

The Indian Journal of Pediatrics

Special Supplement

October 2017

Vol. SS-1

**The International Association for Adolescent Health:
11th World Congress on Adolescent Health**

THEME : INVESTING IN ADOLESCENT HEALTH - THE FUTURE IS NOW !

27-29 October, 2017, New Delhi, India

Key Organisers:

- **International Association for Adolescent Health (IAAH)**
- **MAMTA Health Institute for Mother and Child (MAMTA-HIMC)**
- **Ministry of Health and Family Welfare (MoHFW), Government of India**



I·A·A·H
**International Association
for Adolescent Health**



सत्यमेव जयते

Ministry of Health and Family Welfare
Government of India



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The Indian Journal of Pediatrics

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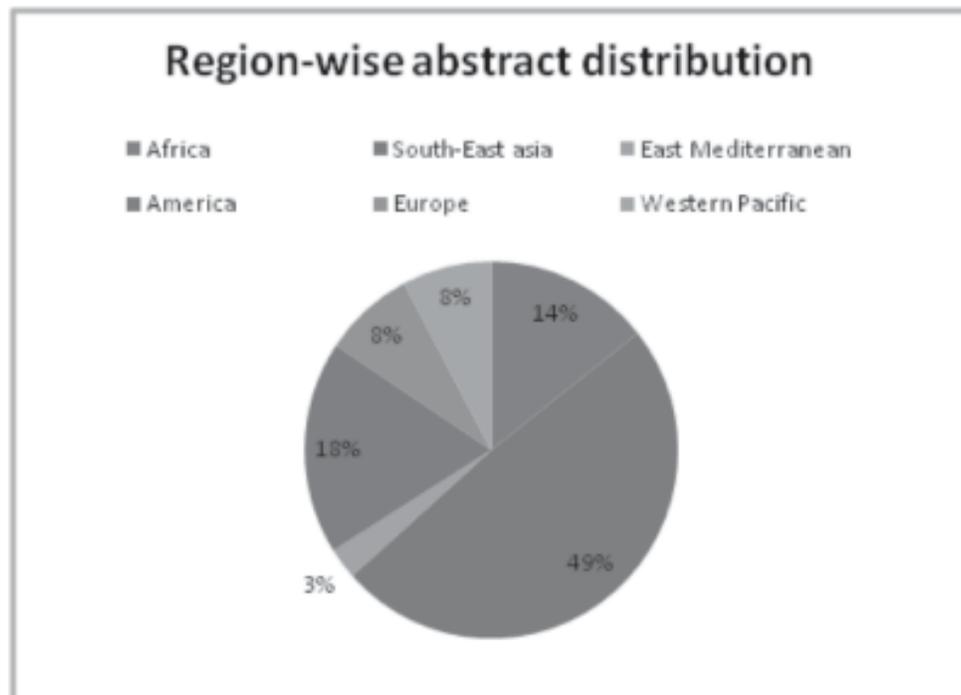
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Abstract Review Committee

The **IAAH - 11th World Congress on Adolescent Health: Investing in Adolescent Health – *The Future is Now*** received more than 700 abstracts. The selection of abstracts was made through the blind peer reviewed process by an international and national panel of reviewers. The time and expertise of all peer reviewers to ensure that the abstracts selected are of the highest scientific quality is acknowledged.

- | | | |
|-----------------------------|-----------------------------------|---------------------------|
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- **Dr. Sunil Mehra**, MAMTA Health Institute for Mother and Child, India
- **Dr. Monika Arora**, Public Health Foundation of India
- **Dr. Bruce Dick**, Past President of IAAH, Johns Hopkins Bloomberg School of Public Health, Switzerland

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Co-chairs:

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- Mr. Anand Kumar Panjiyar, MAMTA Health Institute for Mother and Child
- Dr. Monika Arora, Public Health Foundation of India

Members

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Mr. Pritpal Marjara	Managing Director, Population Services International, India.
Mr. Mathew Joseph	Country Representative, Pathfinder International India
Dr. Venkatesh Srinivasan	Deputy Country Representative, UNFPA
Ms. Dhurwarakha Sriram	Child Protection/ Adolescent Specialist, UNICEF, India Country Office
Dr. Asheber Gaym	Maternal Health Specialist, UNICEF, India Country Office
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Ms. Vanita Nayak Mukherjee	Program Officer, Youth Sexuality, Reproductive Health and Rights Initiative, Ford Foundation.
Ms. Parinita Kapur	American Jewish World Services, India
Ms. Anagha Khot	Manager- Strategy & Partnerships, The Children's Investment Fund Foundation
Dr. Neena Raina	Regional Office, WHO
Dr. Swati Bhawe	Executive Director-Association of Adolescent and Child Care India
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Dr. T. Hema Bindu Singh	Associate Professor, Nilofur Hospital, Hyderabad
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Dr. Harish Pemde	Lady Harding Medical College, New Delhi
Mr. Gautam Yadav	Youth Representative, Hamsafar Trust, Mumbai
Mr. Rishi Garg	Senior Program Manager, MAMTA Health Institute for Mother and Child

National Scientific Committee (NSC)

Chair: Prof. Vikram Patel, Harvard University/ Sangath

Advisor: Dr. Ajay Khara, Ministry of Health & Family Welfare, Government of India

Co-chairs:

- **Dr. Sunil Mehra**, MAMTA Health Institute for Mother and Child
- **Dr. Monika Arora**, Public Health Foundation of India
- **Dr. Anupam Sachdeva**, Indian Academic of Pediatrics

Members of the National Scientific Committee

Name	Members
Dr. Harish Pemde	Lady Harding Medical College, New Delhi
Dr. Swati Bhawe	Association of Adolescent and Child Care in India (AACCI)
Ms. Poonam Muttreja	Population Foundation of India (PFI)
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Dr. AlkaKriplani	The Federation of Obstetric &Gynecological Societies of India (FOGSI)

Lancet standing commission on adolescent health & wellbeing - Meeting the Challenge of Global Adolescent Health

Organisers:

George Patton¹, Susan Sawyer¹, Sabine Kleinert²

¹University of Melbourne, ²The Lancet

Background:

In September 2015 the United Nations Secretary-General announced that the *Every Woman, Every Child* agenda would move forward to 2030 as a *Global Strategy for Women's, Children's and Adolescents' Health*. This has galvanised the international development community and UN agencies to deepen their engagement with adolescent health.

Eight months later the Lancet published *Our Future: A Lancet Commission on Adolescent Health and Wellbeing*, a response from a geographically diverse, interdisciplinary network of researchers. This report provided an overview of global adolescent health needs and the available evidence base for action. It highlighted both the opportunity for adolescent health and the current limits in the knowledge, systems and human resources for action. In responding to these challenges and the report's recommendations, the Lancet has committed to a *Standing Commission on Adolescent Health and Wellbeing*. It will extend the work of the previous Commission for at least five years. This Plenary Symposium will provide an update of the work planned and underway.

Hosts:

Monika Arora¹, Susan Sawyer²

¹Public Health Foundation of India, ²University of Melbourne

Presentation:

Towards a Lancet Standing Commission in Adolescent Health and Wellbeing - George Patton, Professorial Fellow in Adolescent Health Research, University of Melbourne

Panel discussion:

- Marleen Temmerman: Chair Department of Obstetrics and Gynaecology and Director Women's Health, Faculty of Health Sciences, Aga Khan University in East Africa
- Kikelomo Taiwo: Young Commissioner for the Lancet Commission on Adolescent Health and Wellbeing, Member Training Coordinator at Amnesty International, New York
- Sabine Kleinert: Senior Executive Editor, The Lancet

Mental health and adolescents

Organisers:

Vikram Patel¹, Suzanne Petroni², Eugene Kinyanda³, Meghna Khatwani⁴

¹Harvard University, ²International Center for Research on Women, ³MRC Uganda, ⁴Ambedkar University, Delhi

Emotional and behavioural problems among HIV infected children and adolescents in Uganda: the CHAKA study

Eugene Kinyanda¹

¹Mental Health Project, MRC/UVRI Uganda Research Unit on AIDS/Senior Wellcome Trust Fellowship, Entebbe, Uganda

Background: The 5.8 million children and young people living with HIV in sub-Saharan Africa are at great risk of developing emotional and behavioural problems (EBPs). Despite this, the majority of HIV care services on the continent still lack mental health care partly due to the lack of contextually relevant data. In this study, we examined the burden of EBPs among children and adolescents with HIV (CA-HIV) attending care in Uganda.

Methods: Data was collected on 1,339 CA-HIV attending five HIV care clinics in central and south-western Uganda using the DSM-5 based Child and Adolescent Symptom Inventory-5 (CASI-5). Prevalence and risk factors for emotional and behavioural problems were estimated using logistic regression models.

Results: The prevalence of emotional or behavioural problems was 31.6% (95% CI: 29.1% - 34.2%) and that of DSM-5 psychiatric disorders was 6.9% (95% CI: 5.6% - 8.4%). The most prevalent emotional disorder category was anxiety problems (21.2%) while the most prevalent behavioural disorder category was attention deficit hyperactivity disorder related problems

(6.1%). Statistically significant risk factors for behavioural problems were study site, sex (more among males than females), educational level (highest level protective) and marginally, CD4 counts. For emotional problems, only study site was marginally significant.

Conclusion: CA-HIV have a considerable burden of EBPs including psychiatric disorder calling for the urgent need to integrate mental health into HIV care services of CA-HIV in sub-Saharan Africa.

Early Adolescent Health and Development in Low and Middle Income Countries

Organisers:

Robert Blum¹, Jo Boyden², Rajib Acharya³

¹Johns Hopkins Bloomberg School of Public Health, ²Oxford Department of International Development, *Young Lives*, ³Population Council

Moderator:

Catherine Baye MD MPH, Bill and Melinda Gates Institute, JHU

Background

This plenary session will share current findings on early adolescent health and development. Specifically, presenters will draw from the *Young Lives Study* in four countries, the *Global Early Adolescent Study* in 15 countries and the *Population Council's* longitudinal study of young adolescents in two states in India. Based on the *Young Lives* research Boyden will highlight recent findings that show the interrelationships between growing up in poverty, nutritional deprivation and school failure in low income settings. Blum will focus on the nature and universality of harmful gender norms in early adolescence as seen in the GEAS while Acharya will share the impacts of social changes on adolescent health in India. Program and policy implications will be addressed throughout the session.

Change and responsibility: early adolescence in the life course

Jo Boyden¹

¹Director *Young Lives*, Oxford University

Background

Drawing on evidence from *Young Lives*, a unique longitudinal study of childhood poverty in Ethiopia, India, Peru and Vietnam, Professor Boyden will argue that early adolescence is a critical phase in the life-course when young people take on multiple responsibilities in contexts of adversity, with significant implications for their well-being and health. She will describe how poverty, geographical location and social exclusion affect the timing and the consequences of key transitions in early adolescence, and the fundamental role that gender plays in shaping children's imagined futures and current investments and opportunities. Finally, she will highlight the importance of a holistic, life course approach for policy and programming in early adolescence.

Social Media, Sexting, Addiction, Oh My! Adolescent Health in the Digital Age

Organisers:

Michael Rich¹, Yuhyun Park²

¹Harvard School of Public Health, ²DQ Institute,

Background

Today's adolescents are growing up with screens in their hands - presenting them with opportunities to overcome cultural barriers and connect with their global peers, but, used thoughtlessly, with risks to their physical, mental and social health. Concerned about exposure to pornography, cyberbullying, even "addiction" to screens, parents, teachers and clinicians need strategies and resources to support adolescent development in our tech-transformed world. Nisha Dua, MA will present the work of the Learning Links Foundation, which has reached more than 3.5 million children across 15 states of India, empowering them to #StaySafe online, respecting their own and other's well-being and privacy. Yuhyun Park, PhD will share the Digital Intelligence Quotient (DQ²) education and assessment framework, working with academics, corporations, and policy-makers to set standards and build worldwide digital citizenship. Michael Rich, MD, MPH, "The Mediatician" will share the work of the Center on Media and Child Health at Harvard to acquire and apply scientific research to understanding, preventing, and intervening on media-related problems, using as an example the establishment of CIMAID, the world's first evidence-based treatment center for Problematic Interactive Media Use (PIMU).

Parallel Symposia - IAAHPSN001

Reflections on Building Sustainable Adolescent Medicine Training Programs

Abstracts# IAAH170368, IAAH170369, IAAH170664, IAAH170665

Organiser: Boston Children's Hospital; Harvard Medical School

Objective

This symposium aims to provide guidance in developing and setting up post-graduate training programs by sharing perspectives from speakers leading national efforts in Thailand, Chile, and Guatemala. Speakers will (1) describe key elements in developing program framework; (2) discuss existing resources in program development and potential partnerships for collaboration; (3) provide practical strategies to address challenges including cultural barriers, financing, and lack of governmental recognition and support; and (4) share lessons learned from personal experience to inform session participants considering setting up a program in their country.

Format/Structure

The symposium begins with a brief didactic overview of the history of adolescent medicine as a sub-specialty field, the evidence behind the need for sustainable training programs, and the challenges in program development and implementation. Three speakers will then present their unique experiences in developing national training programs including examples of successes and failures along the way, and valuable lessons learned. Presentations will be followed by a speaker panel discussion with audience participation. Speakers will survey session participants to assess current regional educational opportunities, answer questions, and guide participants to share their own experiences and challenges. The chairs will end by summarizing the main themes, lessons, and possible avenues for future collaboration and resource sharing within IAAH.

Chair(s):

Arej Hassan¹, Sarah Golub¹

¹Division of Adolescent Medicine, Boston Children's Hospital; Harvard Medical School

IAAH170368

Advancing Adolescent Training Programs for Physicians in Chile

Veronica Gaete¹

¹Department of Pediatrics and Pediatric Surgery, East Medical Sciences Division, Faculty of Medicine, University of Chile

BACKGROUND: Even though there is an important need to invest in specialized health care for adolescents in Chile, several barriers have made it difficult to develop the field at a pace that matches the increasing health needs of this age group. Despite significant strides in developing educational opportunities, training professionals for the task has been another challenge in this scenario.

DESCRIPTION: Chile has two adolescent medicine training programs, one in each of the main universities. The first, which I lead, was created at the University of Chile in 1983, and is a two-year subspecialty program for pediatricians. Since its inception, only eleven fellows have enrolled; of these, ten have completed requirements with 4 receiving their degree. Although several have become national leaders and contributed to the sustained development of the field, the number remains small due to a limited interest in the specialty. Aspects of life that make studying a subspecialty difficult (e.g., marriage and parenting), pediatricians having little interest in mental health and lower income than in other specialties, are some of the main reasons. In searching for solutions to the shortage of applicants, the program is currently in the process of expanding this opportunity towards family doctors to broaden the base of those who may be interested. In parallel, we are also working on achieving the accreditation of adolescent medicine as a distinct subspecialty at a national level. Accomplishing this has been an ongoing "battle". The national entity in charge of the accreditation of specialties agreed in 2014 -after repeated attempts since 2007- to certify adolescent medicine as a special mention of pediatrics, one step prior to its eventual formal recognition as a subspecialty. Thus far, twenty professionals have been certified.

LESSONS LEARNED: It is of utmost importance to identify and address the barriers of access to adolescent medicine training programs if the health care needs of youth are to be satisfied in Chile.

CONCLUSIONS/NEXT STEPS: Even though adolescent medicine training programs have been available in Chile since 1983, the number of specialists is still small and the accreditation of the subspecialty is yet to be achieved.

IAAH170369

Reflections on Building Sustainable Adolescent Medicine Training Programs in Thailand

Jiraporn Arunakul¹

¹Faculty of Medicine, Ramathibodi Hospital, Mahidol University

BACKGROUND: Thailand has a large adolescent population estimated at 8 million, but until recently the country only had one adolescent medicine specialist. Around 2012, four adolescent medicine specialists finished their fellowship training in North America and returned to Thailand to establish and become leaders in this field. Thailand currently has six adolescent medicine doctors.

DESCRIPTION: In 2010, as part of a growing global health focus on adolescent health, Thailand's Royal College of Pediatricians Subcommittee on Adolescent Health developed a 4-week adolescent health curriculum as a mandatory part of general pediatrics residency training. They also advocated that pediatricians should continue to provide care to their patients through to the age of 18 years, (rather than 15 years) and established a university clinic dedicated to Adolescent Medicine that provides multidisciplinary care for patients through to the age of 24 years in Bangkok and KhonKaen provinces. Building upon these successes, a two-year Adolescent Medicine fellowship training program was approved by the Royal College and began in 2016. There are currently two adolescent medicine fellowship training programs; although both are affiliated with Mahidol University, each program is based at a different affiliated teaching hospital. We have selected two fellows who became interested in this field after completing their adolescent medicine rotation during residency. Despite different sites, there are joint fellowship clinical and academic training activities. Because of a limited number of mentors and services, fellows also join other related sub-specialties for additional training in obstetrics-gynecology and psychiatry.

LESSONS LEARNED: Adolescent medicine is not as popular in pediatric residents compared to other sub-specialties as it is quite new in Thailand. However, providing an opportunity during residency to expose them to this field may increase interest in fellowship training. There continue to be many challenges in adolescent medicine training including no confidentiality laws for adolescents, overlapping services as other sub-specialties, and limited access to additional training and services which are currently centered in large cities.

CONCLUSIONS/NEXT STEPS: In the future, we plan to expand training to other medical disciplines such as family medicine, internal medicine and psychiatry by working with the governing society of each specialty.

IAAH170664

Accomplishments in the Development of an Adolescent Medicine Training Program in Guatemala

Arej Hassan¹, Erwin Calgua², Juan Carlos Maza³

¹Boston Children's Hospital, ²Universidad de San Carlos de Guatemala, ³San Juan De Dios Hospital; Universidad de San Carlos de Guatemala

BACKGROUND: With a population of just under 16 million, Guatemala is one of the most populous countries in Central America with 58% of the population under 25 years old, and 23 percent between the ages of 10 and 19. Young people face enormous health concerns secondary to illnesses, injuries, or disabilities often induced or compounded by economic hardship, unemployment, and exposure to violence.

DESCRIPTION: In 2000, the Pediatrics Department at San Juan de Dios Hospital established an interdisciplinary adolescent clinic comprised of a pediatrician, gynecologist, psychologist, nutritionist and nurse all trained to work specifically with adolescents. This clinic has since grown to incorporate additional providers including a family planner, HIV counselor, and a coordinator for the national adolescent health clinical data registry program. In 2011, the medical school at the Universidad de San Carlos de Guatemala (USAC) recognized the importance of ongoing work at the Adolescent Clinic and developed a short course program, Diplomado de Atencion Integral para Adolescencia y Juventud, to train additional selected health care workers. Building upon the success of this program, San Juan de Dios Hospital in

conjunction with USAC partnered with Boston Children's Hospital (BCH) in 2014. A subsequent collaborative national research endeavor demonstrated continued gaps in health care providers' training, knowledge, access to services, and comfort level in caring for adolescents. Results from this initial research has led to secured support from the Ministry of Health for a formal adolescent medicine fellowship for one to two trainees each year.

LESSONS LEARNED: International partnerships can provide a framework to build successful programs that integrate education and research and lay the groundwork for investing in future leaders within the country. However, the baseline status is different in each country; a detailed analysis including identification of current gaps in system, review of available resources, and input from stakeholders regarding priority setting must be performed before beginning program development.

CONCLUSIONS/NEXT STEPS: Representatives from BCH, USAC, the Ministry of Health, and San Juan de Dios Hospital have formed a working group to further develop requirements and curriculum for the fellowship with goal of incorporating clinical care, teaching, and a scholarly project.

IAAH170665

Going Global: Advocating for Adolescent Medicine Training Programs

Sarah Golub¹, Areej Hassan¹, Sarah Golub¹

¹Boston Children's Hospital

BACKGROUND: The concept of adolescent medicine as a distinct subspecialty field began in the 1950s in the United States; however, it was not until several decades later that there was a noticeable shift to train specialists to provide complex clinical care, conduct research, and advocate for the unique needs of this vulnerable population. Although there have been a growing number of specialized physicians and training opportunities internationally, there are still few countries that offer accredited fellowship programs particularly in low and middle-income countries where over 90% of the world's 1.8 billion young people currently reside.

DESCRIPTION: Research has consistently shown that (1) adolescence is a unique developmental period with complex interactions between the biology of puberty, neurocognitive maturation, and the onset of adult social roles all influencing health; (2) other disciplines such as pediatrics, internal medicine, family medicine, and gynecology have traditionally had little focus on the adolescent patient; and (3) health care providers feel poorly equipped to address and care for adolescents' psychosocial, mental health, and reproductive health care needs. There is general consensus that improving the quality of adolescent health care is dependent on developing sustainable training programs to provide clinicians with comprehensive and evidence based approaches to adolescent care including prevention and risk reduction counseling, as well as additional knowledge in subspecialty areas such as endocrinology, substance abuse, psychiatry, obstetrical and gynecologic disorders, sports medicine, and psychiatry.

LESSONS LEARNED: Despite remarkable global advances in training opportunities, the development of accredited programs has been significantly hindered by common challenges such as religious and cultural barriers, lack of financing, and lack of governmental recognition and support. Additionally, trained faculty for teaching and research purposes are a scarce resource in many parts of the world.

CONCLUSIONS/NEXT STEPS: Adolescents are a unique population with different health care needs. Building an adolescent-competent health care workforce in low- and middle-income countries is crucial to addressing the high prevalence of morbidity and mortality and improving long-term outcomes in this growing population. Sharing knowledge of existing curriculums, programs, and systems as well as potential solutions to commonly faced challenges will increase opportunities to build regional capacity.

Parallel Symposia - IAAHPSN002

Right Start on Improving Adolescent Nutrition

Abstracts#IAAH170376, IAAH170389, IAAH170406, IAAH170425

Organiser: Nutrition International

Objective

Malnutrition is the leading public health concern for adolescent girls in the world as they are particularly vulnerable due to biological processes and social-determinants which impact them more than boys. There is now global consensus that investing in adolescent girls can aid in attainment of SDGs.

This session highlights that after infancy, adolescence (10-19 years) is the most rapid period of growth with highest nutritional needs, providing a second window of opportunity to catch up. Until recently, the health and nutrition of adolescents have been a neglected in global and national investment, policy and programming. The opportunity to reduce anemia with micronutrient and WIFA supplementation, deworming, ensuring dietary diversity are among key interventions for improving adolescent health.

Format/Structure

The session begins with a global overview of adolescent nutrition presented by the chair. She would provide a synopsis of identified needs, data gaps, and opportunities. Speaker from India will share experiences with weekly iron folic acid supplementation projects reaching millions of girls in India both in school and out of school, speaking to program success, challenges and future directions. A speaker from Ethiopia will share experiences in building a new intervention, from procurement, to policies, to provision. Speaker from Save the Children will present case studies from adolescent nutrition programs and share lessons learnt. Final speaker will share lessons from both nutrition sensitive and nutrition specific interventions in (Scaling Up Nutrition) SUN countries in Asia.

Chair(s)

Marion Roche¹, Susmita Das¹

¹Nutrition International

IAAH170376

Reaching adolescent girls with nutrition specific and nutrition sensitive interventions: Experiences from SUN countries

Anjali Bhardwaj¹, Manpreet Chadha¹

¹Nutrition International, Asia

BACKGROUND: Scaling Up Nutrition (SUN), launched in 2010, is a global movement that envisions a world free from malnutrition in all its forms. Nutrition International (previously Micronutrient Initiative), through Technical Assistance for Nutrition (TAN) project, supported by Department for International Development, provides technical assistance to 20 SUN countries in Asia and Africa. SUN Movement identifies adolescents as an important group. Adolescent health is critical to achieving global health targets. (Lancet, 2012). Despite this, adolescents remain a key neglected group for current public health research and programming (Lancet, 2013). Subsequently, nutrition services are most neglected for non-pregnant adolescent girls in most Asian countries. This presentation will discuss nutrition-specific and -sensitive interventions designed by seven Asian SUN countries to bridge these gaps and improve adolescent nutrition.

DESCRIPTION: Review of SUN country plans and other documents indicate that SUN countries are using multi-stakeholder platforms to formulate national nutrition policies with for improving adolescent nutrition. The integration of nutrition actions into national nutrition plans varies among countries, as per their local context and needs.

LESSONS LEARNED: Nutrition International is supporting SUN countries in Asia (Pakistan, Nepal, Bangladesh, Myanmar, Lao PDR, Indonesia, Philippines) to improve their capacity to design, deliver and track the progress of nutrition programs, and support them in meeting their nutrition targets. Nutrition-specific interventions include targeting pregnant adolescents, improving adolescent health, and preconception nutrition through various programs for in and out-of-school adolescents. While these nutrition-specific interventions are in accordance with WHO guidelines (2016), they are not enough to improve adolescent nutrition. Integrated nutrition programs that cut across different ministries are key to improving adolescent nutrition. Accordingly, ministries of health, social welfare, education, women and child/youth affairs, population, water and hygiene, youth and sports; have been identified for implementing nutrition sensitive interventions. Nutrition education and behaviour change communication strategies are critical for all these interventions.

CONCLUSIONS/ NEXT STEPS: Development of national nutrition policies and plans has been initiated in most TAN Asian SUN countries. However, translation of these strategies into action remains to be seen. SUN Movement has been successful in highlighting the issue of nutrition but adolescent nutrition particularly needs greater attention.

IAAH170389

Working across sectors to improve adolescent nutrition: Case studies from Save the Children

Emily Keane¹

¹Save the Children, UK

BACKGROUND: The 2013 Lancet Nutrition series called for increased focus on adolescent nutrition to break the intergenerational cycle of malnutrition. Adolescent girls, especially if stunted and undernourished are more likely to die in child birth, be left nutritionally depleted and give birth to a malnourished child affecting their development and future productivity. There is growing recognition that adolescents are a key neglected group in current research and programming particularly with respect to interventions to delay pregnancy, improve their health and nutritional status, while also preparing them for parenthood.

DESCRIPTION: A Save the Children (SC) review of adolescent nutrition policies and programmes in 22 countries that signed up to Scaling Up Nutrition (SUN) in 2015 found that only 7 of these countries had plans to support adolescent nutrition and even fewer were implementing nutrition interventions targeting adolescents (Save the Children Fund, 2015). A key challenge for governments and development partners is identifying effective platforms for reaching adolescent girls, particularly those that are out of schools and hard to reach for social, geographical and economic reasons.

LESSONS LEARNERD: SC implements programmes across health, education, child protection, nutrition, food security and livelihood, many of which target adolescents. Case studies from different sectors will be presented. In Bangladesh, the Suchana multi-sectoral nutrition programme targeting 250,000 poor households in Shylet Division is reaching adolescent girls using a peer to peer approach with skills building, income generation and savings and behavior change activities. In Mali, SC's School Health and Nutrition programme provides malaria treatment to all school children once per year which reduces the risk of malaria by 95% and the risk of anemia by 44%, (Clarke S et al, 2017). SC has undertaken qualitative research to understand the factors that impact nutritional status amongst adolescents, especially amongst those at risk of child marriage and early pregnancy.

CONCLUSIONS/ NEXT STEPS: Improving adolescent nutrition requires a multi-sectoral approach to help adolescent girls stay healthy, educated, make their own decisions, get married and pregnant when they are emotionally and physically ready and in the long term have healthier better educated children.

IAAH170406

Building an Adolescent Weekly Iron Folic Acid Supplementation Program in Ethiopia: from policy to provision

Ermias Mekuria Lewetie¹, Marion L Roche², Abdul Aziz Adish³, Seifu Hagose³, Yosef Alemu², Bisrat Haile⁴

¹Nutrition International- Ethiopia Country office, ²Nutrition International, ³Addis Ababa University, ⁴Federal Ministry of Health

BACKGROUND: The World Health Organization (WHO) recommends weekly iron folic acid supplementation (WIFAS) for adolescent girls, as a public health approach to preventing and managing anemia, where it is a public health concern. The government of Ethiopia recognizes adolescence as an important opportunity for nutrition interventions, and specifically endorses providing WIFAS for adolescent girls using school, community and health facility platforms; however, no guidelines exist to inform effective programming.

DESCRIPTION: To inform the development of a national WIFAS program, demonstration projects are being implemented in Chifera in Afar and Damote Gale in Southern Nations, Nationalities, and Peoples' Region (SNNPR) to assess effectiveness of program implementation using different delivery modalities to reach in and out of school adolescent girls with WIFAS. Operational guidelines were developed for implementing adolescent girls' WIFAS project in two districts which represent the pastoral and agrarian contexts of the country. Without available WHO recommended formulation of WIFAS, Nutrition International worked with the Ministry of Health to use the prenatal IFA formulation in the demonstration projects. Formative Research was conducted with adolescent girls and their influencers' through 30 focus group discussions and 85 in-depth interviews to develop effective behaviour change intervention strategies.

LESSONS LEARNED: Reaching girls in schools will require engagement of teachers, school administrators and support from the health sector. Coverage and adherence rely upon regular attendance of adolescent girls. For out of

school girls delivery channels may include health extension workers, community structures and in school girls, as well as facilities; yet, it will be more resource intensive to reach these girls. Distinct demand generation and training strategies will be needed for each platform.

CONCLUSIONS/NEXT STEPS: Ethiopia will continue implementation of the demonstration project to reach 20,000 adolescent girls in and out of school in Afar and SNNPR using multiple delivery modalities for a package of interventions (WIFAS and nutrition education). This work will generate distinct recommendations on the effective and feasible modalities for reaching more than 800,000 in and out of school adolescent girls with key partners for scale up in 76 woredas across six regions with WIFAS and supportive messages and effective counseling.

IAAH170425

From strategy to action: Improving adolescent nutrition among school and out-of-school adolescent girls in select states of India.

Mini Varghese¹, Shibani Sharma¹

¹Micronutrient Initiative

BACKGROUND: Since January 2013, the Government of India (GoI) has been implementing the Weekly Iron and Folic Acid Supplementation (WIFAS) program, which includes government-aided schools and outreach (*anganwadi*) centres across all states. Program rollout is still in nascent stage and is expected to cover both adolescent boys and girls (10-19 years). The program follows a 'fixed day, fixed site' approach where school teachers and frontline workers (*anganwadi* workers) administer IFA tablets under direct supervision. While it is known that nearly 53% of women aged 15-49 are anaemic, no systematically collected data on adolescent anaemia is available.

DESCRIPTION: Nutrition International (previously Micronutrient Initiative) provides techno-managerial support to the government at state and district levels to strengthen the WIFAS program delivery. This support includes ensuring provision of an adequate budget, timely tendering and procurement of supplies, and monitoring and review of coverage reports. Coordination between departments at district, sub-district and field levels for implementation of the program is also facilitated. Formal and on-the-job capacity building of district and block officials, supervisors and teachers on program, monitoring and reporting is provided. Innovative behaviour communication materials reiterate consumption and compliance of IFA and nutrition interventions.

LESSONS LEARNED: While the existing WIFA program looks promising, it needs to be expanded to include private schools to reach all adolescent girls. Nearly, 30% of girls in the program states are enrolled in non-government schools, and are not ineligible for the program. Field observations show that school attendance drops drastically for adolescent girls in secondary and higher secondary classes. Hence, from the age of 14 years onwards (when the need for IFA supplementation is more), the total number of adolescent girls reached through the program decreases. The implementation of WIFAS for out-of-school adolescents through the Integrated Child Development Services (ICDS) also needs strengthening.

CONCLUSIONS/NEXT STEPS: Process documentation of the project will be conducted to map the processes and suggest strategies that could be adopted by the states. A monitoring survey will be carried out to assess the current coverages to inform the program strategy. The strategies will focus on improving inter-departmental coordination to strengthen the monitoring and review mechanism.

Parallel Symposia - IAAHPSN003

Evaluating Participants' Perceptions of and Experiences with Interventions to Prevent Girls' Early Marriage Prevention Programs in Rural Jharkand, India and Oromia, Ethiopia

Abstracts#IAAH170128, IAAH170327, IAAH170328, IAAH170411

Organiser: University of California

BACKGROUND: Girl child marriage affects more than 720 million girls globally, with India and Ethiopia having some of the highest rates of child marriage in the world (47% and 41%, respectively).¹ This panel will present on experiences of delivering child marriage prevention programming in Jharkand, India and Oromia, Ethiopia, describing experiences developing and delivering youth-focused models of intervention (presenters one and two), sharing qualitative research findings on girls' experiences with the interventions and

how it affected their self-efficacy and decision-making related to child marriage (presenter three), and discussing approaches to next generation child marriage prevention and intervention efforts based on evidence to date for each country of focus (presenters four and five).

METHODS: Presentations draw from 1) the Tata Steel Rural Development Society's Project RISHTA, a community based intervention delivered by peer educators in rural Jharkand, and 2) Oromia Development Association's Adolescent/Youth Sexual and Reproductive Health Project ("ODA"), a school-based prevention intervention delivered by trained teachers in rural Oromia. In 2014, data were collected in the form of qualitative interviews with girls aged 13-24 years (n=105) who had been exposed to the intervention and subsequently either married as a minor (<18 years) or successfully postponed/canceled marriage as a minor. Participating girls were then asked to identify 1-3 decision-makers in their life to participate in in-depth interviews as well; n=160 decision-makers were included in this study. Interviews assessed girls' and decision-makers' views on child marriage, experiences with the interventions, and recommendations for future programs. Data analysis was undertaken by trained researchers who utilized coded data to create domains and sub-themes to consolidate findings.

RESULTS: Despite differing platforms for intervention delivery, interventions in both countries focused on sexual and reproductive health (SRH) education integrated with child marriage prevention targeting youth, but inclusive of outreach and engagement of parents and the broader community. Participants were largely positive in terms of their perspectives on the program, particularly in terms of gender empowerment approaches including livelihood development activities and girls' psychological empowerment to express their choice and voice. Those with less favorable views included girls who married as minors and community leaders concerned about youth exposure to SRH education; they recommended greater focus on vocational training, better supports for married girls, and stronger engagement with community.

Qualitative data also highlighted that, although fathers or parents typically are the final decision-makers on marriage in the context of both study sites, in earlier stages of marital decision-making such as initiation and negotiation of a proposal, girls' expressions of voice and choice do have influence. Girls with greater self-efficacy to use her voice, and articulate benefits of delayed marriage, appear to be better able to affect father or parental final decision-making on marriage, particularly if the girl has allies such as teachers or supportive family members. Notably, girls' self-efficacy can work toward a child marriage, as some girls and boys initiate the relationship without family approval and move toward elopement.

CONCLUSIONS: Findings suggest that Project RISHTA and ODA's intervention are promising models of intervention to address girl child marriage and benefit from gender empowerment strategies to support girls in terms of both psychological empowerment and livelihood-related skills building; programs can be strengthened via stronger connections to the broader community, supporting married girls, and broadening collective action and economic empowerment approaches.

¹UNICEF *State of the World's Children: A Fair Chance for Every Child*. New York: United Nations Children's Fund;2016.

IAAH170128

Adolescent Girls' Self-Efficacy to Avert Child Marriage or Negotiate Safety in Marriage: Qualitative Findings from India and Ethiopia

Anita Raj¹, Lotus McDougall², Emma Jackson², Yemeserach Belayneh³, Anand Sinha³, Jay Silverman¹

¹Center on Gender Equity and Health, Division of Global Public Health, Department of Medicine, University of California San Diego, ²Center on Gender Equity and Health, University of California, San Diego, ³David and Lucile Packard Foundation

BACKGROUND: Early marriage (marriage prior to age 18 years) affects more than 720 million women and girls worldwide and compromises adolescent girls' health and well-being. Prevention efforts are being undertaken in rural Jharkand, India and Oromia District, Ethiopia, areas with disproportionate burden of this practice. This study explores adolescent girls' self-efficacy related to marital choice and negotiation in marriage in these contexts, after receipt of prevention programs.

METHODS: In-depth interviews were conducted with n=208 women and girls aged 13-24 years, all of whom either married as a minor or cancelled/postponed

marriage as a minor, and their marital decision-makers. Participants were recruited from Jharkand, India and Oromia, Ethiopia, in rural areas that had received a sustained, multiyear, community-wide child marriage prevention program, either through a peer-led model (Jharkand) or a school-based teacher-led model (Oromia). Interviews assessed girls' and decision-makers' views on marriage of girls before age 18 years, decision-making processes related to marital choice and negotiation in marriage, and experiences with the community interventions. Interviews were analyzed using latent content analysis.

RESULTS: Emergent themes included: self-efficacy to cancel/postpone a marriage and to negotiate in marriage, as well as self-efficacy to marry. Facets of self-efficacy that helped girls cancel or postpone their marriage were ability to express their opinions related to marital choice, perceived capacity and skills for income generation, and actively seeking an ally (e.g., teacher, peer leader) to support her voice against marriage. Facilitators were girls' knowledge of laws and services, as well as access to allies. Barriers were pressures from parents, community, and prospective husbands and in-laws, as well as lack of options beyond marriage. Self-efficacy in marriage focused on communication skills with husband and reproductive autonomy. However, some girls also expressed self-efficacy to marry, actively seeking engagement and eloping.

CONCLUSIONS/NEXT STEPS: Girls' self-efficacy in areas affected by early marriage of girls can influence girls' marital choices, via voice, allies, skills and capacities for income generation. These factors can be developed and built upon via programs to help prevent early marriage of girls.

IAAH170327

Why community-based early marriage prevention programs are a priority for Oromia, Ethiopia, and Jharkand, India

Yemeserach Belayneh¹, Anand Sinha¹

¹The David and Lucile Packard Foundation

BACKGROUND: Early marriage (marriage under age 18) affects 720 million women and girls globally and is high in Ethiopia and India. Delaying early marriage is part of the Packard Foundation's goals of promoting women's reproductive health and rights and stabilizing global population growth. Research documents early marriage's substantial effect on early fertility and negative effects on both young mothers and children. This abstract is part of the accepted symposia panel: Evaluating Participants' Perceptions of and Experiences with Programs to Prevent Girls' Early Marriage in Rural Jharkhand, India and Oromia, Ethiopia.

DESCRIPTION: This presentation will focus on describing the context in Oromia and Jharkhand and the approaches of the Oromia Development Association's (ODA) Adolescent/Youth Sexual and Reproductive Health Project and the TATA Steel Rural Development Society's Project RISHTA address these strategies.

LESSONS LEARNED: While many programs utilize incentivization schemes, health services, and education, the Packard Foundation has prioritized two approaches to delay early marriage and first birth for adolescents/youth: the school-based program implemented by ODA, and the community-based, peer-educator led Project RISHTA. ODAs project revealed that school-based intervention that engage community, parents, and local administrative structures is crucial in changing harmful norms that prevent young people from attending school and seeking health services. Furthermore, empowering girls and making school environment friendly increases girls' school enrollment and retention contributing to delaying early marriage. Learnings from the RISHTA project indicate that barriers to family planning include social/family pressure to have children early, limited self-efficacy to acquire and use contraceptives, and lack of information particularly in young marriages. By supporting the broader development of girls and by engaging institutions such as family, schools, and health workers the project created long term impact.

CONCLUSIONS/NEXT STEPS: Programming should be dynamic, broad based beyond just health information, and be integrated within the cultural context. Related factors such as the availability of health care services, access to education for girls and friendly school environment, and existing legal frameworks can affect success of programs. It is therefore essential for programs to interface with multiple levels of the surrounding infrastructure. These conclusions will be explored more extensively in panel.

IAAH170328

What is the ODA teacher-delivered early marriage prevention program in Oromia- history, curricula focus, strengths and challenges?

Yemeserach Belayneh¹, Jemal Abasso²

¹The David and Lucile Packard Foundation, ²Oromia Development Association

BACKGROUND: Early marriage (EM), or marriage before age 18, is associated with poor mental and physical health outcomes for adolescents and increases the chance of early childbearing. Research suggests that girls' education can effectively prevent EM. The Oromia Development Association's Adolescent Sexual and Reproductive Health Project ("ODA"), is a school-based program designed to prevent early marriage and educate girls and boys on health issues related to EM. This abstract is part of the accepted symposia panel: Evaluating Participants' Perceptions of and Experiences with Programs to Prevent Girls' Early Marriage in Rural Jharkand, India and Oromia, Ethiopia.

DESCRIPTION: In this presentation, the structure and curricula of the program will be described, as well as the nature of program reach. In 2009, ODA started a school-based program delivered by trained teachers across 240 schools in Oromia, Ethiopia. The ODA program targets adolescent girls and boys, with the goals of reducing early marriage through reproductive health education (inclusive of topics on contraception, pregnancy, and childbirth), and providing life skills training. A gender responsive pedagogy was initiated by trained teachers and "saving for school" schemes, school attendance incentive programs (incentives in form of school supplies/uniforms) were incorporated.

LESSONS LEARNED: Oromia is a region where 15.8% of teens have already begun childbearing. ODA addressed this problem by implementing the school based project through culturally appropriate teaching methodology and strengthening selected public health facilities for referral. It created supportive environment for girls' education by strengthening existing community structures such as PTAs, community-school partnerships and reducing the opportunity cost for girls' education by introducing saving for school schemes. The community engagement comprises the formulation of bylaws to remove the socio-cultural barriers to girls' education. The cumulative effort contributed to the retention of girls in school and therefore to the reduction of early marriage and teenage childbearing.

CONCLUSIONS/NEXT STEPS: ODA's project show promise and generally well received by the community. The qualitative research findings of this program will be presented by Anita Raj in her component of this panel: "Youth and their decision-makers' perspectives on the value of community-based early marriage prevention programs: findings from a qualitative evaluation".

IAAH170411

What is the RISHTA peer-led early marriage prevention program in rural Jharkhand districts- history, curricula focus, strengths and challenges?

Biren Bhuta¹

¹Tata Steel Ltd.

BACKGROUND: Amongst women aged 20-24 years old in India, 27% were married before age 18. Community-based programming that incorporates health education and youth empowerment has been shown to be beneficial in reducing early marriage. The TATA Steel Rural Development Society's Project RISHTA is a community based program implemented by peer-educators in the state of Jharkhand, India, which aims to prevent EM and provide sexual and reproductive health (SRH) education. This abstract is part of the accepted symposia panel: Evaluating Participants' Perceptions of and Experiences with Programs to Prevent Girls' Early Marriage in Rural Jharkhand, India and Oromia, Ethiopia.

DESCRIPTION: Project RISHTA started in 2004 and has been implemented in 1650 villages across the state of Jharkhand, where prevalence of early marriage in girls aged 20-24 is nearly 40%. The project has reached to more than 50,000 adolescents and youths in the state of Jharkhand. Project RISHTA trains peer-educators to provide instruction to youth in early marriage prevention, SRH education, and youth empowerment and development (i.e. school retention efforts and vocational skill building trainings). RISHTA targets girls and boys and utilizes co-educational teaching groups. Art and creative activities such as dramatization were utilized in the program, as were vocational trainings in embroidery and jewelry making.

LESSONS LEARNED: Youth articulated that they need guidance on matters other than SRH. A need was felt for an exclusive space in community for meeting and discussing youth issues which led to conceptualization of Youth Resource Centres. We realised that we needed to focus our training for newly married couples to delay first pregnancy. Later, we started to engage deeply with the parents of the adolescents. And finally, to make it sustainable, we decided to integrate SRH with the school curriculum.

CONCLUSIONS/NEXT STEPS: Project RISHTA is a promising program model to promote delay in marriage and to spread awareness on SRH, and was generally positively received by girls and the community. The qualitative research findings of program perception will be presented by Anita Raj in her component of this panel: "Youth and their decision-makers' perspectives on the value of community-based early marriage prevention programs: findings from a qualitative evaluation".

Parallel Symposia - IAAHPSN004

Infectious diseases in adolescents from Low and Middle-Income Countries

Discussion by experts

Organiser: Indian Academy of Pediatrics

Lead discussants/Moderators:

Anupam Sachdeva¹, Dr Santosh Soans¹, Rajesh Mehta², Sunil Mehra³

¹Indian Academy of Pediatrics, ²World Health Organization, ³MAMTA Health Institute for Mother and Child

Speakers:

Mahaveer Jain¹, Harish K Pemde², V Kumar², Bhaskar Shenoy³

¹Novacare Clinic, Gurgaon, Haryana, India and Vice President Indian Academy of Pediatrics, ²Lady Hardinge Medical College, New Delhi, ³Manipal Hospital, Bengaluru

Background

According to WHO, more than 3000 adolescents die every day amounting to 1.2 million a year in world. More than 2/3 of these deaths occurred in LMICs in South East Asia and Africa. Infectious diseases like lower respiratory tract infections and diarrhoea are among the top 5 causes of death in adolescents. Tuberculosis and dengue fever add significantly to the mortality in adolescents. However, appropriate timely management of these conditions saves the lives. Fever without focus is a frequent puzzle encountered by the health care providers.

Objectives:

- To discuss the infections which are common in adolescents from LMICs,
- To apprise the audience of the advances in diagnosis and management of selected infections in adolescents
- To provide easy-to-use guidelines for management of selected infections in adolescents in resource limited settings

Lessons learned

These diseases affect a very large number of adolescents in LMICs. Health care providers in these countries must be empowered to manage these common conditions. This is likely to further reduce the mortality in adolescents

Format/Structure

The symposium will consist of brief introduction of the topics by chairpersons, brief presentations by the speakers (15 minutes each), specific comments by Lead Discussant followed by a panel discussion with chairpersons, lead discussant, and speakers as panelists and to be coordinated by the Moderator. Audience will also be encouraged to participate in the discussion.

Fever without focus in adolescents.

Mahaveer Jain¹

¹Novacare Clinic, Gurgaon, Haryana, India and Vice President Indian Academy of Pediatrics,

Fever is common among adolescents seeking healthcare. Acute febrile illness (AFI), defined as fever of <1 week duration, can be caused by respiratory tract infections, typhoid, malaria, dengue, hepatitis, liver abscess, meningitis/encephalitis, and sepsis. Existing guidelines for management of these infections with little modifications can be adapted for middle and low-income countries. Rapid triage and emergency management, assessment, classification, and management of common infections presenting with fever in adolescents at a first line health facility will be discussed. Approach to the adolescent with persistent fever without any apparent focus will be detailed. Management of the acutely febrile adolescent will also be discussed. Treatment of staphylococcal septicemia, toxic shock syndrome, urosepsis, meningococemia will be discussed. Management of disseminated gonococcal infections, Lemierre syndrome, necrotizing fasciitis, rickettsial diseases will also be discussed in brief.

Use of updated IMAI (Integrated Management of Adolescent and Adult Illness) acute care guidelines by WHO for managing febrile adolescents will be used to discuss approach to an adolescent having febrile illness presenting as fever without focus.

Tuberculosis in adolescents- what is unique?

Harish K Pemde¹

¹Lady Hardinge Medical College, New Delhi

Studies have shown that adolescents are a vulnerable age group having higher chance of getting pulmonary TB infection and disease compared to younger children and adults. The pathophysiology and presentation of TB in the adolescent age group is varied from children and adults. Adolescents have a high force of infection and that the number of social contact peaks in adolescence. Hence the chance of acquiring the infection and spread is very high during adolescence. Epidemiological variations in adolescents from different parts of world will be included.

Puberty seems to play a special role in the pathophysiology of TB. It is seen that prepubertal TB patients present more with intrathoracic lymphadenopathy similar to that seen in children and post-pubertal TB patients present with lung cavitation similar to that seen in adults. The hormonal and immuno-endocrinological changes could be the reason for this difference in presentation. Pathophysiological mechanisms involving puberty and tuberculosis and its impact on manifestations of tuberculosis will be highlighted.

Adolescents have more symptoms than signs as opposed to children who have more signs than symptoms. The most common symptoms being loss of appetite, fever and weight loss. The various respiratory signs like crepitations and reduced air entry are uncommon in adolescents. Such variations in clinical manifestations will be discussed.

The mean duration from beginning of symptoms to start of treatment is higher in adolescents partly because of feeling of invincibility in this age group leading to delay in seeking care. Various treatment modalities and plans will be described including daily therapy versus directly observed treatments (2-3 times per week). In adolescence compliance to treatment is varied from children due to the fact that the adolescents have different social and emotional needs, and are concerned with issues such as peer acceptance. Studies on improving compliance will be highlighted. A brief description of our study on tuberculosis in adolescents and some illustrative cases from our TB Clinic at Lady Hardinge Medical College, New Delhi will also be included.

Dengue Hemorrhagic Fever and Dengue Shock Syndrome in adolescents.

V Kumar¹

¹Lady Hardinge Medical College, New Delhi

Dengue is one of the most rapidly spreading mosquito-borne viral diseases worldwide. In most patients, the disease manifests as mild self-limiting febrile illness, however in small proportion it may progress to severe dengue disease. Worldwide it accounts for more than 25,000 deaths annually. The major contributory factors for severe disease are abnormal homeostasis and plasma leakage due to increased vascular permeability especially in pleural and abdominal cavities. Shock occurs primarily as a consequence of plasma leak but may also be contributed by internal bleed, poor oral intake or gastrointestinal losses. There is no specific treatment for dengue infection. Early shock recognition, appropriate fluid therapy and control of bleeding play an important role in the management of severe disease. WHO guidelines are widely followed for initiation of fluid therapy in these cases however subsequent modifications are to be done on the basis of individual case assessment. Refractory shock and fluid overload as a result of excess amount of fluid administered to treat shock in initial phase, both can lead to adverse outcome in severe disease.

In this presentation issues related to management of adolescents with severe disease requiring admission to PICU shall be discussed, with emphasis on modification of subsequent fluid therapy, time of initiation of vasopressors and control of excessive menstrual bleed in female adolescents.

Pneumonia in adolescents – basics to advances.

Bhaskar Shenoy¹

¹Manipal Hospital, Bengaluru

Adolescence, being a period of immense physical and mental growth, is significantly affected by respiratory illnesses. Acute respiratory infections including pneumonia are the most common infections during adolescence. Pneumonia during adolescence is a leading cause of death in adolescents.

Etiological agents including viruses, bacteria, and fungal infections will be briefly described. Epidemiological features unique in adolescents like poor nutrition. Relation of acute respiratory infections and lack of sleep, crowded environment, smoking, recreational drug use and intravenous drug use will be discussed.

Clinical approach for diagnosis and management of pneumonia in adolescents will be discussed. A brief description of atypical pneumonias will be included. Recent advances like use of point of care ultrasound in management will also be discussed.

Parallel Symposia - IAAHPSN005

The Missing Link: Fostering Resilience in Adolescent Girls for Improved Health, Education and Gender Equity

Discussion by experts

Organiser: Corstone

Moderator:

Usha Rai¹

¹Journalist

Speakers:

Ravi Verma¹, Rama Subrahmanian², Steve Leventhal³, Gracy Andrew⁴

¹ICRW, ²Know Violence in Childhood, ³CorStone, ⁴CorStone India Foundation

Background:

For some time now, the global development community has known that investing in the health and education of marginalized girls creates a ripple effect. An educated girl is more likely to be healthy, find work, and reinvest her income in her family than a boy (90% of her future income vs. 35 percent for a boy). While we have made major progress in improving girls' outcomes—the number of girls out of primary school today in developing countries is half what it was in 1990—we can still improve girls' health and education faster and more effectively, accelerating and amplifying the progress we've made. We can do this by addressing a critical piece that has been missing from nearly all development efforts to improve girls' outcomes: building a girl's ability to bounce back and thrive—her *resilience*.

Research shows that resilience is not an innate talent or quality; rather, it's the result of a set of internal and social skills and supports that we can learn, cultivate, and harness. In at-risk youth, assets such as self-confidence, self-efficacy, optimism, persistence, assertive communication, and problem-solving skills are some of the most important factors in overcoming obstacles. Of three important features of childhood well-being—academic, emotional, behavioral—emotional well-being is the primary predictor of whether a child will become a satisfied and happy adult; academic achievement is the least important.

Despite this evidence, coming from more than 50 years of research in higher-income countries, to date we've applied surprisingly little rigorous, evidence-based resilience interventions in the developing world to improve well-being and reduce poverty among marginalized adolescent girls.

Objectives:

- To introduce the concept of resilience as a key missing link in development efforts for girls worldwide.
- To describe the benefits and strengths of a resilience-based approach to improving girls' outcomes.
- To discuss potential challenges and strategies to overcome them in applying a resilience-based approach to development efforts for girls in low and middle-income countries.
- To present next steps in resilience-based education and health programming for girls worldwide.

Summary of Issues for discussion:

Brief review findings from the work of CorStone, an international NGO conducting efficacy, effectiveness, and scalability trials of resilience-based interventions for at-risk youth in India since 2009. Through a vigorous panel discussion, we then discuss the strengths and challenges faced in this approach and the implications for girls' education and adolescent health programming in urban and rural communities throughout India.

Parallel Symposia - IAAHPSN006

School Health Promotion in the 21st Century: Contexts, Continuity and Change

Discussion by experts

Organiser: International School Health Network

Speakers:

Seung Lee, Director¹, Palitha Mahipala², Doug McCall³, Sean Slade⁴, Valentina Baltag⁵, Liam Sollis⁶

¹School Health Program, Save the Children, ²School Health Program, SEARO, WHO, ³International School Health Network, ⁴Whole Child Program, Association for Supervision & Curriculum Development, ⁵Adolescent Health Program, WHO Geneva, ⁶Young Health Programme, Plan International UK

Background:

School-based and school-linked health promotion has been central to the educational success, health and development of adolescents for decades. The recent guidance document provided by the World Health Organization (WHO) on the implementation of the global Adolescent Health Strategy positioned school health as a key element, with emphasis placed on accessible and friendly health services, effective instruction and stable policy requiring agencies, professionals and schools to work together in systematic and multi-faceted programs and approaches. Many different models of and practices in school health promotion have developed in different parts of the world. These models reflect their local country and community contexts as well as bring continuity and consistency to the efforts of their schools, health professionals and agencies. As we face up to the immense opportunities and challenges of the 21st century, we must incorporate fundamental changes to our thinking, our organizational practices and our programs.

Objectives:

The World Health Organization, its regional offices and its global partners have been leaders in the development and promotion of the Health Promoting School (HPS) model. With the first WHO policy advice issued in 1997, the technical review/consensus done in 2007 and with the adolescent health strategy of 2017, it is now an appropriate time to engage in a renewal of international technical guidance.

The symposium will offer the opportunity to discuss and build a consensus around this issue. These will be action oriented sessions, with active discussion, setting out a roadmap and programme of action towards the World Conference on School Health & Development in Dubai in December 2017. The output from the symposium will be focused feedback and suggestions on a policy-oriented consensus statement calling to update the global model/framework on Health Promoting Schools. This statement will be supported by thematic materials that elaborate upon and explain the changes in thinking, systems and programs that will ensure continued success and effectiveness in the next decade. This draft statement will be widely circulated subsequent to the Delhi conference and endorsed/launched in Dubai.

Format/Structure:

A series of four presentations and discussions covering the following topics:

1. The FRESH partnership's project on health promoting schools in low-resource settings: How to contextualise approaches to circumstances such as low resource countries, conflict/disaster affected regions as well as indigenous and disadvantaged communities and a spotlight on WASH programmes in India.
2. Systems thinking and systems/organizational development strategies: Lessons from the WHO 'mega-country' collaboration
3. Understanding how the Adolescent Health strategy and school health promotion can be integrated within the core mandates, constraints and concerns of education systems to effectively engage educators and education decision-makers.
4. A policy-oriented consensus statement: Next steps in updating the global model/framework on Health Promoting Schools.

Parallel Symposia - IAAHPSN007

Moving from tokenistic participation to meaningful influence: How young people can best engage in health policy and practice

Discussion by experts

Organiser: Plan International, UK

Speakers:

Yemurai Nyoni¹, Alyssa Frampton², Radhika Shrivastav³

¹Dot Youth; Youth representative on the PMNCH Adolescent Expert Advisory Group ²Health Rights and Responsibilities Project Canada, ³HRIDAY (Secretariat of the Healthy India Alliance)

Background:

We are currently living with the largest generation of adolescents and young

people in recorded history – an estimated 1.8 billion individuals across the globe. There is a need to act to ensure the unique health needs of today's young people and future generations are adequately addressed. But to do this effectively we need to listen to young people themselves moving from tokenistic participation to meaningful influence. Civil society, governments, and other major stakeholders should provide the tools and supportive environments for adolescents to be active participants in their own health. Young people, themselves, have the power to transform their own futures if given the right support. Advancing the health of adolescents in an equitable manner will require additional sharing of knowledge, funding, and commitments from national governments, civil society and other multi-sectoral stakeholders. This symposium will ask how this can be done most effectively, sharing examples of effective youth engagement programmes and identifying where and how you can provide more opportunities and do things better.

Objectives:

- The symposium will seek to demonstrate that, to promote adolescent health, programmes and policies need to be participatory and engage the voices and perspectives of adolescents in working on strategies that address the issues they face when growing up living in poverty.
- To introduce the voice of youth into the policy discourses that directly affect their health
- To raise awareness of the issues affecting youth health – as identified by research and young people themselves
- To identify how civil society, governments, and other multi-sectoral stakeholders can effectively provide the tools and supportive environments for adolescents to be active participants in their own health
- To share evidence of effective youth engagement programmes.

At IAAH, young people will lead a discussion around youth engagement, providing their perspectives on these emerging themes and suggesting how to develop programmes and policies that support their engagement and the health issues they identify. Youth will lead the discussion ensuring their voices and perspectives are heard, following which, strategies that address the issues they face and experiences of working with young people will be shared and discussed by the experts in the room.

Format/Structure:

Short speeches from our young speakers followed by an interactive discussion with the full panel. This session will be led by a group of young people from the global north and south, with support and response from a wider panel of practitioners and academics working in adolescent health.

Coordinating a youth led national advocacy campaign: Young people's role in demanding the right to health for all.

Alyssa Frampton¹

¹Health Rights and Responsibilities Project Canada

Background: Health rights of children and youth are protected through international laws and regulations, however, many young people lack awareness and understanding of their rights and can face barriers in realizing them, in particular with access to health services.

Alyssa will present a case study from her experience leading the Health Rights and Responsibilities project with the Young Canadians Roundtable on Health (YCRH). The project successfully educates young people on their health rights and enables them to take action through direct advocacy. Young people in Canada have been active agents of change through political mobilization, protest and legislative engagement. Youth-specific strategies include protesting bills that would constrict youth rights, and the use of social media to amplify and develop political messages.

Lessons learned: The YCRH project supports young people to approach and engage with local policy makers, enabling them to create their own advocacy projects that focus on their priority health rights issues. Strategic partnerships will be shown to be important functions for success. YCRH has benefited from support from the University of Toronto, through an initiative to outline the legal rights and responsibilities of young people in each province of Canada, which YCRH disseminated through online platforms. Such work has been successful in raising awareness among young people on their rights to health, while also galvanizing peers' responsibility to demand their rights are respected, protected and fulfilled.

Conclusions: This presentation will describe how young people can effectively tailor political messaging to their peers, while also innovating in dissemination mechanisms and tools. The case study will illustrate how issues affecting adolescent health can be effectively introduced to policy discourse by young people themselves.

How to ensure young people's voice is heard on the global stage. Turning rhetoric into reality

Yemurai Nyoni¹

¹Dot Youth; Youth representative on the PMNCH Adolescent Expert Advisory Group

Background: Yemurai will draw on ten years' experience in youth advocacy initiatives from writing calls to actions to participating in government delegations. Reflecting on global progress he will highlight that progress in adolescent health and youth participation has been frustratingly slow. While many countries have progressive laws, policies and action plans, too many lag behind in implementation. Yemurai will share a selection of case studies to demonstrate that when resourced and supported appropriately, youth advocacy can be transformational.

Lessons learned: Yemurai's experience in setting up a youth-led social enterprise generated key lessons for establishing and advancing advocacy initiatives led by and for young people. Case studies will include examples from the PMNCH Adolescent and Youth Constituency; of Dot Youth Global young leaders; of Women Deliver Young Leaders; and CIFF investments in youth engagement in Kenya. Each case study will demonstrate the value of young people's engagement in advocacy, and their unique capacity to effect change beyond tokenistic participation.

Conclusions: Civil society, governments, and other multi-sectoral stakeholders can and must provide the tools and supportive environments for adolescents to be active participants in their own health. To effectively improve adolescent health, programmes and policies need to be participatory, and meaningfully engage the voices and perspectives of young people in adolescent health strategies. Advancing the health of adolescents in an equitable manner will require additional sharing of knowledge, funding, and commitments from national governments, civil society and other multi-sectoral stakeholders.

An adolescent's role in promoting health in their community and driving increased demand for adolescent friendly health services

Young Peer Educator

Background: Plan International's Young Health Programme (YHP) in Delhi has been making a meaningful difference to the health and well-being of disadvantaged adolescent boys and girls since 2010. The health promotion programme works with young leaders in capacity-building programmes and providing information, knowledge and skills within local communities to enhance health-seeking behaviours.

The YHP peer educator will present a case study of their work within their community to build understanding and engagement in key adolescent health and protection issues, while driving improved awareness of and access to youth-friendly healthcare systems and services.

Lessons learned: The peer educator will discuss typical challenges when engaging within the community such as parental engagement and sustaining commitment and vibrancy amongst the peer educator cadre. They will present the strategies and solutions they found to ensure success. The presentation will outline the health facility youth scorecard tool to strengthen quality of adolescent health care, and illustrate how peer educator engagement can support the development and implementation of a National Adolescent Health Strategy. Youth-led community engagement mechanisms have led to significant enhancement of health providers' accountability towards government health strategy implementation, and improved health service delivery for adolescents.

Conclusions: The presentation will demonstrate how young people can overcome challenges in promoting adolescent health within their communities. It will suggest how youth-led programming can provide innovative and creative approaches to problem solving, health promotion and effective implementation of government health strategies.

Parallel Symposia - IAAHPSN008

Accelerated Action for the Health of Adolescents (AA-HA!): Act Now! No Excuses! IAAH Symposium

Discussion by experts

Organiser(s):

WHO, UNICEF, UNFPA, UNESCO, World Bank, the Partnership for Maternal, Newborn & Child Health (PMNCH)

Speaker(s):

Young person¹, Young person², Cristina de Carvalho³, Joanna Herat⁴, Anneka Ternald Knutsson⁵, Anshu Mohan², Neena Raina⁶, Ana Milena Aguilar Rivera⁷

¹YP Foundation, India, ²PMNCH, ³UNICEF, ⁴UNESCO, ⁵UNFPA, ⁶WHO, ⁷World Bank

Objectives:

- Inform participants about the key recommendations of the *Global Accelerated Action for the Health of Adolescents (AA-HA!): guidance to support country implementation*
- Showcase global, regional and national initiatives in advancing intersectoral action for adolescent health, and accountability
- Discuss how governments, UN agencies and partners can collaborate better to support AA-HA! actions in countries

Description

This symposium aims to inform action on adolescent health within national governments, research institutions, academia and civil society organizations as an integral part of achieving the Sustainable Development Goals. During the course of the event key messages from the *Global Accelerated Action for the Health of Adolescents (AA-HA!): guidance to support country implementation* will be discussed. The guidance was launched in May 2017 and was developed with the active participation of UN agencies, civil society organizations, academics, governments and most importantly, young people themselves.

The symposium will begin with a keynote speech by WHO to explain why and how the AA-HA! guidance was developed. It will then follow with an interactive panel in which representatives of youth, UNICEF, UNFPA, UNESCO, PMNCH, and World Bank will give brief, dynamic 'Ted-talk' style talks on featuring key AA-HA! recommendations. Young persons will highlight approaches that are being used by young people to hold governments accountable for adolescent health, and to advance the realization of adolescent health rights. Other panelists will present experiences, and future plans, in advancing adolescent health and wellbeing through an intersectoral approach. An interactive discussion with the audience will follow on ways to strengthen the accountability of key stakeholders – governments, young people, UN agencies, civil society organizations including researchers and academia - in investing in adolescent health.

The event will take place in English.

Health systems strengthening

IAAH170647

Implementing Adolescent and Youth Friendly Services (AYFS) in primary health care (PHC) clinics in two health sub-districts in South Africa

Catherine Martin¹, Sinead Delany-Moretlwe¹, Buyile Buthelezi², Daphne Thlabela¹, Sandra Qolesa¹, AnnahMolele¹, Pedro Pisa¹, LulamaLunika¹, Shamagonam James¹, Catherine Skosana¹, John Imrie¹

¹Wits Reproductive Health and HIV Institute, ²USAID

BACKGROUND: Adolescents remain at high risk of HIV, sexually transmitted infections and unintended pregnancy. They require access to health services that offer effective prevention, treatment and care options in environments that are sensitive and responsive to their specific needs. We describe our technical assistance approach to implementation and improvement of Adolescent and Youth Friendly Services (AYFS) in primary health care (PHC) clinics in two health sub-districts in South Africa.

METHODS: The AYFS component of Wits RHI's USAID-funded Adolescent Innovations Project (AIP) is implemented in 30 primary health care facilities across two health sub-districts in South Africa. We developed a technical assistance (TA) approach to support implementation of AYFS within the existing PHC services. With the aim of achieving a minimum set of AYFS standards using existing Department of Health (DOH) structures and staffing, the approach in every facility includes: 1) Baseline and follow-up assessments of the 10 AYFS standards; 2) Identification of individual AYFS facility champions; 3) Facility staff capacity building through training and mentoring; 4) Promotion of AYFS services within facilities and surrounding communities, and 5) Implementation of phased Quality Improvement Plans (QIP) to address identified gaps.

LESSONS LEARNED: Between June 2015 and February 2017, 30 AYFS implementing facilities had 1 baseline and 2 follow-up assessments. AYFS champions were identified in all 30 facilities; 17 facilities undertook community events promoting their services; Quality Improvement Plans were implemented in 27 facilities, using phased, step-wise approaches to addressing priority areas and common gaps. Formal AYFS training was provided to 17 DOH staff, with over 644 hours of facility-based in-service training and mentoring provided. While fluctuations in standard scores occurred among some facilities, AYFS scores overall improved from an average of 43% in June 2015 and 50% in February 2016 to 64% in February 2017.

CONCLUSIONS/NEXT STEPS: AYFS are the foundation for improving access, uptake and service quality for adolescents. Improvement and maintenance of achievements requires buy-in and investment in materials and staff to ensure standards required, once achieved, are sustained.

IAAH170235

Assessment of Adolescent and Youth Friendly Health Services in East and Southern Africa

Arushi Singh¹, Juliette Faida Nsensele², Maja Hansen³, Francesca Barolo⁴, Sameer Thakur⁴, Asha Mohamud³, Yilma Melkamu⁵, Paulin Tra²

¹The Pleasure Project, ²IPPF Africa Regional Office, ³UNFPA East and Southern Africa Regional Office, ⁴Independent Consultant, ⁵IPPF

BACKGROUND: The East and Southern Africa Commitment on improving and expanding comprehensive sexuality education and strengthen quality of adolescent and youth friendly health services (AYFHS), the UNFPA East and Southern Regional Office and IPPF Africa Regional Office, with Regional Economic Communities and other partners, reviewed existing AYFHS standards against 8 WHO Global Standards (2015) and assessed the status of their implementation in 23 countries.

METHODS: The study included literature review, in-depth interviews with key stakeholders, observation of selected health facilities, interviews with health providers and exit clients, and focus group discussions with young potential clients, outreach workers and peer educators. In-country assessments in 12 countries resulted in 164 facilities observed and health providers interviewed, and 969 clients interviewed.

RESULTS: Regional summary of findings: Facilities: 71% had outreach activity plans, but only 59% had records of outreach accomplished; 65% had policy on free or affordable services for adolescents; 49% had child protection policy;

81% had age and sex disaggregated data, but only 55% had self-monitoring systems for quality of care to adolescents Health providers: 64% had ever been trained in AYFHS; 45% were exposed to national AYFHS policies; 69% knew about laws on informed consent and services to young people Exit clients: 74% were repeat clients; 91% expressed satisfaction with services availed; 35% wanted general health services, most sought services were contraceptive counselling (18%), ANC, injectables, and HIV counselling; 34% had opportunity to express their opinions on services Qualitative data: potential clients didn't know of services, didn't trust provision of privacy, confidentiality, respect, or quality services; weak linkages between peer educators and facility management

CONCLUSIONS/NEXT STEPS: Despite progressive policies and scale in some countries, several areas need attention: • increase awareness for adolescents and young people and community members on AYFHS with adequate funding for community engagement plans, training budgets for adult outreach workers and young peer educators • integrate adolescent health in pre-service training curricula for service providers • strengthen rights awareness for young clients • address legal and policy barriers to access for young marginalized and key populations • implement age-disaggregated national HMIS • promote young people's leadership in planning and monitoring of AYFHS

IAAH170027

Transition from pediatric to adult health care services for adolescents with chronic diseases

Tamara Zubarew¹, Paula Bedregal², Loreto Correa³, Carolina Inostroza³, Adolescent Branch⁴

¹Pontificia Universidad Católica de Chile, ²Public Health Department, Pontificia Universidad Católica de Chile, ³Pediatrics Department, Pontificia Universidad Católica de Chile, ⁴Chilean Pediatric Society

BACKGROUND: One in 10 adolescents has a chronic disease, 90% survive to adulthood. Up to date, in Chile there are no studies regarding the transition process from pediatric to adult services and there are no guidelines or policies for such purpose. Adolescent transfer is usually not scheduled or planned, and it is a difficult process for both adolescents and their caregivers, and has an impact on adherence to treatment and follow-up, impacting morbidity, mortality and their quality of life.

METHODS: The Pediatrics Department of the P. Universidad Católica de Chile recently conducted the study: "The transition process from pediatric to adult services: perspectives from adolescents with chronic diseases, their caregivers and health professionals", whose goal is to describe critical points, barriers and facilitators perceived by adolescents with chronic diseases, caregivers and health professionals in the transition process. According to these results, and based on published international experiences, the present statement provides recommendations for the implementation of a gradual and planned transition process for adolescents with chronic diseases.

LESSONS LEARNED: Following aspects are discussed: design and implementation of transition policies encouraging extending of the upper age of pediatric patients to age 18 (being now up to 14 years in Chile); setting up multidisciplinary teams and establishing coordination between pediatric and adult teams; timing and stages in transitional care; fostering personal autonomy, self-care and independence; ensure a range of tools available such as medical summary, transition readiness assessment, emergency care plans. Recommendations also include an active involvement of adolescents and their families; need for emotional support; ethical issues involved; importance of confidentiality; need for adequate hospital services and professional training; and need for programs and services evaluation and further research on the subject.

CONCLUSIONS/NEXT STEPS: As a result of a planned transition and implementation of these recommendations, adolescents with chronic diseases are expected to achieve expedited access to health services, continuity of care, greater knowledge and skills in managing their disease, and reinforce personal development skills such as self-care and self-efficacy. This will result in better adherence to controls, lower morbidity and mortality, and better quality of life, achieving maximum developmental potential.

IAAH170459

Health systems strengthening (including models of service delivery & approaches to pre/in-service training)

Rakesh Chandra¹, Mahesh Srinivas¹, Courtney Boudreau¹, Claire Cole¹

¹Pathfinder International

BACKGROUND: In 2015, Pathfinder International trained 217 Accredited Social Health Activists (ASHAs) in Bihar, India to reach Mahadalit youth (ages 15-24) with sexual and reproductive health and rights (SRHR) information and services. The training was followed by on-site mentoring/supportive supervision visits to help the ASHAs reach the target community. Mahadalits are a subset of the Scheduled Caste population of India, and are among the most socially and economically vulnerable.¹ In Bihar, early marriage is highly prevalent in Mahadalit communities. This group also experiences difficulties accessing contraception due to a variety of factors, including their marginalized status, low-literacy rates, distance from health facilities, and poor outreach services by frontline workers.

METHODS: The ASHAs conducted home visits to deliver interpersonal communication on healthy timing and spacing of pregnancies (HTSP), prevention of early marriage, and community-based distribution of contraceptives. In 2016, nine Focus Group Discussions (FGDs) were held with ASHAs to identify how they reach Mahadalit youth, as well as to understand the challenges they face and how they address these challenges. Major themes and program learnings were extracted from FGDs and shared with programmatic staff to encourage real-time adaptation.

LESSONS LEARNED: Over the course of the project, ASHAs made 2,941 home visits to Mahadalits (with women ages 15-24), conducted community distribution of condoms (4,339 condoms) and pills (944 courses), and referred 205 women for sterilization and 208 women for IUD insertions. During FGDs, ASHAs discussed the importance of building rapport with young Mahadalit women, as well as with women's husbands and mothers-in-law. Data showed that while ASHAs provided counseling on delaying the age of marriage, many families were resistant to this idea. ASHAs reported tailoring contraceptive counseling based on the parity of the woman, as opposed to the woman's age or other factors. Major challenges that ASHAs reported were a lack of community members' trust of ASHAs and literacy challenges.

CONCLUSIONS/NEXT STEPS: Training programs may encourage front-line health workers to reach vulnerable populations with SRHR messages and services. The on-site mentoring/supportive supervision visits promote sustainability by providing existing government workers with the skills to reach vulnerable populations with SRHR messages.

IAAH170623

On call adolescent care and counselling services: Need of an hour

Shwetanjali Kumari¹, Deepa Maria¹, Beena Varghese¹

¹PHFI

BACKGROUND: PiramalSwasthaya in partnership with six state governments introduced a Health Information Helpline, which is a health contact center that aims to provide information on minor ailments and provides counseling services to community. By dialing 104 (a free call to users) any person can get medical information and advice, avail counseling services, request directory information, or lodge a service complaint against any public health facility. The helpline allows callers to talk anonymously. This study aims to estimate the proportion of adolescent's callers and their reasons for seeking help from the helpline.

METHODS: We analyzed one-month call records of the 104 helpline (15 September until 15 October) from three states of India (Chhattisgarh, Jharkhand, and Karnataka). Variables like age, gender, reasons for calling the helpline were included in the analysis. Analysis was conducted using statistical tool Epi info 7.

RESULTS: There were 446,693 valid calls, of which 82% calls were from Karnataka state. Of valid calls, 40% were made by adolescents (10-19 years age group), maximum from Jharkhand (53%) and minimum from Chhattisgarh (32%). Early adolescents (10-14 years) comprise 18% whereas late adolescents (15-19 years) comprise 82% of the adolescent callers. Majority of the calls were made by male adolescents (93%). Main reasons for calls by early adolescents included issues pertaining to acne/black spots, fever/cough, headache, body pain and body mass index (stature, weight, obesity, fitness etc.). For late adolescents, reasons for calls included acne/black spot, nocturnal emission/ masturbation, body mass index issues, fungal infection, hair loss, memory issues/lack of concentration, fever/cough/body pain/abdominal pain and fatigue, and depression (love failure/adjustment problems/addiction/ financial problem/examination fear).

CONCLUSIONS/NEXT STEPS: In the context of the changing socio-cultural scenario, there appears to be an increased need for adolescent care and counselling services. It is essential to help and guide them through an array of guidance and counseling services. On call consultation and counseling is one of the options that could be scaled further as it is accessible and acceptable to the adolescent population. This service provides a sense of security and confidentiality among adolescents. Female adolescents must also be encouraged to reach out to the helpline through awareness generation programs.

IAAH170681

National-wide scaling up of Youth Friendly Health Services (YFHS) in Republic of Moldova. First results and lessons learned.

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BACKGROUND: As one of the main response to youth health and development problems in Republic of Moldova, MoH with support of international donors and UN agencies since 2002-2003 is developing YFHS. Initially were created 3 pilot Youth Friendly Health Centers (YFHCs) and in 2005 was extended they number to 12 YFHCs. Created initially as projects, since 2007 all YFHC become a subdivisions of existing public primary health care institutions. Since 2008 was started they financing by State through the National Health Insurance Company (NHIC).

DESCRIPTION: In 2011 was launched scaling up process of a youth-friendly health services (YFHS). Were applied strategies for vertical and horizontal scaling up, according to WHO guidance. Thus, in 2017 YFHS are offered by a network of 40 Youth Friendly Health Centers (YFHC), which operates in all districts and municipalities of the country. As a result, access of young people to YFHS increased in the last 5 years 4 times – from 5% in 2011 to 20% in 2016. About 36% of the beneficiaries of YFHCs are boys.

LESSONS LEARNED: Main factors that act to assure sustainable scaling up of YFHS in Republic of Moldova are: combining of the horizontal with vertical scaling up strategies, such as: achievement of governmental commitment and supportive normative framework; National Health Insurance Company financing of the YFHCs in base of economical evaluation of them; Medical University Curricula revision in the area of adolescent health. Also, technical and financial support of UN Organisations and international donors and dedication of core team of professionals were crucial supportive factors in this process.

CONCLUSIONS/NEXT STEPS: In spite of increased access to YFHS last years, continued efforts are needed to ensure the effectiveness, quality and sustainability of these services. Are needed additional interventions to increase access to such services of adolescent from rural area and improve inter-sectorial cooperation in promotion of adolescent health and development.

Socially shaped behaviours

IAAH170030

Bullying Involvement and Substance Use among Brazilian Adolescent Students

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¹UCLA

BACKGROUND: Substance use is one of the leading preventable causes of mortality and morbidity in adolescents. Although bullying involvement has been associated with substance use among adolescents, most of the evidence has been restricted to high-income countries. Fewer studies are available for low and middle-income countries, home to 70% of the world's adolescents. Studies in these countries have focused on risk factors associated with bullying victimization-only, and little is known about substance use among bullying perpetrators, and perpetrator-victims. This study investigates the relationship between types of bullying involvement and adolescent substance use (i.e. alcohol, cigarettes and marijuana) in Brazil.

METHODS: Data for this cross-sectional analysis was obtained from the 2015 PENSE, a nation-wide school-based survey of 102,301 adolescents attending 9th grade. Substance use was analyzed in two ways; 1) any substance use (Yes/No) measuring any use of alcohol, cigarettes or marijuana in the previous 30 days; and 2) substance co-use (Yes/No) which measured use of all of three substances. Logistical regression analyses were conducted for each of the two substance use variables, and odds ratios (AOR) were calculated adjusting for sex, race, age, school type (Public/Private), geographic region and mental health. The analysis was also adjusted for the survey's complex sample design.

RESULTS: Adjusted odds of any substance use for bullying perpetrators-only, and perpetrator-victims were significantly higher compared to adolescent with no bullying involvement (AOR= 2.89, 95% CI=2.62, 3.19; AOR=2.37, 95% CI=2.17, 2.59, respectively). Victimization-only was associated with a slight, 9% increase in the odds of any substance use compared to those with no bullying involvement (AOR=1.095% CI=1.03, 1.17). Adjusted odds of substance co-use were also significantly higher among perpetrators-only, and perpetrator-victims (AOR= 3.76, 95% CI= 2.84, 5.00; AOR=3.18, 95% CI= 2.46, 4.12, respectively). Moreover, odds of substance co-use were not significantly different between victims-only and those with no bullying involvement (AOR=0.93, 95% CI= 0.71, 1.20).

CONCLUSIONS/NEXT STEPS: The results underscore the complex relationship between bullying involvement and substance use among adolescents. Results are in line with findings from high-income countries, and indicate type of bullying involvement should be taken into consideration when assessing health-risk behaviors and bullying among adolescents.

IAAH170337

Prevalence and correlates of Substance abuse among school going adolescents in a hilly district of Himalayan region in India

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BACKGROUND: According to UNDCP World drug report, the problem of substance abuse in adolescence is fast assuming alarming proportions in both developed and developing nations. Kullu district of Himachal Pradesh has regularly been in media headlines for extensive cannabis cultivation and abuse of other substances. The study was conducted to provide an essential source of information about substance abuse and its correlates in this Himalayan region

METHODS: This was a descriptive school-based cross-sectional study conducted among students (13-19 years) studying in classes 7th to 12th. Multi stage cluster random design and PPS sampling methodology was adopted. A sample of 3000 students both from rural and urban areas studying in 20 government and private senior secondary schools was selected. An anonymous, pre tested, self-administered questionnaire adapted from WHO and ESPAD questionnaires was used to collect relevant information. Relevant statistical analysis was done by entering the data in SPSS.

RESULTS: The ultimate response rate was 98.5 %. Out of the total of 2864 participants, 785 (27.4%) had indulged in substance abuse at least once in their lifetime. Prevalence of current and regular users was 13.8% and 4.1% respectively. Alcohol was the most commonly abused substance among ever users at 18.1% followed by tobacco (17.6%) and cannabis (6.2%). Around 85%

of the students perceived indulgence in substance abuse to be harmful for health. Binomial logistic regression revealed that substance abuse among friends (AOR=5.32), family members(AOR=2.04), inability to spend quality time with parents(AOR=2.44), gender(AOR=1.68) and older age group of 16-19 years(AOR=1.51) were the factors found to be positively associated with substance abuse.

CONCLUSIONS/NEXT STEPS: The study has brought out a high prevalence of substance abuse among the students. The participants' high knowledge about deleterious effects of substance abuse did not translate into any beneficial behavioral change. Hence, scaling up of IEC activities and life skill education focused on school going adolescents is imperative. Further, the negative influence of family abuse practices and inability to spend quality time with their wards highlights the necessity to include parents in any awareness campaign being planned. Acknowledgements: This research is funded by MAMTA-IAP-RCH fellowship award

IAAH170393

Youth obesity, chronic diseases and the food- beverage industry: Case of soda tax in Mexico

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¹Basta! Chapter Mexico

BACKGROUND: Mexico currently ranks 1st in obesity worldwide, according to the FAO; with 31.8% and 70% of the population with obesity and overweight, respectively.

DESCRIPTION: Since 2012, the company cecil proposed a tax on soft drinks in order to reduce obesity in Mexico; since the average consumption per person per year was 163 liters, being the first place in the world. Following the international recommendations, the proposal was of 20% on the price; it was also proposed that the resources collected from the tax would be used for the prevention of obesity and the installation of public drinking water fountains. In 2013 the tax on sugary drinks was approved in the Federal Congress, with a rate of one peso per liter; In addition to a special tax on processed food with a high caloric content with a rate of 8%. During the first quarter of the entry into force of the tax, what was estimated for a year was collected. After two years, the Institute of Public Health conducted a study on the decline in consumption, finding that it decreased by 7% and increased consumption of bottled water; the largest population of consumers in Mexico, by its quantity, is the largest.

LESSONS LEARNED: One of the lessons learned was that the population is misinformed about what they consume daily, so it also ignores the damage it claims to cause to their body. While obesity is a multifactorial problem, it needs efforts from all sectors in a win-win.

CONCLUSIONS/NEXT STEPS: The youths and children of today may be the first generation to die before their parents. That is why the following recommendations are made: A subsequent labeling that must contain the ingredients they contain, including all of their additives expressed in decreasing order of proportions, and their nutritional information. Consider physical education and sport as a fundamental right. The State will promote the physical activity and practice of the sport in all the schools and levels in which it imparts education. Foster the creation and maintenance of open spaces for the public, for physical activity and sports. Promote the consumption of free and free drinking water, promote and establish accessibility and availability in conditions.

IAAH170463

An evaluation of compliance, knowledge, and attitudes related to the 100% smoke-free law in bars and restaurants in Kampala, Uganda

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BACKGROUND: In 2016, Uganda implemented the Tobacco Control Act 2015, which included a smoke-free (SF) law in public spaces. We assessed: 1) compliance with the SF law in bars and restaurants; and 2) knowledge and attitudes towards the SF law among venue staff and owners.

METHODS: We conducted: 1) systematic observations of smoking behavior and signage at bars and restaurants; and 2) structured interviews with employers and employees using a random sample of N=222 venues. Data were collected 2 months after law implementation (July 2016), but prior to enforcement being mandatory

RESULTS: Active smoking was observed in 18% of venues, 31% had some unregulated form of “no smoking” signage and 47% had visible cigarette remains inside the venue. Among interview respondents, 57% felt that they had not been adequately informed about the smoke-free law; however, 90% were supportive of the ban. Nearly all respondents (97%) agreed that the law was necessary to protect workers’ health, but one-third (32%) believed that the law would cause financial losses at their establishment. Total mean indoor air quality levels were hazardous (267.6 ig/m³), while venues without active smoking had moderate air quality (29.6 ig/m³)

CONCLUSIONS/NEXT STEPS: In the early phase of Uganda’s SF law, the majority of hospitality owners and employees support the law. However, our findings indicate the majority of premises still allowed smoking on-site; active smoking was observed in nearly a fifth of the visited venues, and most signage did not meet the law’s regulations. Civil society must play a key role in supporting compliance with the law, and a coordinated enforcement system must be implemented to inform hospitality venues and smokers of the SF law requirements.

IAAH170493

Assessing the Implementation of The Strengthening Families (“Familias Fuertes”) Program across Latin America

Kristina (Gia) Naranjo-Rivera¹, Kristin Mmari¹, Sonja Caffè², Fiona Weeks¹, Robert Blum¹

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BACKGROUND: The Pan American Health Organization (PAHO/WHO) commissioned a study to address gaps in knowledge about the implementation of the “Strengthening Families” Program (Familias Fuertes 10-14) in Latin America, and to formulate recommendations for continued program operation and research. Familias Fuertes 10-14 (FF) is a 7-session; family-centered, positive youth development model that targets adolescents ages 10-14, to avert problem behaviors such as substance abuse, teen pregnancy, and violence. While impact evaluations have demonstrated program success in the US and Europe, there is limited evaluation data in Latin America.

METHODS: In this study, we mapped FF in 16 Latin American countries by collecting data from questionnaires, conducting 30 key informant interviews, and reviewing country-level documentation. We captured information about the characteristics of FF implementation in Latin America, including training and infrastructure development, target populations, fidelity, adaptations, and outcomes. Findings were synthesized to formulate recommendations for improving FF from lessons learned and best practices, and to outline future research opportunities.

RESULTS: While program implementation has varied substantially, as seen in the diverse range of geographical locations, settings, and target populations, informants perceived that program results met and exceeded the intended program outcomes. Most countries reported observing improved bonds and communication between parents and youth, parenting skills and youths’ abilities to cope and resist peer pressure. In addition, several countries observed decreased intrafamilial violence and youth problem behaviors, and increased school attendance and performance. Informants also reported external challenges, including limited resources and government support, political problems, and low parent and male participation. When queried about overcoming challenges, informants described making specific adaptations, such as modifying selection criteria, tailoring content to context, and using best practices for garnering community and government support.

CONCLUSIONS/NEXT STEPS: Study findings reveal initial evidence that implementation of FF has had success as a primary prevention program for enhancing parenting skills and reducing adolescent problem behaviors in the 16 Latin American countries implementing from 2005 to 2017. These findings strengthen evidence supporting the inclusion of FF in PAHO’s regional strategy to improve adolescent health. However, to determine the true impact of the program in preventing harmful behaviors among adolescents, we recommend conducting a longitudinal impact evaluation.

IAAH170172

Cannabis legalization in Canada: Public health concerns regarding youth

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BACKGROUND: In June 2016 the Canadian government announced a 60 day public consultation on the legalization of cannabis for recreational use. Since health concerns about cannabis were important, the Montreal Regional Public Health department mandated a multidisciplinary team of professionals with expertise in adolescent addictions, mental health and tobacco control and public policy to respond. The objective was to submit evidence based recommendations to legalize cannabis in a manner that would protect the population’s health, especially that of children and adolescents.

DESCRIPTION: The current scientific literature concerning the risks associated with cannabis use was reviewed. The experiences of jurisdictions that had already legalized cannabis were analyzed and lessons taken from these field experiments. A response to the Government of Canada’s public consultation was submitted with recommendations addressing the following issues: 1) Harm reduction: regulations concerning minimum age for cannabis use, publicity, taxation, quantities and products allowed (edibles not initially), THC and CBD levels, labeling, safe packaging and education of the public; 2) Establishment of a licensed production system: regulations on personal cultivation and commercial production that would optimize the quality and security of cannabis products; 3) Development of the distribution system: regulations on places of purchase; prohibition of vertical consolidation (integrated production, distribution, sales) and horizontal sales (retail stores); 4) Accessibility of medical cannabis: eliminate barriers for patients and discourage recreational users from accessing medicinal cannabis.

LESSONS LEARNED: Our response served to inform decision makers about the risks of cannabis use and the importance of specific regulations to protect our population. It also stimulated debate among colleagues, as well as the public, on cannabis legalization and the potential health risks of cannabis use, especially concerning youth.

CONCLUSIONS/NEXT STEPS: This consultation has mobilized the health, education and workplace sectors in our jurisdiction to review best practices in prevention of early initiation of cannabis use in youth and hazardous use in adults. Research priorities are being identified and on-going surveillance of the effects of this legislation on the population’s health will be implemented to monitor changes following legalization and to allow adjustments to the law.

Non-Communicable Diseases

IAAH170221

Acne vulgaris: prevalence, severity and impact on quality of life and self-esteem among secondary school-aged adolescents in Egypt.

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BACKGROUND: Acne vulgaris has a great importance among the dermatoses that affect adolescents, in view of its prevalence in this age bracket and its impact on quality of life (QoL). Objectives: to estimate the prevalence of acne, severity and its impact on QoL and self-esteem among adolescents in Alexandria, Egypt.

METHODS: A cross-sectional study was conducted, where 787 students were selected using multistage stratified random sampling from twelve (six private and six public) secondary schools in Alexandria, between February and May 2016. Data collection was performed using self-reported questionnaire and clinical examination. Severity of acne, its impact on QoL and self-esteem were assessed using Global Acne Grading System (GAGS), Cardiff Acne Disability Index (CADI) and Coopersmith self-esteem scale, respectively.

RESULTS: The study population consisted of 396 boys (50.3%) and 391 girls (49.7%), with a mean age of 16.31±0.725 years. Prevalence of self-reported acne was 34.7%. Females reported acne more frequently than males (39.1% vs. 30.3%, p=0.009). Prevalence of clinically-confirmed acne was 24.4%, with higher rates among females (28.6%) than males (20.2%, p=0.006). A higher proportion of students in private schools (29.6%) compared with those in public schools (19.6%) had acne (p=0.001). Using GAGS, 75.5% of students had

mild acne, 22.9% had moderate acne and 1.6% had severe acne. The severity of acne was similar in both genders. Association was neither found between self-esteem and acne nor with acne severity. Low self-esteem was more prevalent among females with acne (67.0%) than males with acne (45.0%, $p=0.004$). The CADI showed that 49.0% experienced mild impairment, 39.6% had moderate and 11.4% had severe impairment. The overall mean CADI score was 4.95 ± 3.21 , with a mean score of 4.62 ± 3.44 in males and 5.19 ± 3.02 in females. No association between CADI and gender was found. There was a significant medium positive correlation between GAGS and CADI ($r=0.338$, $p=0.00$).

CONCLUSIONS/NEXT STEPS: Our findings should alert health professionals and school authorities to timely identify, manage and educate adolescents with acne.

IAAH170667

Prevalence and Determinants of Diabetes among Adolescents in Delhi - A Cross-Sectional Study

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BACKGROUND: Adolescents have become quite vulnerable to various non-communicable diseases like diabetes, especially due to tremendous lifestyle changes over the last few decades. Global & national estimates for prevalence of diabetes in adolescent age group are unavailable till date. Hence, the study was conducted to study the prevalence of diabetes and prediabetes among Indian adolescents and associated risk factors.

METHODS: The community-based cross-sectional study was conducted in three urban areas of central Delhi catered by Maulana Azad Medical College over a period of 12 months (January 2014 to December 2014) among adolescents residing in these areas. The sample size was calculated to be 915. Accounting for 10% non-response rate, a total of 1005 adolescents were included in the study. Houses in all 3 areas were selected as per systematic random sampling. The purpose of the study was explained to each subject and his/her parents in the local language and informed consent was taken. The individual was then interviewed using a predesigned, pretested, semi-structured questionnaire containing items on identification data and risk factors, and tested for both diabetes and hypertension. Anthropometric measurements were also done. The collected data was then analysed and statistically evaluated using SPSS-17 version.

RESULTS: Overall prevalence of diabetes & prediabetes was 3.6% & 6.1% respectively. Prevalence of diabetes was significantly higher in obese persons (13.7% vs. 2.4%, p value <0.001), sedentary adolescents (4.6% vs. 1.9%, p value=0.02), smokers (9.4% vs. 3.3%, p value=0.02), non-vegetarians (4.5% vs. 1.6%, p value=0.02), hypertensive (10.8% vs. 3.1%, p value <0.001) & subjects with family history of diabetes (11.2% vs. 2.4%, p value <0.001). Independent risk factors on multivariate logistic regression analysis for diabetes were age 15-19 years [OR=2.03, CI:1.25-4.03], obesity [OR=1.86, CI:1.05-3.37], family history of diabetes [OR=2.16, CI: 1.27-3.66], sedentary lifestyle [OR=1.90, CI: 0.98-3.69] & hypertension [OR=1.79, CI: 1.11-2.45].

CONCLUSIONS/NEXT STEPS: Current study observed that diabetes is emerging as a public health problem among adolescents. Hence, it is recommended that healthy lifestyle changes like reduction of salt intake and fatty food, regular exercise, reduction of BMI, and abstinence from tobacco and alcohol should be promoted to reduce the prevalence of diabetes. An intensive IEC campaign to educate adolescents and sensitization of healthcare personnel & policymakers is essential for prevention and control of diabetes.

IAAH170296

Prevalence and associate risk factors for diabetes among Adolescents in United Arab Emirates

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BACKGROUND: The United Arab Emirates (UAE) has one of the highest prevalence diabetes mellitus in the world among its adults; however, similar

data for adolescents is unavailable. This study aimed to estimate the prevalence of prediabetes, diabetes mellitus type 1 (T1DM) and type 2 (T2DM) in UAE youth and evaluate associated risk factors

METHODS: A random sample of 1186 adolescents, aged 12 to 18 years old was selected from 114 public and private schools in Al Ain, UAE. Prediabetes, T2DM & T1DM were diagnosed by a) by laboratory findings according to American Diabetes Association guidelines: fasting plasma glucose (FPG) ≥ 126 mg/dl (7.0 mmol/l) and 100-125 mg/dl (5.6-6.9 mmol/l), respectively and/or b) or clinically by history of insulin or oral hypoglycemic drug use.

RESULTS: Overall, the prevalence (per 1000 subjects) of prediabetes, T2DM and T1DM were 85.30 per 1000 (95% CI, 67.98-98.9), 8.44 per 1000 (95% CI, 3.91-14.02), and 1.69 (95% CI, 0.15-4.47), respectively. After controlling for age, the potential determinants for prediabetes, included native Emirati ethnicity (adjusted relative risk ratios [Adj. RRR]=2.2; 95% CI: 1.32-3.68, $p<0.002$), male gender (Adj. RRR=3.33; 95% CI 1.94-5.72, $p<0.001$) lack of physical activity (Adj. RRR=1.79; 95% CI: 1.08-2.99), $p<0.025$), time on screen (Adj. RRR=3.14; 95% CI: 1.07-10.43, $p<0.045$). Less than secondary level education of mother (Adj. RRR=8.40; 95% CI: 8.40, $p<0.0047$), lack of physical activity (Adj. RRR=7.69; 95% CI: 1.37-43.13, $p<0.020$), being overweight (Adj. RRR=9.26; 95% CI: 0.99-87.05, $p<0.051$) and central obesity (Adj. RRR=45.01; 95% CI: 5.56-364.29), $p<0.001$) were potential determinants for T2DM.

CONCLUSIONS/NEXT STEPS: The prevalence of prediabetes and T2DM is excessive among adolescents of the UAE. Lifestyle changes are urgently needed to mitigate this major public health epidemic.

IAAH170361

Building competencies for the provision of quality health services for adolescents in Latin America

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BACKGROUND: The existence of competent service providers is essential for the provision of quality health services for adolescents. In 2015 the World Health Organization (WHO) and UNAIDS published global guidance on the core competencies needed for primary health care providers. A key debate in this respect is related to the most expedient modalities for acquisition of these competencies, including pre-service, in-service, or other pathways. In 2003 the Pan American Health Organization (PAHO/WHO) entered into a partnership with the school of Medicine of the Catholic University of Chile for the development of a diploma course on adolescent health. The modular course is offered as post-graduate training through a virtual platform over a 9-month period. PAHO also established a scholarship program, and between 2003 and 2015 a total of 687 scholarship recipients from 15 Latin American countries initiated the training. In 2016 PAHO conducted an evaluation of this 12-year capacity building effort.

DESCRIPTION: All 687 persons were invited to participate in an online survey based on the three domains and 17 core competencies proposed by the WHO. The survey included questions on the acquisition of the core competencies, perceived improvements in the position and service provision, and challenges or problems encountered

LESSONS LEARNED: A total of 282 persons (41%) completed the survey. Reported improvements included increased job autonomy and career perspectives, increased confidence in the ability to provide services for adolescents and level of client satisfaction. Improvements were reported in all the core competencies ranging from 6.7 to 8.2 on a 10-point scale. Key challenges and problems included the lack of policies and opportunities to make changes in the service delivery in line with the new knowledge, lack of resources to implement sustainable changes in the programs and services, and being transferred to other posts. Recommendations included updating of training contents with emerging topics such as the use of digital media and bullying.

CONCLUSIONS/NEXT STEPS: From the perspective of the participants the training contributed substantially to capacity strengthening in core adolescent health competencies. Advocacy with national and local authorities to establish a favourable policy environment for trained persons to put into practice what was learned is essential.

IAAH170096

Child and adolescent mortality across Malaysia's epidemiological transition: A systematic analysis of global burden of disease data

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BACKGROUND: A rapid epidemiological transition in developing countries in South East Asia has been accompanied by major shifts in the health status of children and adolescents. In this paper, mortality estimates in Malaysian children and adolescents from 1990 to 2013 are used to illustrate these changes.

METHODS: All-cause and cause-specific mortality estimates were obtained from the 2013 Global Burden Disease Study. Data were extracted from 1990-2013 for the developmental age range from 1 to 24 years, for both sexes. Trends in all-cause and cause-specific mortality for the major epidemiological causes were estimated.

RESULTS: From 1990 to 2013, all-cause mortality decreased in all age groups. Reduction of all-cause mortality was greatest in 1-4 year olds (2.4% per year reduction) and least in 20-24 year olds (0.9% per year reduction). Accordingly, in 2013, all-cause mortality was highest in 20-24 year old males (129 per 100,000 per year). In 1990, the principal cause of death for 1-9 year boys and girls was vaccine preventable diseases. By 2013, neoplasms had become the major cause of death in 1-9 year olds of both sexes. The major cause of death in 10-24 year old females was typhoid in 1990 and neoplasms in 2013, while the major cause of death in 10-24 year old males remained road traffic injuries.

CONCLUSIONS/NEXT STEPS: The reduction in mortality across the epidemiological transition in Malaysia has been much less pronounced for adolescents than younger children. The contribution of injuries and non-communicable diseases to adolescent mortality suggests where public health strategies should focus.

IAAH170730

Protecting young generation of Indonesia- fight for comprehensive tobacco advertising regulation

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BACKGROUND: The prevalence of smoking among children aged 10-14 years in Indonesia increased from 9% in 1995 to 17.4% in 2010. Exposure to tobacco advertisements contributes to smoking uptake among these youths. Indonesian Government enacted Tobacco Control regulation in December 2012 that includes partial control on tobacco advertisement and sponsorship (TAPS). Understanding concerns of stakeholders by analysing news provides insight to maximize the potency of the regulation. This study aims to analyse stakeholder arguments regarding the adoption and implementation of the regulation.

METHODS: News articles in English and Bahasa Indonesia from 24 December 2014 to 29 February 2016 were attained from Factiva for printed and Google News for online articles. Specified search terms were applied and 213 news articles were included in the analysis. A coding procedure application resulted in 9 in support and 7 opposed categories. Stakeholders who presented the arguments were documented, descriptive analysis then applied. Kappa statistic was calculated for inter-coder reliability.

RESULTS: More than two-thirds (69%) of 436 arguments were in support of the regulation, almost half (47.2%) of those agreed that the regulation should be more comprehensive and the implementation should be enhanced. Protecting young people (9.6%) and other health concern were the next common reasons to push the adoption and to scale up into more comprehensive regulation. Of 135 opposed arguments, the three most common were the potential decrease in government revenue at 26.7%, disadvantage to the tobacco industry at 18.5% and concern for tobacco farmers/workers welfare at 11.1%. The majority of the in support arguments were made by national government, tobacco control advocates, and journalists, whilst the tobacco industry made most opposing arguments.

CONCLUSIONS/NEXT STEPS: The advocacy for stronger TAPS ban has become an on-going fight to protect young peoples in Indonesia. Understanding the arguments reported by news media will assist advocates in advancing legislative reform. Making media analysis available to advocates, especially in a fragmented and expansive geographic area, like Indonesia, will ensure lessons learned are shared in a timely manner.

Nutrition

IAAH170287

Prevalence and predictors of stunting in Indian adolescents- Findings from National Nutritional Monitoring Bureau Survey 2011-12

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BACKGROUND: Adolescence is the transition phase from childhood to adulthood, which is the second fastest period of growth after infancy. Thus, nutritional assessment is important during this period as they are more susceptible to nutritional insults. The present study was done with an objective to assess the prevalence and predictors of stunting in rural adolescents in India.

METHODS: The data set on 15523 adolescents from the National Nutritional Monitoring Bureau Survey (2011-12) conducted in 10 states of India was utilised. Stunting was estimated using height for age Z-scores according to WHO classification. Dietary intakes and dietary diversity score (DDS) was analysed from the 24 hr dietary recall available in a subset of 6842 adolescents. The distribution of calories from macro nutrients was calculated and compared with the Acceptable macro nutrient distribution range (AMDR) for Indians. Statistical analysis includes the descriptive statistics, Chi-square tests for association and logistic regression for computing odds ratios.

RESULTS: The overall prevalence of stunting in adolescents is 31%, the prevalence being higher among girls and in 13-15y age-group. Dietary intakes of macro and micro nutrients and DDS was observed to be lower in stunted compared to normal adolescents with age and gender differentials. Contribution of calories from macro nutrients is significantly lower in stunted girls of 10-12 age groups. Macro nutrient distribution range does not satisfy AMD across age and gender with carbohydrates as the primary source of energy (74-76%). Factors associated with higher odds of stunting in adolescents are paternal illiteracy, living in Kutcha house, low per capita income, 15-19y age group, DDS less than eight food groups out of 14 food groups and unprotected source of drinking water.

CONCLUSIONS/NEXT STEPS: The prevalence of stunting is high among rural adolescent girls and boys. DDS and non-dietary factors such as source of drinking water, age group, income, father's educational status and type of house are associated with stunting. The results of the present study will help in planning intervention programmes to ameliorate stunting among adolescents in India.

IAAH170358

Stunting in early childhood and risk of overweight/obesity in adolescence: Evidence from 7 and 14 years cohort in Indonesia

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BACKGROUND: Stunting, a form of chronic malnutrition, has been closely related to being overweight/ obese in children around the world, including in Indonesia – constituting the double burden of malnutrition. Our previous cross-sectional research has shown that stunted children were significantly more likely to be overweight than the healthy height children (Odds Ratio>1) in four different years (1993, 1997, 2000 and 2007). This study aims to determine whether stunted young children (aged 2.0-4.9 years) are at greater risk of overweight/obesity, thinness, or high blood pressure in adolescence.

METHODS: This is a secondary data analysis using the Indonesian Family Life Survey waves 1 (1993) to 4 (2007). We generated a 14-year follow-up cohort (1993-2007) and two 7-year cohorts (1993-2000 and 2000-2007) of children. Stunting (HAZ<-2) and overweight/obesity (BMIZ>+1) were determined based upon the WHO Child Growth Standards. We analysed the data using STATA Data Analysis and Statistical Software version 13. We computed and presented the prevalence of stunted children in 1993 who fell in the overweight/ thinness category fourteen years later in 2007 as well as the prevalence of stunted children in 1993 and 2000 who become overweight/obese or thin seven years later (in 2000 and 2007, respectively). High blood pressure (HBP) was interpreted using the 4th Diagnosis of HBP in Children and Adolescents (>90th percentile).

RESULTS: 765, 1083, and 1589 children were included in the 14-year-, and the two 7-year-cohort analyses, respectively. In the 7-year-cohorts, early life stunting was inversely associated with overweight/obesity (Prevalence Ratio 0.32 and 0.38, respectively; P<0.05), but no significant association was found

with the 14-year cohort. We found no significant association between early life stunting to adolescent thinness or the likelihood of having high blood pressure in adolescence.

CONCLUSIONS/NEXT STEPS: We found no causal association between early-life stunting and overweight/obesity, thinness or high blood pressure in adolescence in Indonesia.

IAAH170614

Effectiveness and feasibility of Weekly Iron and Folic Acid Supplementation to adolescent girls and boys through Peer Educators at Community level in the tribal area of Gujarat

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BACKGROUND: Anemia during adolescence affects growth and development of girls and boys increasing their vulnerability to dropping out-of-school. An estimated 56% girls and 30% boys in the age group 10-19 years in India are anemic according to NFHS-3 data. NFHS4 data reveals that there is no difference in anemia among 15-49 year women (55% anemic) Hence investing in preventing anemia during adolescence is critical for their survival, growth and development. Objective: To find out the burden of anemia on adolescent age group in the tribal area of Jhagadia block and to assess the change in the hemoglobin level through the weekly Iron and Folic Acid IFA (DOTS) directly observed treatment supplementation under Supervision by Peer Educators at Community level among adolescents.

METHODS: Community based intervention study conducted with adolescents (117 girls and 127 boys) aged 10-19 years, through supplementation of IFA (DOTS) by trained Peer Educators for 52 weeks in 5 tribal villages of Jhagadia. Hemoglobin level was determined by HemoCue method before and after intervention and sickle cell anemia by Electrophoresis method. Primary data on hemoglobin and number of tablets consumed was collected and statistically analyzed in SPSS 16.0 software by applying paired t-test.

RESULTS: The overall findings suggest that the prevalence of anemia reduced from 79.5% to 58% among adolescent girls and from 64% to 39% among boys. Mean rise of hemoglobin seen was 1.5 g/dl among adolescent boys and 1.3 g/dl among girls. A significant association was found in change in hemoglobin before and after intervention (P=0.000)

CONCLUSIONS/NEXT STEPS: Prevalence of anemia among girls and boys can be reduced in their adolescent phase of life, through weekly supplementation of iron folic acid tablets under direct supervision and nutrition education by Peer Educator at community level.

IAAH170683

Prevalence and Predictors of Anemia among Adolescent of Nepal: A Nationally Representative Cross-sectional Survey

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BACKGROUND: Anemia is a major public health problem among adolescents in developing countries but there is limited data available, including for Nepal. This study investigated the prevalence and predictors of anemia in a representative population of adolescents within the National Adolescent Nutrition Survey, 2014 in Nepal.

METHODS: 3780 adolescents aged 10 to 19 years were selected for a cross-sectional survey through multi-stage cluster sampling. Structured interviews and anthropometric measurement were undertaken, together with capillary blood to estimate blood hemoglobin levels. Bivariate and multivariate analyses were undertaken to compute the Adjusted Odds Ratio (AOR).

RESULTS: The overall prevalence of anemia was 31%, of whom 18% had moderate to severe anemia. The likelihood of anemia was significantly higher among older adolescents (AOR 1.74, 95% CI: 1.39-2.18), females (AOR 1.98; 95% CI: 1.61-2.44), Hindus (AOR, 2.52; 95% CI: 1.49-4.28), and those residing in the Tarai region (AOR 1.67, 95% CI: 1.01-2.78). Food consumption from more than four food groups (AOR 0.70, 95% CI: 0.56-0.88) was protective against anemia.

CONCLUSIONS/NEXT STEPS: Anemia is prevalent in Nepali adolescents. Given the impact of anemia on learning and productivity, better understanding of the causes of anemia in both genders are needed, as are efforts to improve the nutritional status of this high-risk population.

IAAH170319

Ten2Twenty: Nutritional, social and economic pathways of optimizing adolescent nutrition for better health in low and middle income countries: A systematic literature review

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BACKGROUND: There is increasing attention to adolescence as “the second decade of opportunity” for improving nutritional status in order to optimize adolescents’ health and developmental outcomes, and those of the future generation. However, adolescent nutrition is complexly interwoven with social and economic life trajectories. Although a growing amount of studies focuses on adolescent nutrition and social and economic aspects, there is a need for synthesizing associations, and untangling them at micro, meso, and macro levels.

METHODS: We conduct a systematic narrative literature review to improve understanding on the interrelations between nutritional, and socio-cultural and economic aspects during adolescence in LMICs. Searches were performed in PubMed, Scopus and CAB Abstracts and built on five layers including adolescence, (10-19 years), LMICs (World Bank list), nutritional status, and socio-cultural and economic aspects. Results were limited to primary research between 1997 and 2017. Two reviewers screened titles and abstracts. Included papers were fully read and assessed for quality, after which data was extracted and categorized.

RESULTS: Out of 1752 studies, 196 were selected for data extraction. Most concentrated around larger countries and focused on boys and girls. Papers focused on: overnutrition (33%); over- and undernutrition (51%); undernutrition (8%); or food security status (8%). The majority had a cross-sectional design (70%) and only 16% had a longitudinal design. Definitions of adolescence and measurements of nutritional status highly varied. Factors associated with nutritional status were found at the individual (e.g. sex, age, ethnicity, birth order, education) and household level (household composition, socio-economic status, residence, household wealth, parental background). Other factors related to autonomy, pregnancy, migration, marriage and peer effects. Consequences of malnutrition were found in life course trajectories of education, family formation (marriage, fertility), and labour market participation.

CONCLUSIONS/NEXT STEPS: Research on associations between nutritional, socio-cultural and economic trajectories of adolescents in LMICs seems fragmented. Future research should focus on improving knowledge concerning the critical stages of adolescence and investigate which social and economic drivers are herein important. Developing and testing standardized nutritional assessment methods, interdisciplinary research, qualitative studies, and longitudinal multi-country studies are needed to inform the highly needed integrated interventions aiming to improve the nutritional and development outcomes of adolescents.

IAAH170519

Prevalence of and factors associated with thinness and anaemia among younger and older adolescents: Evidence from a state-representative survey of adolescents in Uttar Pradesh and Bihar

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BACKGROUND: Adolescence can be the last window of opportunity to identify vulnerable groups that require appropriate nutrition interventions and to implement strategies to correct growth deficits. Yet, nutritional status of adolescents has been insufficiently studied. Much of the population-based evidence on nutritional status in India, for example, focuses on pre-school children and married women in their reproductive ages. The objective of this paper is to present evidence on the prevalence of anaemia and thinness among adolescents aged 10-19 and to identify factors correlated with the different levels of nutritional status.

METHODS: Data come from a state-representative survey of adolescents (aged 10-19 years) in the states of Bihar and Uttar Pradesh. Survey participants included unmarried boys and girls aged 10-19 and married girls aged 15-19; a total of 20,594 adolescents were interviewed successfully. Anthropometric measurement and anaemia testing were conducted for a subsample of these adolescents (nearly 8000 adolescents). Levels of malnutrition have been assessed using BMI-for-age (WHO growth references) and hemoglobin level. We adopted proportional odds model to examine the factors associated with different levels of nutritional status among adolescents.

RESULTS: Overall, 29% and 19% of younger (10-14 years) and older (15-19 years) boys were found to be thin; comparatively, fewer girls were thin (19% of younger girls and 9-10% of older girls). On the contrary, anemia was more prevalent in girls as compared with boys: 13% of younger girls and 19-27% of older girls were moderately or severely anaemic, and the corresponding percentages among boys were 6 and 12, respectively. Moreover, 2-3% boys and 3-4% girls were overweight. Findings from proportional odds regression models suggest that respondent's education and household wealth status were correlated with thinness and overweight across all categories of adolescents, and respondent's education was associated with anemia among older boys and girls. Findings also show that boys who received nutritional counselling or services were less likely than others to be thin, and married girls who received such services were less likely than others to be anaemic.

CONCLUSIONS/NEXT STEPS: The high prevalence of thinness and anaemia among adolescents calls for greater focus on providing adolescents with nutrition services and counselling.

Mental health

IAAH170538

HIV associated psychosocial adversities and stresses in the lives of adolescents visiting the Comprehensive Care Clinic at Kenyatta National Hospital in Nairobi

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BACKGROUND: Kenya is among six countries worldwide that contributes about half of the deaths due to AIDS related illnesses among adolescents. Tracking psychosocial adversities and behavioral outcomes in young people living with HIV provides us with unique insight into developing curative and preventative interventions and allow us to rethink pathways to various services and outreach implementation gaps.

METHODS : We conducted a descriptive survey among 270 HIV positive adolescents aged 10 – 19 years to determine psychosocial challenges using the HEADSS assessment tool covering Home environment, Education, Activity & exercise, Drugs use, Sexuality functioning and suicide / depression. Depression was further assessed using a PHQ 9 scale. The study was conducted between August and December 2016 among adolescents enrolled into the Comprehensive care clinic (HIV clinic) at Kenyatta National Hospital, Nairobi.

RESULTS: We enrolled 270 adolescents. The mean age of our sample was 14.75 years (SD=2.65) and 53.7% were males. Nearly all of the participants (99.6%) were in school, 18.5% (n=50) had experienced bullying, 18.1% (n=49) reported dropping school performance, 33.7% (n=91) had repeated a class, 31.5% (n=85) had changed school in the last 2 years, and 44.1% (n=119) reported being sent away from school due to lack of fees. Another, 12.6% (n=34) reported missing meals in the preceding 2 weeks and 29.6% (n=80) were not involved in extracurricular activities. Of those adolescents who were 12 years and above 13.6% (n=31) reported having had a sexual encounter of whom 69% (n=20) did not consistently use a condom. Depressive symptoms were found in 52.6% (n=142) of the study participants. On univariate analysis, factors found to be associated with depression included the older adolescent aged 15-19 years ($\chi^2(1, 270) = 14.80; P < 0.001$), having repeated a class ($\chi^2(1, 270) = 3.67; P = 0.018$), being sent away from school due to lack of fees ($\chi^2(1, 270) = 7.85; P = 0.005$) and ever missing a meal in the preceding 2 weeks ($\chi^2(1, 270) = 6.84; P = 0.009$). On multivariate analysis of association between PHQ-9 scores and other variables being of ages 15-19 years and missing meals due to food insecurity had odds of 2.88 (CI 1.72 – 4.82) and 2.62 (CI 1.09 – 6.28) respectively of developing depression.

CONCLUSIONS/NEXT STEPS: One in every two adolescents living with HIV and attending the KNH clinic is suffering from depression. Older age and lack of food security were independent risk factors for depression.

IAAH170601

Competing frameworks to understand suicide among LGBTQ adolescents

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BACKGROUND: Suicide is a global leader in deaths among adolescents. In the United States, it is the second leading cause of death and has nearly doubled within the 5-14 years old age group in the last decade. Adolescents and young adults who report being LGBTQ may be at the greatest risk of suicide with estimated 2-5 times greater risk than hetero-normative counterparts. These estimates suggest that suicide may easily be the leading cause of death for LGBTQ youth.

METHODS: The presentation is based on a systematic review to synthesize the literature about sexual orientation as a factor that affects the suicide risk among adolescents and identify the gaps to inform future research.

RESULTS: Two competing theories are the most used in the frameworks to relate sexual orientation and suicide among adolescents. Minority stress theory proposes that the greater burden of suicide on LGBTQ youth may be driven by the stress and negative affect associated with stigma discrimination. Intersectionality approaches suggest that racial differences together with sexual orientation are factors that affect the risk of suicide among adolescents such that White and Hispanic gay adolescents as well as White lesbians may be at a greater risk of suicide due to their sexual or gender orientation status than Black or Asian counterparts. Female sexual minorities, much like females generally, also appear to report greater suicide risk than male counterparts. Studies on adolescent suicide

in LGBTQ populations that take a minority stress theory approach highlight how it is not LGBTQ status per se that is responsible for elevated risk but rather that it is the minority status of LGBTQ populations that puts them at greater risk for the true underlying causes of suicide risk generally. Numerous individual, interpersonal, and community level factors that are associated with suicidality are disparately associated with LGBTQ minority status.

CONCLUSIONS/NEXT STEPS: There is a dearth of research on adolescent LGBTQ suicidality in countries outside the U.S. and Western Europe, a fact that itself is a disparity. Where literature does exist, it tends to support general findings that LGBTQ are at elevated risk relative to same sex heterosexual peers.

IAAH170278

Self-harm prior to pregnancy, maternal mental health and mother-infant bonding: 20-year prospective cohort study

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BACKGROUND: Self-harm is a conspicuous marker of underlying emotional vulnerability and is predictive of poor life outcomes. The prevalence of self-harm in young people is rising and is particularly common in young women. However, very little is known about the perinatal outcomes (including maternal mental health and maternal-infant bonding) of women with a preconception history of self-harm.

METHODS: The Victorian Intergenerational Health Cohorts Study (VIHCS) is a follow-up study of participants in the Victorian Adolescent Health Cohort Study (VAHCS), which was initiated in August, 1992 in the state of Victoria, Australia. In VAHCS, participants were assessed for health outcomes at ten time-points (waves) from age 14 years to age 35 years. Enrolment to VIHCS began in September, 2006, during the ninth wave of VAHCS, and depressive symptoms at this time-point were measured with the Composite International Diagnostic Interview. We contacted women every 6 months (from age 29 years to age 35 years) to identify any pregnancies. We assessed perinatal depressive symptoms with the Edinburgh Postnatal Depression Scale (EPDS) by computer-assisted telephone interview at 32 weeks of gestation, 10 weeks after birth, and 12 months after birth. We defined perinatal depression as an EPDS score of 10 or more. The Postpartum Bonding Questionnaire (PBQ) was used to assess maternal-infant bonding at 10 weeks and 32 weeks postpartum.

RESULTS: Preliminary analyses demonstrated that at all three perinatal time-points, significant differences in depression scores were observed between participants who self-harmed as young adults and those who did not. These associations remained significant after adjusting for preconception mental disorder. Differences were also observed in the mother-infant bonding scores between these two groups; final analyses will be conducted prior to the IAAH congress and discussed in full.

CONCLUSIONS/NEXT STEPS: Our findings highlight the importance of identifying women with a recent history of self-harm during routine antenatal appointments, in order to implement appropriate interventions. It is likely that this has the potential to improve a) their mental health; b) their relationships with offspring; and c) the physical and mental health of their offspring.

IAAH170344

A qualitative study of understanding depression and help-seeking behaviour among rural school-going adolescents in India

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BACKGROUND: Adolescents comprise nearly one-fifth of the total population of India. Depressive disorders are present in a high percentage in Indian

adolescents. Little research, however, has focused on Indian adolescents' knowledge and views about depression and seeking help for depression. This study was aimed at exploring adolescents' understanding of depressive disorders and the potential causes for them; and identifying the help seeking behaviour of rural adolescents and their families.

METHODS: Hundred students (52 boys and 48 girls) from 6 secondary schools of Nalanda district of Bihar, India participated in 12 semi-structured focus group discussions (8-9 each with boys and girls) where participants were asked questions to elicit their understanding of depression, treatment for depression, and words used to describe it. Coding of prominent themes and words from transcribed discussions were entered in NVivo 10 for qualitative analysis. Three themes emerged: (1) adolescents' description of depression, (2) beliefs about adolescent depression, and (3) treatment for adolescent depression.

RESULTS: Students used following local language (Hindi) terms to describe depression: tanav (tension), chinta (worries), and Mansikbhimari (mental illness). Students' description of depression included negative behavioural symptoms such as sadness, irritability, social withdrawal, and lack of concentration. Both male and female participants agreed that females experienced more depression than males. Female participants reported that girls experienced more depression than boys due to gender discrimination, early marriages and low self-esteem. Students reported that the first point of contact is mostly the religious healer (Oja, Bhagat) or a quack (Jholachap doctor) because they are easily accessible and costs less than the trained doctors. Students responded that trust and support are the most important needs when they are depressed. All the participants expressed commitment to help their peer, but when probed for methods and resources, they displayed either poor or inappropriate knowledge.

CONCLUSIONS/NEXT STEPS: While depressive symptoms among adolescents in India are common and recognized, resource and treatment knowledge is scarce. An understanding of the beliefs, attitudes, and knowledge of these adolescents can provide crucial information about the content for already existing school-based health programmes and/or provide structure for a universal, school-based mental health awareness programme.

IAAH170439

Body Mass Index (BMI) in childhood and risk of depressive symptoms and disordered eating in adolescence: The mediating role of body image and external signs of puberty

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BACKGROUND: Research indicates the increase of eating pathology and depressive symptoms in adolescence, which are both associated with harmful effects upon physical and psychological health in adulthood. This study examined childhood BMI (7 years) as a potential risk factor for eating pathology and depressive symptoms in adolescence (14 years). Further, we aimed to explore the potential mediating roles of BMI later in childhood, depressive symptoms, body image, and external indicators of pubertal development (breast development for girls, height for boys).

METHODS: Data on disordered eating and depressive symptoms at 14 years were obtained for 8,195 adolescents from a cohort study in the United Kingdom (Avon Longitudinal Study of Parents and Children). A model was hypothesized to conceptualise prospective associations between BMI (7 years), BMI (11 years), body image (11 years), and depressive symptoms (11 years), and external indicators of pubertal development (13 years) on disordered eating symptoms and depressive symptoms. Model fit was assessed separately for girls (n = 4,040) and boys (n = 4,155).

RESULTS: Structural equation modelling indicated that the hypothesized model was an excellent fit to the data for both girls ($\chi^2 = 8.918$, $p = .01$; RMSEA = .03; CFI = 1.00) and boys ($\chi^2 = 3.698$, $p = .16$; RMSEA = .01; CFI = 1.00), but the patterns of prospective associations differed between genders. For girls, childhood BMI (7 years) exerted indirect effects on disordered eating (14 years) via later higher BMI, body dissatisfaction, depressive symptoms, and advanced breast development. Indirect effects of childhood BMI were also found for depressive symptoms (14 years) via later higher BMI, depressive symptoms, and advanced breast development. For boys, childhood BMI (7 years) had indirect effects on disordered eating (14 years) via later higher BMI, body dissatisfaction, and shorter height. However, childhood BMI did not exert effects on depressive symptoms (14 years).

CONCLUSIONS/NEXT STEPS: These findings enhance our understanding of early risk factors and their prospective associations for later psychopathology, highlighting the mediating roles of body dissatisfaction, depressive symptoms, and external indicators of pubertal development. This suggests targets for school-based interventions to reduce the incidence of depression and eating disorders amongst young people.

IAAH170460

How they cope: A qualitative study on daily stressors and coping in adolescents in urban India

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BACKGROUND: Stress and coping processes are central to understanding the onset, maintenance and amelioration of psychological distress and disorders in adolescence. The contextual factors related to home, family, school and society influence occurrence of these stressors, and the coping processes adopted. Studies with adolescents in India have suggested high levels of stress, as linked to an accumulation of chronic daily stressors, and use of limited repertoire or maladaptive coping strategies. Fewer studies have discussed the role of specific contextual factors on stressors and coping. This study describes the daily stressors, the coping processes adopted by adolescents and the associated contextual factors in the ever growing peri-urban Indian context thus addressing the gap.

METHODS : Qualitative interview-based data were collected from 22 focus group discussions (FGDs), comprising 191 students (114 girls and 77 boys, range 11-18 years) in peri-urban schools of Delhi (lower socio-economic relatively) and Goa. Adolescents were asked to discuss issues pertaining to stress, coping processes adopted along with factors associated with these. We analysed the transcripts in the language of the discussions with NVivo and using the framework approach.

RESULTS: Our preliminary coding framework developed deductively from research questions comprised of two main themes – 1) Stressors and 2) Coping processes with specific sub-themes for contextual factors. Additional codes related to causes of stressors, coping strategies, factors associated with home and school environment, peers, relationship issues, neighbourhood, financial constraints, etc., were identified inductively. Preliminary findings suggest that the most of the stressors are associated with factors related to home environment (commonly conflicts between parents, domestic violence, lack of parental trust), school environment (exam stress, low attendance), anxiety about future and interpersonal relationship issues with the opposite sex that vary across young and older adolescent age groups and gender. Adolescents used a range of strategies including alcohol/drug use, for emotional coping but less commonly resorted to problem solving. Perceived stressors and coping were influenced by the available resources, and ambient cultural beliefs to a great extent.

CONCLUSIONS/NEXT STEPS: Interventions to enhance stress coping strategies of adolescents need to adopt an ecological framework and be able to impart skills to navigate the contextual factors in addition to addressing specific stressors.

Interactive Media

IAAH170356

Social capital among adolescents: Comparison of Online and offline relationships as sources of Social capital among in-school adolescents in Oyo State, Nigeria

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BACKGROUND: Social capital (SC) refers to network ties of goodwill, mutual support, shared language, shared norms, social trust, and a sense of mutual obligation that people can derive value from. With the increasing availability of newer electronic media, SC can now be derived from online interactions. Very few studies in developing countries have considered social capital from online sources. This study measures and compares social capital from online and offline sources among adolescents in Oyo state, Nigeria.

METHODS: This cross-sectional survey was conducted in Ibadan metropolis. Four stage sampling was used to select three of five local government areas, 15 of 109 senior secondary schools, class arms, and 1178 adolescents. Information on socio-demographics and SC was obtained through interviewer administered questionnaires. Offline and online SC were measured using pre-validated scales of 23 and 24 items respectively with minimum and maximum scores of 0 and 3 for each item. Scores e''34 and e''36 were categorized as high offline and online SC respectively. Frequencies, Chi-square, and logistic regression were used in analysing the data and significant at p<0.05. To ensure homogeneity, percentage scores were calculated from the offline and online SC scores.

RESULTS: The mean age of the respondents was 15.9±0.1years. About 66.3% and 91.2% of the respondents reported high online and offline SC respectively. Family (93.0%) and peer SC (73.6%) were the highest offline and online SC domains respectively. Offline SC was significantly higher than online SC (p<0.001). Family SC was significantly higher offline as compared to online (p<0.001), while peer SC was significantly higher online as compared to offline (p<0.001). A positive correlation was observed between offline SC and online SC. Factors such as adolescent's perception of family wealth, perception of care from family, monitoring of access to internet and time spent with significant others such as parents and peers were found to influence social capital among adolescents.

CONCLUSIONS/NEXT STEPS: Although, social capital from online sources was reported to be lower than from offline sources, this study shows that adolescents also accrue social capital from online sources. Since adolescents can accrue social capital from online sources, therefore it is expedient that the capacities of adolescents be built in developing quality relationships online as well as offline.

IAAH170539

Promoting the uptake of HIV testing services among adolescents through roll out of a two-way interactive Short Messaging Service channel

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BACKGROUND: In Zimbabwe, adolescents and young people represent a growing share of the country's population. The group is falling in terms of accessing HIV Testing Services (HTS) because of inadequate dissemination of information. There is need for strategies to engage this cohort in accessing youth-friendly information and services at health facilities and to improve adolescents' knowledge of HIV issues, including adolescents in hard to reach areas.

DESCRIPTION: AfricaidZvandiri, in collaboration with UNICEF, trained 20 Community Adolescent Treatment Supporters (CATS) to manage the HTS dashboard on U-Report, a social messaging tool that allows anyone from any community, anywhere in the world, to respond to polls, report issues, support child rights and work as positive agents of change on behalf of people in their country. The programme was designed for people between the ages of 15-35 years.

LESSONS LEARNED: The system has registered 54 504 people in Zimbabwe, 51% of whom are adolescents and young people between the age of 15-24 years. CATS responded to and resolved 3,595 cases on Sexual Reproductive Health, and HIV prevention, treatment, care and support. This platform has enabled free and frank discussions on Sexual Reproductive Health, HIV and AIDS issues since the platform promotes confidentiality through anonymity on all cases from both the service provider and end user.

CONCLUSIONS/NEXT STEPS: Four adolescents and young people from Africaid developed the Zvandiri mobile application; it is used for information-sharing and monitoring ART adherence, specifically for adolescents and young people with HIV in both Zimbabwe and other parts of the world. The mobile application complements the U-Report intervention by giving an opportunity to adolescents and young people in remote areas to access HIV Testing Counselling information and referrals to comprehensive HTS.

IAAH170330

Examining the feasibility and acceptability of mobile based interactive voice response system for delivering information on reproductive health in rural India

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BACKGROUND: Use of mobile based technology in public health is rapidly expanding. Present study examines the feasibility and acceptability of mobile based Interactive Voice Response System (IVRS) on delivering reproductive health among ASHA (female outreach worker) and young married women (YMW).

METHODS: Two blocks (Purkaji and Churu) one each from Uttar Pradesh and Rajasthan, India selected respectively for the intervention of IVRS as they had low reproductive health indicators. IVRS covered 200 ASHAs and around 1000 YMWs. The study analyses 20 focus group discussions (FGDs) conducted after six months of intervention among ASHAs (82), YMW (34), pregnant women (36) and lactating mothers (up to 6 months) (34). Additionally, we looked into the IVRS MIS data for the call records of ASHAs and YMWs.

RESULTS: All ASHAs (82) interviewed revealed that IVRS enhanced their existing knowledge and work efficiency on reproductive health and delivering better inputs to YMW. They reported that families of YMW's rely more on their suggestions than ever before, as these families equally access IVRS facility for their queries. Three fourth YMW (25) showed their initial hesitation, as they were not accustomed with IVRS technology before, however gradually got habituated under the guidance of ASHA. MIS data suggest that over the period of 6 month call rate increased by 600% (ASHA 175 % and YMW 988%). It was witnessed that ASHAs mostly opted for ANC & delivery section followed by pre-conception care and reverse was the case among YMW. It was reported that information through entertainment section had five times more listener than general information sharing section. Women narrated the ease of getting information regarding contraceptive methods, menstruation issues and care during pregnancy along with the care for children through IVRS. Nearly all the participants indicated that IVRS is of great use as it's free of cost, available all the time and easily accessible.

CONCLUSIONS/NEXT STEPS: Based on results, there is a need to scale up IVRS strategy for the community in the hard to reach areas, with limited health workforce. This technology would empower rural community to get basic preventive and curative measures for their reproductive health issues with just a miss call away.

IAAH170295

Translating research: the experience of using social media to amplify the Lancet Commission on Adolescent Health and Wellbeing.

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BACKGROUND: Translation of research into formats that can be consumed through online media continues to evolve. For the Lancet Commission on

Adolescent Health and Wellbeing it was decided very early on to develop a web-based presence to support the international collaboration and to consider the role social media including Twitter and Facebook may play.

DESCRIPTION: The online presence and the steps taken to promote followers will be showcased through this presentation using the example of the Lancet Commission. The series of active decisions made by the project team to use a stand-alone website will be presented. These include the use of an embedded blog, a newsletter driven by the blog and amplification of this content via twitter using the hashtag #LancetYouth. Limited use of LinkedIn was also implemented. The reasons that other social media platforms were considered but not ultimately implemented will also be presented (i.e. Facebook, Medium).

LESSONS LEARNED:

- Choose a short, catchy hashtag (#LancetYouth) and use it consistently
- Plan a strategy from the outset
- Be clear from the outset, who you wish to communicate to, and what you wish to communicate
- Allow sufficient time and resources: - To build website infrastructure, to gain a following on twitter, to create enough content to maintain interest and relevance, to engage social media influencers
- Timing of twitter content is important
- Twitter chats are time consuming and may be of little benefit unless planned well
- Training for staff is necessary but not greatly time consuming

CONCLUSIONS/NEXT STEPS: The Lancet Commission is in the process of becoming a Standing Commission of at least 5 years duration. We are currently considering the use of online media to:

- Amplify the messages from the recommendations of the Lancet Commission - youth engagement/empowerment - connection/capacity building in LMICs
- Continue the current engagement and communication with the academic world around the recommendations
- Harness the voice and input of young people/youth health advocates around the recommendations
- Reach new audiences to translate the future outputs of the Standing Commission for policy and practice

IAAH170653

Cybergirl Rwanda: Using human-centered design to develop digital and SMS sexual health and employment tools

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BACKGROUND: In Rwanda, unemployment is highest among youth and one in ten girls report having transactional sex. Only 12% of sexually active adolescents (15-19) use contraception. Cybergirl Rwanda aims to improve health and livelihoods of urban adolescents through digital training in employment skills, sexual health information and linkage to youth-friendly services.

DESCRIPTION: Using youth-centered health design, a participatory methodology, we conducted qualitative research (n = 212 providers, parents and youth) to explore perceptions on contraception, sexuality, technology, and employment. Important themes were: adolescents had little knowledge of contraception; stigma prevents youth from seeking care; sexuality education emphasizes abstinence, and youth use the internet to access health information. Parents felt poorly equipped, were short on time and lacked confidence to inform their children about puberty and sexual health. Research with health providers revealed stigma, bias against long acting methods for adolescents and lack of knowledge about adolescent sexual health. We then prototyped digital educational tools with 72 adolescents and providers. We trained Rwandan adolescents to co-create Cybergirl's content and design.

LESSONS LEARNED: Among adolescents who engaged with the Cybergirl prototypes, knowledge of condom effectiveness increased by 21%, and awareness of dual protection increased by 42%. Employment and entrepreneurship training increased acceptability of sexual health education among parents and adolescents. A virtual advisor to answer questions was appealing to adolescents as a private forum to seek information, and to parents, who lacked confidence and knowledge to answer their children's questions.

We adapted Cybergirl to include an SMS Q&A hotline, a clinic referral tool, and a provider companion tool, Cybernurse, to address stigma and improve knowledge.

CONCLUSIONS/NEXT STEPS: Often, adolescent health programs are designed without youth or parent participation. Youth-centered health design offers a rapid methodology to design programs responding to young people's needs and preferences. Early prototyping and user feedback allowed for swift adaptations before developing final digital products. Our next steps are to evaluate the effectiveness and acceptability of the Cybergirl digital education tools in Rwanda.

IAAH170068

How can health systems best support marginalised young people in the digital age?

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BACKGROUND: The WHO Global Standards for Quality Health-Care Services for Adolescents provides a framework to improve youth-friendly healthcare. However, research about healthcare access and navigation of healthcare systems by marginalised young people, including their use of technology, is limited.

METHODS: Access 3 is a multi-methods project funded by the New South Wales (NSW) Ministry of Health, Australia to inform policy. The project focused on young people aged 12-24 in NSW who were: Indigenous, living in rural and remote areas; homeless; refugee; and/or, gender and/or sexuality diverse. The project included four studies:

1. Cross-sectional survey (online and paper) with targeted recruitment of marginalised young people.
2. Qualitative longitudinal study involving 3-4 interviews over 12 months with marginalised young people
3. Qualitative interviews with health professionals
4. Policy translation forum to make policy recommendations. A mixed-methods approach to analysis used SPSS and Nvivo software and Grounded Theory (Corbin & Strauss, 2008).

RESULTS: Study 1 (n = 1,416) oversampled marginalised groups: rural (33.8%), gender and sexuality diverse (30.2%), Indigenous (11.9%), homeless (8.3%), and refugee (5.3%). Study 2 (n=41) interviewed young people who were gender and sexuality diverse (20), rural (20), refugee (9), homeless (9) and Indigenous (5). Study 3 (n=22) included health professionals from a range of roles and services, and rural areas (41%). Study 4 (n=64) involved representatives from academia, services and policy, alongside young people. The most significant barriers to health care identified in study 1 were cost (45.6%), opening hours (31.7%) and embarrassment (27.6%). Confidentiality, previously considered the most important barrier, was cited by 16.2% of the sample. In studies 2 and 3, key themes identified were the importance of health literacy, the role of technology in engagement, providing welcoming and respectful services for all young people, responding to the challenge of health care cost driving choice and health system complexity. In study 4, policy priorities for action featured technology, training, integrated care and youth participation.

CONCLUSIONS/NEXT STEPS: The findings of the Access 3 project provide clinicians and policy makers with evidence to effectively improve marginalised young peoples' access to and experience of health services in the digital age.

SRH/HIV

IAAH170316

"I feel brave and positive": Feasibility and acceptability of financial incentives for improving retention in care and adherence to anti-retroviral therapy amongst adolescents living with HIV in Rwanda

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BACKGROUND: HIV has become the leading cause of death amongst adolescents in Africa with over 2.1 million adolescents living with HIV. Adherence to antiretroviral therapy (ART) is critical to suppress HIV viral load, sustain immune function, and avoid opportunistic infections and death. Interventions combining health and economic well-being such as financial incentives have shown early promise in motivating protective behaviours however concerns remain around acceptability. We aimed to undertake a pilot study to evaluate the feasibility and acceptability of financial incentives on adherence and retention in care in Rwanda.

METHODS: In this single-arm, two-site pilot study, seventy-two adolescents, aged 12-19 were recruited through random sampling (stratified by age and gender) from an urban clinic (n=50) and a rural (n=22) clinic. Adolescents aware of their HIV-positive status, enrolled in care at one site for >1 year, prescribed ART for >1 year, with informed consent were invited to participate. Monthly peer-led financial literacy training was delivered at the clinic. Enrolled adolescents also received financial incentives via mobile money on clinic attendance and on demonstrating suppressed viral load (VL). Participant cohorts were enrolled for 3 months (October 2016-December 2016). Qualitative data collection elicited experiences with and attitudes about the intervention. Transcripts were analyzed in N Vivo 10.

RESULTS: Semi-structured interviews were conducted with 30 adolescents, 20 caregivers, and 4 healthcare workers across both sites. All interviewed found the intervention highly acceptable, with emotional benefits associated with the incentive. Feeling rewarded combined with planning for the future was a key theme expressed by adolescents. Few caregivers expressed concern about adolescents accessing mobile money accounts independently. Challenges in accessing a mobile money account had an impact on the perceived benefit. Saving increased and no increase in spending on risky behaviour was observed. Participants and caregivers wished for the incentive to be expanded to other adolescents in HIV care.

CONCLUSIONS/NEXT STEPS: The intervention was acceptable to parents and caregivers however the feasibility of the intervention was limited by adolescents' access to mobile money accounts and other operational challenges. Designing youth-targeted financial services would enhance the feasibility of this potentially beneficial intervention. Larger studies are needed to evaluate the efficacy.

IAAH170435

Transition Training (T2): Transferring the Necessary Economic Psychosocial and Self-Care Skills Needed for Young Adults Living with HIV (YALHIV) in Malawi to Make a Healthy and Successful Transition into Adulthood

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BACKGROUND: In Sub-Saharan Africa, there is a large gap in age-appropriate medical and non-medical services for perinatally-infected YALHIV. HIV-specific adolescent programming often lacks the tools necessary for adolescents to successfully transition into adulthood. During this crucial transition period, psychosocial support is often withdrawn and older adolescents are pushed directly into adult care. Baylor College of Medicine-Children's Foundation Malawi (BCM-CFM) runs a large network of adolescent and psychosocial programs called "Teen Clubs" across Malawi. With no suitable psychosocial services for young adults, the Teen Clubs are becoming overcrowded.

DESCRIPTION: T2 is a hands-on training to equip 18-24 year olds with practical knowledge, skills and tools to achieve their personal goals while living positively with HIV. 25-30 participants enroll in a 6-week program meeting twice weekly and are selected from local “Teen Club” graduate pools. From January 2013-March 2017, BCM-CFM conducted nine T2 sessions with 288 graduates. T2 program was developed to equip YALHIV with life skills to gain financial security and social enfranchisement, and to strengthen medical and non-medical self-care skills. At the conclusion of the program, participants are encouraged to enroll in a supplemental computer skills training program.

LESSONS LEARNED: Evaluation of 168 T2 graduates indicated 85.7% (144) viral load suppression (< 1000 copies). 137 T2 graduates followed had good adherence out of 158 representing 86.7%. 24 graduates have disclosed their status to close friends/partners (15males, 9females), 41 re-enrolled in secondary school (29male, 12females), 8 enrolled in university classes (5 female, 3 male), 15 have found employment (10 males, 5 females), 3males started entrepreneurship, 1male is a musician, 2females interning at international organizations, 7 attended international conferences as ambassadors for YALHIV (4male, 3female), 20 are mentors for local Teen Clubs and ALHIV (10males, 10females), 25females accessing contraceptives, 50 are Camp Hope mentors (25male, 25females) and 4 are Peer Supporters for BCM-CFM’s clinic (3male, 1female).

CONCLUSIONS/NEXT STEPS: T2 creates a unique and safe space for young adults to learn life skills and safe care. Transition programs are crucial for decompressing crowded adolescent programs. T2 program graduates also become a resourceful pool of mentors for younger ALHIV hence increasing long-term sustainability of Teen Clubs.

IAAH170478

Addressing psychosocial needs and care/treatment delivery gaps for adolescents living with HIV (ALHIV) using technology: The case of Teen Support Line (TSL) in Malawi

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BACKGROUND: Though a cornerstone for improving physical and mental health outcomes, quality psychosocial services are sparse across Sub-Saharan Africa and very limited for ALHIV. Regional networks of youth-friendly-services are forming to increase access to care, however distance to health centres and transport costs are major barriers to accessing services. The TSL bridges these service gaps giving ALHIV in Malawi 24-hour access to HIV-specific information, psychosocial support and linkage to care centres through a free cellular hotline service.

DESCRIPTION: From March 2013 to March 2017, the hotline number was shared with 7194 fully disclosed ALHIV using the existing “Teen Club” network, targeted TSL launches and during full disclosure of HIV status in pediatric ART clinics across Malawi and through the Ministry of Health’s “disclosure of HIV status” flip books. Call-takers provide counselling, information, referrals, follow-ups, and healthcare-center linkages to callers and complete M&E forms eliciting caller details. Data was collected from the call-taker M&E forms and a retrospective review and descriptive analysis of results was done.

LESSONS LEARNED: A total of 2264 calls have been received during the period under review. 54% of callers were males. 52% (1168) were aged between 12-15 years and 33% (746) were 16-19 years. 62% of callers were in primary school and 30% in secondary school. 49% were first-time callers. Most common call topics were: Teen club/clinic appointment information (24%), clinic/medical (12%), ART/medication (11%), sexual reproductive health (4%), caretaker’s problems (3%) and stigma/discrimination (3%). At the call conclusion, 95% felt better about their situation and 94% indicated that they had learned something from the call. 13% of the callers were referred for depressive symptoms.

CONCLUSIONS/NEXT STEPS: ALHIV reached through our targeted activities are using the TSL as their trusted source of information and counselling. An ALHIV-specific hotline can provide psychosocial services lacking at health-centres and reduce distance as an overriding constraint in providing case-specific counselling. ALHIV-specific hotlines should be considered as an adjunct to care in countries burdened with adolescent-focused delivery gaps.

IAAH170648

Sexual and reproductive health services for Adolescent Girls and Young Women in Johannesburg, South Africa - an entry point to HIV testing, prevention and care.

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BACKGROUND: Adolescent girls and young women (AGYW) in South Africa are at high risk of both HIV and unintended pregnancy. Yet knowledge of HIV status and uptake of contraception remains poor. We describe how targeting and improving access to integrated sexual and reproductive health (SRH) services can serve as an important entry point to HIV testing, treatment, care and prevention for AGYW.

DESCRIPTION: Wits RHI’s USAID-funded Adolescent Innovations Project, together with the Gauteng Department of Health provides integrated adolescent friendly primary care services at Ward 21 Adolescent Clinic, Hill brow Community Health Centre. Ward 21’s services originally focused on adolescents aged 10-19, including those living with HIV, and primarily consisted of antiretroviral treatment (ART) and HIV testing services (HTS). From April 2016, services were expanded to include 20-24 year olds, with active referral of AGYW seeking contraceptive services. At Ward 21, service provision is integrated, with all those accessing contraceptive services offered HIV testing. There is direct linkage within the clinic to either ART or HIV prevention services, including Pre-Exposure Prophylaxis (PrEP) through demonstration projects for those who test. We assessed the impact of expanding contraceptive services and increasing the clinic’s target age group to include 20-24 year olds, on the uptake of HIV testing, ART initiation and SRH management using routinely collected programmatic data.

LESSONS LEARNED: The overall headcount at the clinic increased by 57%, from 3150 for the period October 2015 – March 2016 to 4942 for the period April 2016 – September 2016, due to more female attendance in the age group 15-24 years. Contraceptive service requests increased tenfold during the 12 months. There was a 122% increase in HIV testing overall and ART initiation increased by 160% overall, predominantly in 20-24year old females. Sexually transmitted infection syndromic management increased 164%.

CONCLUSIONS/NEXT STEPS: Contraceptive services are an important health system entry point, and can be leveraged to improve overall care for AGYW. Acceptable and accessible models of care, that effectively integrate SRH, HIV testing and treatment, care and prevention services for AGYW are essential to optimising the HIV treatment and prevention efforts in this population.

IAAH170630

Diagnosis Disclosure to Adolescents Living with HIV in Rural Kenya Improves Antiretroviral Therapy Adherence and Immunologic Outcomes: A Retrospective Cohort Study

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BACKGROUND: Emphasis on adolescent HIV has increased worldwide as antiretroviral treatment has greatly extended life expectancies of positive children. Few evidence-based guidelines exist on the optimal time to disclose to an adolescent living with HIV (ALHIV); little is known about the medical effects of disclosure. We investigated whether or not disclosure is associated with improved medical outcomes in ALHIV. Prior work has tended to be qualitative, cross-sectional, and with an emphasis on psychosocial outcomes. This paper addresses the adolescent cohort retrospectively (longitudinally), building upon what is already known about disclosure.

METHODS: We performed retrospective, longitudinal clinical record reviews of ALHIV seen at Kericho District Hospital between April 2004 and November

2012. Patient demographics and clinical outcomes were systematically extracted. We used the student's t-test to calculate changes in mean CD4 count, antiretroviral therapy (ART), and cotrimoxazole adherence pre- vs. post-disclosure. Linear regression was used to assess for trends in those clinical outcomes associated with age of disclosure, while controlling for potential confounding variables.

RESULTS: Ninety-six ALHIV (54 female, 42 male) were included; most (73%) entered care through the outpatient department. Nearly half were cared for by parents, and 20% experienced a change in their primary caregiver during the course of the study. The mean time in the study was 2.47 years; mean number of visits 10.97. Mean disclosure age was 12.34 years. We found an increase in mean ART adherence percentage with disclosure (0.802 vs. 0.917; $p = 0.0015$). Younger disclosure age was associated with significantly higher mean CD4 counts over the course of the study ($p = 0.001$), and a trend toward a higher mean ART adherence percentage ($p = 0.055$).

CONCLUSIONS/NEXT STEPS: ART adherence and improved immunologic status are both associated with disclosure of HIV infection to ALHIV. Disclosure of an HIV diagnosis to an adolescent is an important means to improve HIV care.

IAAH170651

An integrated model of HIV treatment, care, sexual and reproductive health and prevention for adolescents attending primary healthcare (PHC) facilities in South Africa – The Adolescent Innovations Project

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BACKGROUND: South Africa faces an increasing burden of adolescents and youth living with HIV, or youth at risk of HIV and other poor sexual and reproductive health (SRH) outcomes. Effective, scalable and sustainable models of integrated adolescent HIV and SRH healthcare are urgently needed. We describe an evidence-based, integrated adolescent HIV, SRH and HIV prevention model being implemented in primary healthcare (PHC) in two sub-districts in South Africa.

METHODS: Wits RHI's USAID-funded, Adolescent Innovations Project (AIP), aims to develop, implement and evaluate the effectiveness, scalability and sustainability of an innovation-driven model of integrated adolescent HIV, SRH and HIV prevention care for adolescents attending PHC facilities that also aligns with the UNAIDS 90-90-90 targets. The AIP model was developed through a process of: 1) Describing the existing HIV care cascade and identifying the gaps and priorities; 2) Systematically reviewing the best practice literature with a focus on evidence of effectiveness and interventions with a potential to address gaps in the cascade; 3) Adapting the selected interventions to fit the local context, and 4) Piloting and evaluating the model and the innovative interventions, in collaboration with the local Departments of Health.

RESULTS: HIV testing services and SRH services are entry points to HIV care that can be optimised through adolescent-focused outreach and provision of adolescent-friendly services. Introducing peer navigators - Health Connectors - improves HIV-positive adolescents' linkage and retention in ART treatment and care, and all adolescents' uptake of sexual and reproductive health (SRH), STI and HIV prevention interventions. Retention for HIV-positive adolescents is optimised through Youth Care Clubs – group-based clinical and psychosocial management tools, and for young women on PrEP through EMPOWER Support Clubs. m-Health services comprising ART adherence and health promotion messages and two-way communication through an adolescent health platform (bwisehealth.com) provide information support to the intervention package.

CONCLUSIONS/NEXT STEPS: Integrated adolescent HIV and SRH healthcare models are urgently needed. The AIP approach has ensured the model is scalable, sustainable within current resources and aligns with the UNAIDS 90-90-90 targets. Effectiveness of the AIP model is being assessed in 31 PHC facilities using routine clinical and HIV treatment outcomes aligned with the 90-90-90 cascade.

Equity/Positive Youth Development

IAAH170083

Adolescent Girls and Young Women can fulfill their DREAMS through mentorship

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BACKGROUND: Adolescents, aged 15–19, carry a particularly high burden of HIV resulting from gender disparities, early marriages, transactional sex and unplanned pregnancies. This burden is however not equally shared across gender lines as females are twice more likely to be infected, at 7.5% than their male counterparts at 3.4%, (ZDHS 2010-11). Several studies (Gupta, et, al, 2008; Nyamukapa) on Sexual and Reproductive Health issues have shown that young women face highly constrained access to economic opportunities, educational and health services; and these structural barriers assist in fueling their vulnerability to new HIV infections. The initiative also aims at reaching male pupils, parents, the education system, health service providers, policy makers and other organizations for strategic linkages.

DESCRIPTION: The Big Sister Young Sister (BSYS) Initiative is an innovative self-sustaining mentorship program, which allows for the harnessing of experiences and expertise of female student teacher trainees (18 - 24) to benefit 10 000 AGYW between the ages of 15 and 18 in 100 secondary schools. The Initiative focuses on 2 key components which are; (1) improving vulnerable AGYW's access to comprehensive health related services and empowerment initiatives in secondary schools and, (2) assisting in addressing structural barriers for long term empowerment through the AGYWs retention in schools. The project acknowledges the liberating power of education and sees the attainment of quality education by AGYWs as potential lever for their economic, political and social emancipation and participation in mainstream development. The BSYS Initiative is being implemented in four (4) DREAMS Districts in Zimbabwe (Mutare, Bulawayo, Gweru and Mazowe).

LESSONS LEARNED: 1) Structured mentorship provides a comprehensive package for the development of skills and impartation of knowledge to AGYW 4) AGYW relate and respond better to their peers in relation to their SRH concerns 3) Referrals of AGYW to sexual SRH services are usually completed if provided by peers

CONCLUSIONS/NEXT STEPS: Structured mentorship for AGYW is enhancing their ability to fulfill their DREAMS within their respective contexts where such dreams have been shattered by structural, social and gender related impediments. Mentored AGYW will in turn beyond the lifespan of the programme mentor peers through skills development, dissemination of information and continuous referrals to services.

IAAH170015

Meaningful Youth Participation as a way to achieving success - Results from operational research on MYP in a large-scale youth SRHR program in Africa and Asia

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BACKGROUND: Youth participation is a key component in many youth development and sexual and reproductive health and rights (SRHR) programs. Organizations involve young people because it is their human right, and because of assumptions that their involvement leads to more relevant programs. We present the results of Operational Research on Meaningful Youth Participation (MYP) in the context of a large scale youth SRHR program in Ethiopia, Indonesia, Kenya, and Pakistan. The research was carried out to learn how MYP contributes to achieving the program objectives and examine the underlying processes that enable young people to participate in a meaningful and empowering way.

METHODS: Data was collected from 29 different organizations in 4 countries, through participatory, qualitative research, using observations, 141 in-depth interviews and 49 focus group discussions with heads of organizations, project staff, service providers, young people engaged in the program, and some external stakeholders. Data was collected by a team of young co-researchers (mostly youth volunteers in the program). A professional adult researcher trained and coached these teams.

RESULTS: MYP was found to have positive effects on the empowerment and civic engagement of young people; on adult staff and organizations' capacity to create structures to institutionalize the meaningful involvement of young people; on the provision of youth-sensitive SRHR interventions; and on achieving program objectives. Factors influencing effective and meaningful youth participation included: placing young people in positions of responsibility and trusting them; regular, transparent, and honest communication between adults and young people; adult support, guidance, and adequate capacity building; and strategies and structures for young people's involvement and leadership.

CONCLUSIONS/NEXT STEPS: For MYP to have such positive effects, we conclude that certain conditions are needed that enable meaningful and structural participation, including: program mandates and organizational policies that address structural and fair youth representation at decision making levels in all phases of the program; opportunities for young people to have responsibility for decision-making, and to share power with adults; building young people's capacities and understanding; welcoming and safe social environments in the organization where both young people and adults feel valued, respected, encouraged and supported.

IAAH170049

Helping young people stay afloat: A qualitative study of community resources and supports for LGBTQ adolescents in the U.S. and Canada

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BACKGROUND: Extensive research has demonstrated that LGBTQ youth are at high risk of a variety of poor health outcomes compared to their straight cisgender peers. However, many within this group are thriving, and research and practice initiatives should more effectively represent what is going well alongside the challenges. This study aimed to broaden and deepen our understanding of protective factors for lesbian, gay, bisexual, transgender and queer or questioning (LGBTQ) youth in diverse communities.

METHODS: We conducted 66 "go-along" interviews with youth (ages 14-19) in a variety of locations in Minnesota and Massachusetts (US) and British Columbia (Canada), in which participants led the interviewers through their communities, indicating where they would go for help, support, socializing and fun as an LGBTQ teen, with particular attention to how they knew a place was safe and supportive. Participants were diverse with regards to sexual orientation, gender identity, racial/ethnic background, and urbanicity. Qualitative data were thematically coded by an experienced, multidisciplinary team.

RESULTS: Key findings and major themes are organized as a "life preserver" model of resources for LGBTQ youth. The model highlights the domains in which youth identified resources and supports. Specifically, youth identified supports across all levels of the social ecological model (family/friends, school, organizations and the broader community). They discussed both LGBTQ-specific resources (e.g. Pride events, school Gay-Straight Alliances, LGBTQ youth-serving organizations) and resources for the general population (e.g. coffee shops, parks, adolescent health clinics). Finally, youth noted resources that were oriented towards problem management (e.g. bullying prevention programs, HIV testing) as well as those oriented towards general adolescent development (e.g. after school sports, youth centers). Youth also described resources they desired but were not present in their areas, particularly in smaller communities.

CONCLUSIONS/NEXT STEPS : Findings from this study detail the ways in which LGBTQ youth feel supported by their communities and highlight opportunities to add and improve resources in different types of community settings. Discussion will focus on ways to apply these findings internationally.

IAAH170228

"My sexuality matters too": Tarshi's work on sexuality of young people with disabilities

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BACKGROUND: In India, where it is still mistakenly believed that people with disabilities are living the results of sins they committed in previous births; the

sexuality of young people with disabilities is often ignored. Conversations focus mainly on accessibility and education; the result: service providers – counsellors, educators, care providers etc. – do not consider sexuality-related needs of young people with disabilities. TARSHI, an Indian NGO working on sexuality-related topics, believes that all people – including those with disabilities – have the right to a self-affirming and enjoyable sexuality. Since 1996, TARSHI has been working on expanding conversations around disability and sexuality.

DESCRIPTION: TARSHI includes discussions around disability and sexuality in trainings and online courses for service providers so they can approach the issue with a rights-based perspective. Topics discussed include hysterectomy, relationships, masturbation, sexual and gender identities, the right of young people with disabilities to information and pleasure. On our emagazine "In Plainspeak" and social media, we feature articles, videos and visuals around disability and sexuality. We are currently updating our 2010 working paper on sexuality and disability.

LESSONS LEARNED: Feedback from our trainings and online courses shows that TARSHI's sessions encourage participants to appreciate linkages between disability and sexuality and understand rights-based approaches to the topic. Service providers acknowledge that young people with disabilities have to deal with sexuality-related issues too. Our work on this topic in Hindi is appreciated for opening up these conversations among Hindi-speaking audiences, since there is not much content or discussions around this topic in Hindi. TARSHI's emagazine and social media posts consistently maintain momentum and conversation on the topic through a variety of content.

CONCLUSIONS/NEXT STEPS: Conversations change lives! TARSHI's discussions on disability and sexuality on different platforms are critical for service providers to design services for young people with disabilities that take into account their sexuality needs. These conversations emphasize the role of sexuality in lives of young people with disabilities, as crucial as education or accessibility. They highlight that young people with disabilities are deserving of respect, equality, information and choice in all areas, including their sexual and reproductive health and rights.

IAAH170496

Putting Girls and Boys in the Center of Health Programming using Positive Youth Development (PYD): Lessons from a Systematic Review in Low and Middle Income Countries (LMIC).

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BACKGROUND: Positive Youth Development (PYD) is an approach that aims to build and support the competencies, skills and abilities of youth so that they are empowered to reach their full potential. Building the assets and skills of young people has been shown to improve outcomes for youth in high-income countries. However, the evidence from low and middle income countries (LMIC) is sparse.

DESCRIPTION: The United States Agency for International Development (USAID) commissioned the YouthPower Learning project to undertake a systematic review to synthesize what is known in the literature about PYD in LMIC and identify the gaps to inform future research. The review examines 97 programs in 60 LMIC countries to draw lessons about what works for cross-sectoral programming. This presentation will focus on the evidence of health programs.

LESSONS LEARNED: Effective programs target interventions at multiple levels (individual, household and community) and are implemented in more than one setting. A number of high-quality studies of health-focused PYD programs show improved knowledge, attitudes, and behaviors related to SRH. Evidence related to outcomes in the areas of mental health and physical activity is less conclusive. Many of the programs that had strong evidence of effectiveness, especially those that integrate gender, focus on youth but also work with adults, such as community members, parents and teachers. Using innovative ways of involving youth is also common among the more effective programs. The review confirms that there is only a limited amount of evidence on PYD programs in LMICs, leaving major questions about "what works" to improve youth development unanswered.

CONCLUSIONS/NEXT STEPS: Given the lack of focus on theoretical underpinning and understanding of PYD, there is still a need to invest in advancing the field, piloting new strategies, and rigorously evaluating and documenting programs that are being implemented. The authors suggest a six step strategy for contributing evidence to fill these gaps.

IAAH170515

Fostering Gender Equity among Early Adolescents: A mixed-method, quasi-experimental evaluation of a multi-level intervention targeting very young adolescents, parents and community members

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BACKGROUND: In Nepal, women and girls face discrimination on multiple levels by virtue of their sex, caste, and ethnicity. Recognizing that early adolescence represents an opportunity to address these challenges, Save the Children developed and tested a package of gender transformative interventions.

METHODS: A mixed-method quasi-experimental study conducted in the Terai region of Nepal assessed benefits of working not only at the individual, but also the family and community levels of the ecological system. In control and study arms early adolescents participated in Choices, a gender-transformative curriculum. In the experimental arm, parents were invited to participate in Voices (discussion of video testimonies), and the community received the Promises intervention (social network diffusion of key concepts). 900 participants in each arm (300 girls, 300 boys, and 300 parents) completed structured interviews at baseline and end line. Logistic and linear regression models using rigorously tested parent and very young adolescent (VYA) measures of gender norms, attitudes, and behaviors evaluated the effect of adding the parent and community components to the individual intervention.

RESULTS: While all children participated in Choices, the intervention reached 70% of mothers and 60% of fathers. Few significant intervention effects were observed among parents. Among children, however, for the majority of moderate/high quality VYA measures improvement from baseline to end line was significantly greater in intervention than control areas. Monitoring data provided essential information, revealing that the intervention was not implemented with fidelity and that participation was higher in control than intervention areas. Interestingly, parent attitudes and norms did not vary greatly by gender, age, or religion. Among adolescents, outcomes differed significantly by gender, but not in a consistent direction, confirming the theory that girls and boys experience different gender socialization processes. Despite the assumption that gender socialization intensifies with age, no significant differences were observed between younger and older VYAs.

CONCLUSIONS/NEXT STEPS: VYA program efforts are in the early stage, with little rigorous evidence on what works, for whom, and under what circumstances. This study addresses this gap by presenting quality assessment of gender-related measures and providing evidence that adding a parent component to VYA interventions may increase gender equity.

Safety and Violence

IAAH170485

Husband-Perpetrated Violence and Reproductive Coercion are associated with Family Planning and Unintended Pregnancy among Married Adolescents Girls in Rural Dosso, Niger

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BACKGROUND: Adolescent girls in Niger suffer from poor health outcomes due to the country having the globe's highest rates of both child marriage and adolescent fertility. Family planning (FP) use among married adolescents is low, with a major barrier thought to be violence from male partners (IPV). Recent evidence suggests that specific coercive behaviours to block access and use of family planning by female partners (reproductive coercion) may also play a role. This study is the first to explore associations of IPV and reproductive coercion with the reproductive health of married adolescents in Niger.

METHODS: Data were collected from a cluster randomized sample of married female adolescents between 13-19 years (N=1099) across 48 villages in rural Dosso, Niger. Associations of lifetime reproductive coercion and husband-perpetrated physical and sexual IPV with family planning outcomes – recent and surreptitious family planning use (i.e., use without partner knowledge), and unintended pregnancy – were assessed.

RESULTS: Among married adolescent participants, 8.2% reported physical IPV, 5.5% reported sexual IPV and 7.4% reported reproductive coercion. Physical IPV was associated with increased odds of recent FP use (OR 2.0, 95% CI 1.2-3.5), surreptitious FP use (OR 2.1, 95% CI 1.0-4.3), and unintended pregnancy (OR 1.6, 95% CI 1.0-2.5); reproductive coercion was associated with surreptitious FP use (OR 2.1, 95% CI 1.0-4.4).

CONCLUSIONS/NEXT STEPS: Married adolescent girls in Niger who experience violence from husbands are more likely to use FP, but this attempted use may not be consistent or effective, as IPV was also associated with increased risk for unintended pregnancy. Conflict with husbands over FP use is indicated by findings that IPV and reproductive coercion both increased the odds of a married adolescent using FP without the knowledge of her husband. Husband violence and coercive behaviours to stop their adolescent wives from using FP are likely contributing to low levels of female reproductive autonomy. Interventions that address IPV and reproductive coercion may enable and empower adolescent wives to control their fertility and reducing unintended pregnancy in this high-risk context.

IAAH170589

Intervening to stop violence: Impact of a school-based primary prevention program, Jharkhand, India

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BACKGROUND: Despite recognition of violence against children at policy level, violence is largely prevalent and normalised. This paper presents evidence on the impact of Gender Equity Movement in Schools (GEMS), a school based primary violence prevention program, on bystander intervention on violence amongst young adolescents. The GEMS program recognizes the importance of engaging with adolescents, within institutional settings, at early ages to encourage discourse on gender equity and violence. GEMS works with teachers to conduct classroom sessions with adolescents aged 12-14 years, and school-based campaigns using gender transformative approaches.

METHODS: Surveys were conducted at three points with 3065 girls and boys of classes 6th and 7th studying in 80 schools of Khunti and Ranchi districts of Jharkhand, India, as part of the GEMS evaluation. Audio computer assisted self-administered interviewing technique was used for surveys to capture attitude, experiences of violence, bystander intervention and perpetration. In-depth interviews with boys and girls provided an understanding of their experiences and pathways to change on violence.

RESULTS: Analysis of the baseline and endline data showed that an increased proportion of boys from GEMS schools reported taking positive action in case of physical violence (tried to stop perpetrator or reported to a teacher or principal) [Adjusted DID=10.6%, $p<0.01$] as compared to those from non-GEMS schools, and they also reported a greater reduction in use of violence (hitting or using abusive language against the perpetrator) [Adjusted DID=-14.8%, $p<0.01$] to stop emotional violence than those from non-GEMS schools. Similarly, there was a significant increase in the proportion of girls reporting positive action in case of emotional violence [Adj DID = 9.7%, $p<0.01$] and decline in negative action (enjoyed) in case of sexual violence [Adj DID = -21.1%, $p<0.01$]. In-depth interviews corroborated these findings, as most narratives showed increased conviction to intervene in cases of violence after program exposure.

CONCLUSIONS/NEXT STEPS: School-based primary violence prevention programs such as GEMS that use gender transformative approaches to engage young adolescents can enhance their ability to recognize violence, and intervene. School, as an institution of socialization, is uniquely placed to lead primary prevention programs and bring large scale sustained change.

IAAH170627

The linkages between exposure to violence in private and public spaces and violence related attitudes and behaviours among adolescent boys: Evidence from a prospective study in rural Bihar, India

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BACKGROUND: In India, few studies have explored the factors that elevate the likelihood that adolescent boys and young men will hold attitudes that condone violence and will perpetrate violence against girls and other boys. This paper explores the linkages between adolescent boys' and young men's exposure to violence, as defined by witnessing or/ and experiencing violence in private and public spaces, and a) their attitudes towards men's entitlement to perpetrate violence against girls, b) their perpetration of violence against girls and c) their perpetration of violence against boys.

METHODS: Data were drawn from a prospective study of boys in the ages 13-21 years who were members of youth clubs who were enrolled in the control arm of a larger evaluation of an intervention designed to change violence-related attitudes and practices of boys in rural Bihar. A total of 566 boys were interviewed at baseline, and of these, 517 were re-interviewed about 20 months following the first interview.

RESULTS: As many as 34% of the study participants had witnessed the perpetration of violence in the home or community, and 62% had been themselves subjected to such violence. Findings suggested that witnessing violence had a milder effect on attitude than experiencing violence in private or public spaces. The study further brought to attention the role of the family in perpetuating or engendering boys' attitudes about violence against women and girls and in promoting or inhibiting their perpetration of violence against girls; it also demonstrated that the association of violent attitudes and behaviours became stronger when exposure (witnessing and experience) to violence in the home was compounded by exposure to violence in public spaces. Witnessing intra-parental violence was significantly associated with bullying in boys, while experiencing violence in only community and in both home and community had higher chances of perpetrating bullying.

CONCLUSIONS/NEXT STEPS: Findings highlight the role of the family and community/school in perpetuating or engendering boys' attitudes about violence against women and girls, as well in promoting or inhibiting their perpetration of violence against girls. Findings underscore the need for targeted messaging to parents and peers/teachers about the deleterious effects of violence at home and outside home on the attitudes and behaviours of their boys.

IAAH170633

Where do I feel 'un'safe in school: Mapping safety through participatory research with young adolescents in five Asian countries

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BACKGROUND: Schools are usually perceived as safe spaces, where children get opportunities to learn in a stimulating and secure environment. However,

the actual experiences of young adolescents reflect that schools are, in fact, sites that make girls and boys feel unsafe in myriad ways. This paper presents the perception of students regarding safety in school, which was gathered using innovative participatory methods, as part of a multi-country research undertaken in five Asian countries.

METHODS: Participatory group discussions were organised separately for girls and boys studying in grades 6-8 in select government schools in five countries – Vietnam, Cambodia, Nepal, Pakistan and Indonesia. To encourage articulation of experience in non-threatening ways, open-ended stories and a participatory discussion were used to create maps of safe and unsafe sites in school, capture students' voices on the reasons for feeling unsafe, and understand the consequences and help-seeking behaviour. School maps and verbatim discussion notes from these discussions were analysed.

RESULTS: Safety at school was an obvious issue of concern for both boys and girls as they created their school maps – maps of unsafe places in school, which left few spaces untouched. Classrooms, school corridors, playgrounds, toilets, canteen, library and secluded rooms were all reported as sites of harassment and unpleasant experiences, with some variation across country and gender. The reasons for feeling unsafe were, more often than not, related to experiences of verbal, visual, physical and sexual violence such as offensive pictures on walls, fights, verbal abuse, and sexual harassment. Perpetrators included both peers and teachers within schools, and strangers around boundaries of schools. A range of consequences were articulated by students – sadness, fear, anger, absenteeism and unable to concentrate on studies. Reporting was minimal – these experiences were either accepted as normal, or students felt that they would be blamed and/or shamed.

CONCLUSIONS/NEXT STEPS: The importance of a safe environment where children can learn without fear is recognized in international treaties and conventions, but adequate attention has not been given to the normalized, everyday experiences of violence. Innovative methodologies can be adopted to capture students' voices; and strengthen the evidence base towards advocating for violence prevention initiatives in schools.

IAAH170660

Shifting gender norms for sustainable behaviour change: intervention to increase family planning use and reduce intimate partner violence among young couples in the DRC

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BACKGROUND: Creating positive, socially sanctioned, gender norms to support family planning (FP) use, and prevent intimate partner violence (IPV), is an emerging area in global health research and practice. Promoting such work may help married adolescents develop and strengthen social assets or capital (World Bank, 1999) that are critical in helping them meet their FP needs and achieve self-efficacy and overall well-being while navigating the transitional periods of marriage and/or first-time parenthood. Implemented in Kinshasa, DRC, the 'Transforming Masculinities' intervention aims to shift male gender norms related to FP and IPV among newly married couples and first-time parents aged 18-35 years. The interventions consist of an eight-week group education program, community mobilization, public testimony, and health talks within 17 Protestant congregations.

METHODS: A cluster randomized control trial was conducted to measure impact with a cohort of 1,100 young couples and cross-section of 1,700 broader congregation members, using surveys to explore attitudes, norms and behaviours, and the diffusion of messages on positive gender norms within communities. The intervention was complemented by an enabling service environment with FP health talks and referral cards, engagement of youth-friendly clinics and pharmacies, and a youth FP hotline.

RESULTS: Baseline results indicated high FP use (74% among women & 76% among men). Faith leaders and congregation members were supportive of FP use, but more so among first time parents than newly married couples. In terms of violence, despite some violence in the community (45% women, 53% men), both injunctive and subjunctive norms support non-violence and mutual respect. Additionally, there was high level of support for men participating in household chores and childcare; though faith leaders and congregation members were more supportive of men's participation in childcare. Overall, however, there was limited discussion and diffusion on these themes.

CONCLUSIONS/NEXT STEPS: There is need for social and behavioural change (SBC) programs to go beyond the individual-level and support more in-depth and sustainable shifts in gender equitable behaviours among community and social structures. Implementation and scale-up of the intervention may contribute to the science of diagnosing and measuring gender norms, understanding of integrating sustainability, and measuring longer-term impact on SRH and IPV.

IAAH170592

Promoting gender egalitarian norms and practices among boys in rural Bihar, India: The relative effect of intervening in early and late adolescence

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BACKGROUND: While the importance of exposing adolescents, particularly boys to gender transformative programmes in early adolescence has been widely acknowledged, such programmes are limited. Moreover, studies that assessed the relative acceptability and feasibility of delivering gender transformative programmes to younger and older boys together and the relative effect of intervening in early compared to late adolescence are even more limited in India and elsewhere. This paper examines the extent to which the acceptability of and receptivity to gender transformative programme differed among younger and older boys and the relative effect of intervening in early compared to late adolescence on boys' attitudes and notions of masculinity, their intervention to stop incidents of violence they witnessed and their perpetration of violence on girls.

METHODS: We used data from an evaluation, using a cluster randomised controlled trial design, of an intervention that targeted boys in ages 13-21. We compared the perspectives of boys who were exposed to the intervention in early (ages 13-14, N=429) and late (ages 15-19, N=596) adolescence about their participation in the intervention and the effect of the intervention among younger and older boys. We applied the intention to treat (ITT) analysis for estimating the effect of the intervention separately among younger and older boys. We estimated the overall impact of the programme on both primary and secondary outcomes among both groups of boys, using cluster summary measures.

RESULTS: Delivering the programme to younger and older boys together did not inhibit younger boys from participating fully in the programme. Findings show that the intervention was more effective among younger than older boys. Of the five indicators that we used to measure gender role attitudes of boys, a significant positive effect was observed on four indicators among younger boys and on one indicator among older boys. Moreover, the effect size was marginally larger among younger than older boys.

CONCLUSIONS/NEXT STEPS: Gender transformative programmes are more effective in changing traditional norms and attitudes among boys and laying the groundwork for reductions in the perpetration of violence against women and girls, if they target boys during early adolescence compared to late adolescence.

SRH/ School Interventions

IAAH170229

Impact of a school health promotion intervention on school climate, and health outcomes for adolescents in Bihar, India: a cluster randomized trial

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BACKGROUND: Schools, particularly with increasing school retention in many settings, are promising platforms for health promotion and prevention in adolescents.

OBJECTIVE: To evaluate the effectiveness of a whole-school adolescent health promotion intervention on school climate, delivered by either i) a lay school counsellor SEHER Mitra (meaning a friend; SM); or ii) a Teacher-as-SEHER Mitra (TSM), each compared with the Adolescence Education Program (Control), in government-run secondary schools in Bihar, India.

METHODS: A cluster-randomized trial was conducted in 74 schools (24 in TSM arm; 25 each in SM and comparison arms) in Nalanda district between April 2015 and March 2016. The baseline survey was conducted in 13035 participants (TSM arm: 4046, SM arm: 4524, control arm: 4465; 52.5% boys; median age: 14 years) and the endpoint survey (8-months later) in 14414 participants (TSM arm: 4475, SM arm: 5316, control arm: 4623; 52.9% boys). The intervention aimed to improve school climate and health outcomes through whole-school activities (awareness generation activities, a student wall-magazine, student suggestion box, extracurricular competitions, introduction of a School Health Promotion Committee, and review of school health policies), student group work, and provision of individual counselling. School climate was measured with the Beyond Blue School Climate Questionnaire (BBSCQ). Secondary outcomes included bullying, violence, depression, attitudes towards gender equity, and knowledge of reproductive and sexual health. Random effects regression models were used to adjust for within-school clustering.

RESULTS: Adjusting for baseline school climate score, age, gender, caste, and school size, the SM schools had a significantly better school climate score at endpoint (BBSCQ=24.13) than the TSM (BBSCQ=17.16; adjusted mean difference (aMD)=7.91; 95% CI: 6.34-9.47; [p<0.001]) and control schools (BBSCQ=17.75; aMD=7.44; 95% CI: 5.88-8.99; [p<0.001]). There was no difference between school climate scores in the TSM and control schools (aMD=-0.47; 95% CI: -2.03-1.07; [p<0.55]). The SM intervention also had a beneficial impact on all secondary outcomes compared with both the TSM and control arms, but there was inconsistent evidence that the TSM intervention was beneficial compared with the control arm.

CONCLUSIONS/ NEXT STEPS: A multi-component whole school health intervention delivered by lay school counsellor has the potential to have profound effects on health during the adolescent years as well as promoting school climate and academic achievements.

IAAH170249

Comprehensive Sexuality Education in Lao PDR – A quasi-experimental study to assess sexuality education and student's sexual and reproductive health awareness

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BACKGROUND: Ministry of Education and Sports (MoES), supported by UNFPA, developed and implemented a teacher guidebook for integration of comprehensive sexual education (CSE) in relevant subjects in secondary school, teacher and vocational training institutes and non-formal education in order to bridge the lack of integration of CSE in the existing curriculum. The study assessed the outcomes of the teacher guidebook to inform adaptation and scale-up, and the forthcoming process of integrating CSE in basic education.

METHODS: This mixed-method study, quasi-experimental cross-sectional survey among students and semi-structured interviews with teachers and school

management, took place in November 2016. A total of 1,589 students participated from three districts of Luangnamtha province where majority of schools had been exposed to the intervention. The survey consisted of 60 questions addressing integration of CSE in subjects, teaching skills, and awareness and attitudes among students. Teachers and management were interviewed separately.

RESULTS: Most (96%) students found CSE important. More students in intervention group reported receiving information about family planning (51%) and puberty (69%) in school as compared to those in control group (38% and 32% respectively). Majority (72%) found information on birth spacing most important, yet awareness of family planning was not satisfactory in any group. Although misconceptions were less in the intervention group, almost half of intervention students answered that modern contraception results in infertility. Qualitative findings suggested that teachers and managers support CSE and accepted the intervention, however they highlighted the need for simplifying the guidebook, generating job aids and need for additional training. Creating linkages between education and health sectors were suggested. Some interviewees communicated misconceptions, particularly regarding contraceptive use among adolescents.

CONCLUSIONS/NEXT STEPS: Teachers, school management and students acknowledge and value the importance of CSE in schools. Survey results indicate increased awareness in sexual and reproductive health among the intervention group compared with control group, however not yet at a satisfying level. Improvements in attitudes were inconsistent, and persisting misconceptions need to be taken seriously. A need for improved supporting and monitoring mechanisms, simplified and adapted material for teachers to facilitate integration, and trainings to address identified knowledge gaps, misconceptions and improve CSE teaching skills was identified.

IAAH170378

Actions for adolescent sexual and reproductive health: a review of reviews

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BACKGROUND: More than any other area of health, the area of sexual and reproductive health of adolescents and young adults is affected by a country's cultural, religious, legal, political, and economic contexts. Actions for sexual and reproductive health must take these contexts, as well as age and gender, into account. Drawing on, and updating, the evidence reviews conducted for recently published report - Our Future: a Lancet Commission on Adolescent Health and Wellbeing - this presentation will outline current evidence for actions to improve sexual and reproductive health (including HIV) in adolescents.

METHODS: We conducted a review of systematic reviews to assess current knowledge on the effectiveness of actions to improve sexual and reproductive health (including HIV) in adolescents. We included both specific health outcomes and health risks. Between March 15 and March 30 of 2015, we searched the following databases: CINAHL, Education Research Complete, ERIC, MEDLINE, PsycINFO, and Cochrane Database of Systematic Reviews. Levels of evidence were assessed, and "recommended interventions" were considered to be those with at least 50% of review studies reporting positive outcomes. These were often supported by some evidence on cost-effectiveness. Interventions with some positive evidence not reaching this threshold were "recommended for further research". Some other actions were classified as "unlikely to be effective in isolation but recommended as part of multi-component interventions".

RESULTS: Results outline the evidence for effective actions in policy, school, family, community, health service and online settings.

CONCLUSIONS/NEXT STEPS: The most effective programmes are typically multi-component and target one or more of these settings. The provision of accessible and quality health care (e.g., provision of contraception, sexually transmitted infections (STI) screening including HIV testing, treatment of STIs, provision of continuous care for HIV-positive adolescents), and high-quality, comprehensive sexuality education are likely to be effective, although much more so in conjunction with a broader suite of actions.

IAAH170412

Innovation in Adolescence Education in India: Learning from Udaan – a School Based At Scale Program in Jharkhand

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BACKGROUND: 'Udaan', a school based adolescence education program, is being implemented by the Department of School Education and Literacy (DSEL), Government of Jharkhand to influence and empower the adolescent boys and girls, with age appropriate knowledge on life skills and reproductive health and prepare them for a healthy transition to adulthood. With financial support from David and Lucile Packard Foundation, C3 has strengthened capacity of the government system for effective delivery and monitoring of the program. The program provides quality coverage to all enrolled schools in the state on adequate and accurate knowledge about life skills.

DESCRIPTION: The key strategies followed in the program to mainstream adolescent health education are: (i) a teacher-delivered curriculum for students of classes 6-9 and class 11 in approximately 1800 government schools in Jharkhand, (ii) systematic and quality training of nodal teachers by master trainers identified from within the school system (iii) Multi-Stakeholders involvement by undertaking advocacy efforts (iv) initiation of school based life skills activities through students led activity clubs and (v) mainstreaming of the program in pre-service teachers training system and school textbooks for sustainability.

LESSONS LEARNED: Since inception, assessment of impact had been carried periodically: in 2007, 2008, 2009, and 2010 to gather evidence of success on varied indicators. Assessment result shows that the program has addressed the felt need to improve knowledge, attitudes and life skills in critical areas like sexual and reproductive health, gender equality, changes during adolescence, and HIV/AIDS. The learning has been that a teacher-delivered curriculum for adolescents is acceptable and scalable within the school sector. Based on the experience from Udaan, some of the key recommendations will be that any large scale and system delivered program should have formal and long-term partnership between key stakeholders.

CONCLUSIONS/NEXT STEPS: The program has been acknowledged by the Government of India as a sustainable and scalable in-school ARSH model in the country by Government of India. Efforts to gain larger community buy-in, state specific and student ARSH curricula, quality trainings and sustainability clause, have led to acceptance of the program in the state and it is now establishing itself as one of the largest in-school ARSH programs in the country, reaching out to 9,00,000 students across the state.

IAAH170415

YouthLIFE: Imparting Life Skills and Health Education through Innovative Digital Curriculum

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BACKGROUND: Adolescence is the most crucial phase in the life of an individual. It denotes the transitional stage from childhood to adulthood, marked by conspicuous physical, cognitive, emotional and social changes. With the availability of multiple channels of communication, information and knowledge gain are predisposed to the arenas of electronic media. As new technologies increasingly engage a growing number of young audiences in India, new education methodologies and new technologies are now being used as a means of communication, education and information sharing.

DESCRIPTION: Using information technology to provide critical life skills and SRH information is a feasible strategy to reach out to the adolescents. With this understanding, a digital curriculum on life skills and health education, YouthLIFE, was designed and developed by Centre for Catalyzing Change (C3) for adolescents in the age group of 10-14 years. The digital curriculum incorporates classroom and computer learning, using edutainment and gaming. Supported by the MacArthur Foundation, the initiative was implemented in two phases: pilot and scaled up phase in Jharkhand and Delhi. Baseline and endline evaluation were carried out to assess the impact of the curriculum among students and gauge their knowledge, attitude and understanding on issues around growing up, health habits and relationships.

LESSONS LEARNED: Findings from pilot phase reflected that average net gain in knowledge was 24.22% in students where program was implemented

via digital medium over that among students where program was implemented via print medium. The cost effectiveness analysis using direct cost of implementing the YouthLIFE package showed that use of print medium had lower effectiveness/cost ratio (0.05) as compared to digital medium (0.11). Evaluation of scaled up implementation reflect learning gain among students in most of the content areas, including gender and gender-based stereotypes.

CONCLUSIONS/NEXT STEPS: An innovative tool such as digital curriculum aides in knowledge gain, post exposure retention, and encouraging students to continue seeking information on their own. Both boys and girls found the digital curriculum delivered through edutainment games and exercises interesting and informative for acquiring information on life skills, health, and gender issues.

IAAH170468

Young People Driving Access to Quality Comprehensive Sexuality Education for Adolescents

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BACKGROUND: Quality Comprehensive Sexuality Education (CSE) programs have shown to have a positive impact on the sexual and reproductive health of both adolescent girls and boys. However, access to CSE programs does not meet demand. Furthermore, adolescents and young people are often not engaged in the design, implementation, and evaluation of CSE policies and programs that affect their lives.

DESCRIPTION: Young people were given seed grants over a period of six months to implement CSE advocacy projects they developed. These youth advocates also participated in coursework that increased their skills in advocacy and project management, while benefitting from technical advising during the implementation of their project. Through her project, Marinella worked against fierce conservative opposition to raise awareness for the need for CSE in Croatia and implemented new CSE programs in select schools. Oko's CSE4ALL project provided sexual and reproductive health information to young people between the ages of 10-24 in Ghana, and used innovate platforms to facilitate dialogue about increasing access to CSE. In Cameroon, Desmond developed key recommendations for a CSE National Guidance and counselling syllabus, and garnered political support to increase access to CSE.

LESSONS LEARNED: To date, these advocacy efforts directly benefited a total of 2,062 adolescents ages 10-19 (1,145 female, 917 male) in the communities where projects were implemented. Issues young people advocated for were also placed on policy agendas and gained support from community members; overall, four local legislators placed these issues on their political agenda, and 43 community influencers expressed public support for CSE. Partnerships with local governments and partner organizations are being sustained past the project's duration, enabling the continuation of advocacy efforts.

CONCLUSIONS/NEXT STEPS: This unique combination of direct funding and technical support enables young people to be effective advocates in their own right. The immediate and on-going results from these seed grant projects demonstrate that young people themselves are strong and effective advocates to advance adolescent health and wellbeing, and are contributing to making programs and policies more effective and responsive to the needs of adolescents and young people.

Late breaker abstracts

IAAH170721

Digital uses, Risk-Taking and Online Negative Experiences among secondary school students in France and India: A comparative study

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BACKGROUND: The research presents a comparative study of digital uses, risk-taking and online negative experiences among students aged 13 to 18 in France (N=1312) and India (N=1021). They completed an anonymous questionnaire adapted from Smith et al (2008), Livingstone et al (2011) and Blaya (2013), concerning the following: digital uses; attitudes toward the Internet and addiction; risky behaviors; cyberbullying; coping strategies; parental and school mediation; and socio-economic variables.

METHODS: A questionnaire on negative online experiences was piloted and amended for the cultural contexts involved. Convenience sampling strategies were adopted in both countries. The sample design included: 3 state and 2 private secondary schools each in Tamil Nadu and Punjab (India), and 4 state secondary schools in France. In France, online interviews (CAWI) were conducted under the supervision of a research assistant through Sphinx Survey. In India, paper-and-pencil interviewing (PAPI) was adopted due to lack of sufficient computer equipment in the participating schools.

RESULTS: Indian students were more prone to take risks on the Internet than French students. As for France, the findings pointed to a much higher victimization rate than previous studies. Although a similar percentage of French and Indian students declared that they had been victims on the Internet during the previous 12 months, significantly more Indian respondents had suffered multi-victimization, that is, several forms of cyberaggression. This may be associated with the fact that 78% went online several times a day (against 49% in France), increasing their risk of being victimized.

CONCLUSIONS/NEXT STEPS: The research highlights the necessity of reconsidering prevention strategies in both countries, since victimization rates demonstrate that young people remain vulnerable, despite awareness-raising campaigns and parental involvement in prevention. It would also be relevant to carry out more in-depth research on different cultural values among youths in both countries and to analyze their moderating effect on cybervictimization. Such cross-national studies can be conducted across other countries.

IAAH170737

Compilation of the World Health Organization's current recommendations on Adolescent Sexual and Reproductive Health

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BACKGROUND: Over the last ten years, WHO has published a number of guidelines which contain recommendations on policy and programmatic aspects of Adolescent Sexual and Reproductive Health (ASRH) or for the general population applicable to adolescents (e.g. family planning, safe abortion, STIs, HIV, GBV, antenatal care, etc.). Those developing ASRH plans, policies and strategies, may not always be able to access and incorporate the full range of current WHO ASRH recommendations. Further, the same may be true for plans and investment cases developed in the context of bilateral or global initiatives, such as FP 2020 and the Global Financing Facility. While WHO guidelines also contain recommendations for ASRH research, ASRH researchers lack an easily accessible short document to inform their research.

DESCRIPTION: This compilation is short and user-friendly. The document will be organized using WHO's Framework on Sexual Health and will address the following issues/problems: 1) Comprehensive sexuality education. 2) Sexual function and psychosexual counselling services. 3) Contraception provision and counselling. 4) Antenatal, intrapartum and postpartum care. 5) Safe abortion services and post-abortion care. 6) Preventing Sexually Transmitted Infections (STIs) and providing STI care 7) Preventing HIV and providing HIV treatment, care and support. 8) Gender based violence prevention, support and care 9) Harmful traditional practices, including child marriage and female genital mutilation. Each of these issues/problems will be addressed using the following structure: 1. Title and definition of the topic. 2. Rationale and epidemiology. 3. WHO's guidelines that address the topic. 4. The specificities for adolescents

in the context of the WHO guidelines mentioned above. 5. In addition to the WHO guidelines, 2-3 key complementary documents. 6. A real-life example to illustrate the nature of the issue/problem or of the successful application of a WHO guideline recommendation.

LESSONS LEARNED: The Compilation will serve as a gateway to the rich body of WHO's guidelines, and as a handy resource to inform advocacy, policy and programme/project design and research.

CONCLUSIONS/NEXT STEPS: WHO will release this compilation at the 11th World Congress on Adolescent Health. Following the release, WHO will disseminate the compilation.

IAAH170780

The health and wellbeing of Indigenous adolescents in Australia: A systematic synthesis of population data

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BACKGROUND: Indigenous communities carry an excess burden of disease and premature mortality. Most Indigenous communities are young and adolescence (10-24 years) provides great opportunities for population health gain. Yet, there has not been a comprehensive account of Indigenous adolescent health, a barrier to effective policy.

METHODS: We defined 241 indicators for Indigenous adolescent health in Australia including health outcomes, health risks, and determinants of health. Available data were mapped against these indicators and the highest-quality selected to report a health profile for Indigenous adolescents. Where possible, comparison with non-Indigenous adolescents was made to measure health inequality.

RESULTS: Data were available for 189 indicators. Mortality amongst Indigenous adolescents was twice that of non-Indigenous. 60% of Indigenous adolescent deaths were due to suicide and road traffic injury, and 80% potentially avoidable. Communicable diseases (particularly STIs) were leading contributors to non-fatal illness. There was a large burden of NCDs including mental disorder and harmful substance use, alongside emerging type 2 diabetes (T2DM) and ischaemic heart disease. Additionally, there was marked excess morbidity due to intentional and unintentional injuries. This health profile differed markedly from non-Indigenous adolescents: rates of acute rheumatic fever, STI, hospital separation from T2DM were 10 times greater, rates of assault and fertility amongst 15 – 19 year olds five times so. Health risks were prevalent; 40% of 15-24 year olds were current tobacco smokers. Widespread disadvantage across social and cultural determinants underpinned these complex needs.

CONCLUSIONS/NEXT STEPS: Despite Australia's adolescents having amongst the best health profiles globally, Indigenous Australian adolescents have largely been left behind. Addressing Indigenous adolescent health will require inter-sectoral action as well as a reorientation of the health system to address their needs. Without a specific policy focus on adolescents, Australia (and other nations) will fail to redress the health inequities experienced by Indigenous peoples.

IAAH170792

Disentangling adolescents' vulnerability to gender-based violence through a capability lens in Ethiopia and Rwanda

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BACKGROUND: Adolescence is increasingly recognised as being pivotal in the life course, in part because of the physical transformations brought about by puberty – which are considered second only to those experienced in infancy in terms of their scope and speed – and in part because of the ways in which

children's place in the family and broader community shifts as they approach maturity (Viner et al. 2015; Steinberg 2015; Patton et al. 2012; UNICEF 2011). Despite remarkable progress over the past two decades, the transition from childhood to adulthood remains especially fraught for girls in low- and middle-income countries, who continue to experience a range of discriminatory gendered social norms and practices, and arguably particularly with regard to bodily integrity and freedom from violence.

METHODS: This paper draws on qualitative research in two distinct but marginalised geographies in Ethiopia (East Haraghe) and in Rwanda (Musanze district) with approximately 200 early (10-12 years), mid (13-15) and older (16-19) adolescent girls and boys, their peers and caregivers in 2016. The data was collected as part of the Gender and Adolescence: Global Evidence longitudinal research programme. The paper's conceptual framing centres around the threats and opportunities to adolescents' realisation of intersecting and overlapping individual and collective capability sets (Sen 1999, Nussbaum 2003).

RESULTS: Findings highlight that while the MDG era saw significant advances in basic education and health outcomes for millions of young people in East Africa, adolescent girls in particular but also boys in Ethiopia and Rwanda continue to face high levels of risk of sexual and gender-based violence at multiple levels (in families by siblings and/or parents, in and en route to school by strangers, classmates and/or teachers, in community spaces and beyond as part of migration routes domestically/internationally). Exposure to SGBV risks are in turn compounded by deficits in other capability domains especially sexual and reproductive health rights and voice and agency.

CONCLUSIONS/NEXT STEPS: The paper concludes by calling for the employment of a multi-capability approach to tackling adolescent vulnerabilities to gender-based violence broadly defined, both analytically and programmatically, as well as for a stronger focus of urban-specific risks and experiences.

IAAH170794

Increasing access to SRH services among the youth through university family planning network: A descriptive study in China

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¹China Youth Network

BACKGROUND: While adolescents in China are becoming increasingly open-minded about sex, sexual and reproductive health (SRH) education and service cannot meet the increasing demand. A survey in 2010 showed that 22.4% of Chinese (15-24 years) had sex; over 20% of the young girls having premarital sex experienced unwanted pregnancy. According to China CDC, the number of students with HIV infection increased by 35% over the past 5 years, mainly sexual transmitted. Thus, it is urgent to increase access to SRH services among the youth. We describe the University Program for delivering SRH services within an existing family planning network.

DESCRIPTION: Some services offered by the program included: counselling on decision-making, contraception and HIV prevention. Two youth leaders per and one family planning staff were nominated by their University for training in the relevant youth service. From January 2014-December 2016, the program commenced in 211 universities with 660 students and 280 family planning staff training in relevant areas, and they organized peer education, curriculum and counseling online and offline, during freshmen education, physical examination, World Contraception Day, etc. The program is a new way based on youth-adult partnership for SRH services.

LESSONS LEARNED: Over 3 million adolescents benefited from this program from 2014 to 2016. A survey of 5136 students (Jun. 2015-Dec. 2016) revealed that 80.8% of the students participated in peer education for the first time. Awareness of Long Acting Reversible Methods (LARM) during these events increased from 78.3% to 84.8%. Students knew the high-risk transmission of HIV / AIDS also increased from 81.4% to 87.8%. Awareness of the main method to prevent AIDS increased from 76.7% to 82.2%. Moreover, 71.4% (increased from 66.1%) of the participants think we should respect LGBT people. 87.4% of all think the program is good and excellent. 211 youth health clubs and 4 provincial youth networks have been established. The program is inexpensive and popular among young people, and could be delivered to any university.

CONCLUSIONS/NEXT STEPS: A unique youth-targeted program increased access to SRH services in Universities across China. The embedment of the program in an existing family planning network may make it scalable.

A self-adaptive personalized behavior change system for Adolescent Preventive Care

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BACKGROUND: Alcohol use is a leading cause of morbidity and mortality among adolescents. Although adolescent health risk behaviors such as alcohol use are amenable to behavioral intervention, few health information technology interventions have been integrated into adolescent care. The objective of this research is to design, implement, and investigate INSPIRE, a self-adaptive personalized behavior change system for adolescent preventive health. INSPIRE is being developed by a transdisciplinary team of psychologists, health services researchers, and computer scientists. With linkages through primary care, adolescents will interact with INSPIRE outside the clinic to develop an experiential understanding of the dynamics and consequences of their substance use decisions. The first phase of this research has been the design and development of the narrative centered behavior change environment. The next stage of the project is an investigation of the impact of the self-adaptive personalized behavior change system on adolescent behavior change integrating clinic-based and home-based system deployment.

METHODS: Drawing upon social cognitive theory of behavior change, INSPIRE has been developed in an iterative process with input from diverse adolescents on characters' personae and avatars, virtual environments, and narratives. We have conducted a series of focus groups and preliminary pilot tests with successive versions of the narrative centered behavior change environment.

RESULTS: Built with the Unity3D game engine, INSPIRE's interactive narrative game environment realizes an episodic branching storyline about a group of adolescents recounting events and decisions from a high-school get-together that occurred the previous night and involved alcohol use. A rich cast of seven intelligent virtual agent characters was created. Across two 30-minute episodes, the player alternately controls two protagonists, one male and one female. Adolescents report that INSPIRE is engaging, believable and relevant to teens' lives.

CONCLUSIONS/NEXT STEPS: Ultimately, the narrative-centered behavior change environment will be linked to adolescent primary care and the electronic health record system to serve as a clinician extender and support provider feedback to adolescents. This work has the potential to serve as an intervention method to effectively bridge between clinic and home environments when leveraging advanced health behavior change technologies.

ABSTRACT SELECTED FOR POSTER

Equity/ Positive Youth Development

IAAH170003

“NIRMAN-Youth for Purposeful Life”: An initiative to identify, nurture and organize Young Social Change Makers

Amrut Bang¹

¹SEARCH, NIRMAN

BACKGROUND: Half of the Indian population is under 25 yrs of age. NIRMAN (<http://nirman.mkcl.org>) aims to help these youngsters find meaning to their lives, to bridge the gap between the various social, scientific and technological challenges around and to unleash the tremendous potential of the youth.

DESCRIPTION: NIRMAN is a youth initiative to identify, nurture and organize young change makers to solve various societal challenges. As part of NIRMAN educational process, each batch of around 75 selected young students/professionals goes through a series of 3 residential camps that are organized once in every 6 months. Each camp is of about 8 - 10 days, conducted at Gadchiroli and the series continues for one year. Participants from different regional, economic and academic backgrounds add depth and breadth to this process. Along with the camps, study visits, educative sessions, reading assignments, internships, fellowships, individual mentoring, group activities are carried out.

LESSONS LEARNED: Since its inception, 6 batches of NIRMAN have finished the training program. The seventh batch has commenced from January 2017. Through these 7 batches, a total of 900 youth are associated with NIRMAN. Geographically spread, these youth are from 34 out of the 36 districts in Maharashtra state. Education wise, there are around 35% doctors, 35% engineers and a mix of lawyers, journalists, filmmakers, teachers, farmers, science-arts-commerce graduates, etc. There is a 55:45 male/female gender ratio. Around 150 NIRMAN youth are now working full time on specific social challenges in different parts of India. Their work domains include health, education, energy, environment and agriculture, development and governance. NIRMAN is developing its advanced educational process for this pool of young change agents to further build their effectiveness and world view.

CONCLUSIONS/NEXT STEPS: The participants in NIRMAN belong to the age group of 18 – 28, the ‘emerging adulthood’ phase. Their narratives reflect the possibility of “search for purpose through pursuit of social problem solving” that is driving them. In a situation where young people in India are continuously bombarded with consumerism and monetary competition for success, NIRMAN is offering a conducive environment and systematic possibilities for the youth participants to engage in actions of social change and find a deeper meaning to their lives.

IAAH170050

The health of newly arrived refugee young people: findings from the Optimising Health and Learning screening program in New South Wales, Australia

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BACKGROUND: Young people of refugee background are a vulnerable population whose health care prior to resettlement is often compromised by periods of social upheaval and transition. In 2011, the Optimising Health and Learning Program (OHLP) commenced in Intensive English Centres (IECs) located in secondary schools in New South Wales, Australia. This offers newly arrived students screening for a range of physical health conditions and facilitates referrals to external health services. This paper reports on health prevalence data and their demographic correlates of the refugee subset of IEC students.

METHODS: Students are invited to participate in the OHLP during school enrolment. Dual consent (student and parent) is obtained. Registered nurses conduct the following: body mass index calculations; ‘lift the lip’ dental screening; audiometry; visual acuity; blood tests for anaemia, iron deficiency, vitamin D deficiency, hepatitis B status, and if indicated: strongyloides, schistosomiasis, malaria and hepatitis C infections. Results are provided to the family’s local general practitioner for follow up. Deidentified clinical data collected from four IECs between 2011 and 2015 were analysed using the

Statistical Program for the Social Sciences. Analysis includes calculation of prevalence with 95% confidence intervals, and demographic correlates using chi-square tests of: weight status, need for dental, optometry and audiology referral, and detection of a health condition. This study has been approved by relevant local health district Ethics committees.

RESULTS: Between 2011 and 2015, 572 (11- 19 years; 51.4% female) students of refugee background were screened (participation rate > 90%). Top three countries of birth were Iraq (28.5%), Syria (13.6%) and Iran (6.8%). Dental health problems, vitamin D deficiency, hepatitis B under-immunisation and anaemia were common conditions. Clinical data are currently being analysed.

CONCLUSIONS/NEXT STEPS: Young people of refugee background experience a range of physical health conditions that may have been previously undetected, and which could impact on their wellbeing. The OHLP program facilitates access to evidence based care and appropriate referrals through partnerships and networks with external health services. Future research may include longitudinal studies to explore follow up and engagement with other parts of the health system and a full cost-benefit analysis of this program.

IAAH170056

Course and progression of children admitted before 4 years of age in a French welfare center

Serge fanello¹

¹CHU angers

BACKGROUND: Determine the institutional trajectory and future of young children in child welfare (CW).

DESCRIPTION: A catamnestic study-based on data from the CW office in Maine and Loire, France, from 1994 to 2001 –conducted by a child psychiatrist and a psychologist. Medical, judicial, and educational data (development, health, pathways in child protection services) were analyzed regarding the status of these children 15 years later, adding information gathered by interviewing the staff and foster family consultant.

LESSONS LEARNED: We included 128 children admitted before 4 years of age. Admission to the CW system suffers from care delays (a mean of 13.1 months between the first child protection referral and placement) with an average entry age of 17 months and frequent cases of child abuse. Physical and mental health status of these children was poor (poorly monitored pregnancies, prematurity, low birth weight). More than 30% had growth failure at admission, with catch-up in half. The average length of stay in the CW system was 13.2 ±4.6 years. At the end of the follow-up, there were specific measures to safe guard vulnerable adults: “young adult” (24cases), ‘major protection’ (8 cases) and ‘disabled living allowance’ (9 cases). 116 children suffered from psychiatric disorders at entry and 98 at the end. The general functioning of children as assessed by the Children’s Global Assessment Scale (CGAS) showed a statistically significant improvement. 50% young adults showed problems integrating socially with chaotic pathways: many foster placements, unsuccessful return to the family, and academic failures.

CONCLUSIONS/NEXT STEPS: The clinical situations of children in the CW office and their long-term progression confirm the importance of this public health problem. Although the measures can greatly improve their physical and psychological recovery, with evidence of thriving, this remains limited: only a few of these children are well integrated socially and academically.

IAAH170082

Child marriage in three African countries: Using data to improve programs

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¹Population Council

BACKGROUND: There is increasing research attention to the negative consequences of child marriage on girls’ health and well-being, as well as the development of nations. As well, efforts are increasing to eradicate the practice and mitigate the harmful effects among girls who are already married. At the same time, limited research has been undertaken that highlights patterns of child marriage in different settings and how varying practices impact upon the design of programs. This paper examines patterns of child marriage in three African settings and discusses implications for child marriage program design.

METHODS: This is a large-scale study of rural girls in three countries in sub-Saharan Africa where child marriage is prevalent: Burkina Faso, Ethiopia and

Tanzania. Population-based surveys of girls aged 12-17 years were undertaken in rural areas where child marriage is prevalent. Overall, 7,005 girls were interviewed, which formed the baseline survey for interventions to delay child marriage. We analyzed patterns of child marriage among girls who had already been married in the three countries.

RESULTS: There was considerable variation in child marriage practices between the three studied countries. In Ethiopia, the vast majority of marriages were arranged by families (93%), whereas 28% of Tanzanian girls chose to enter the marriage themselves. Less than 5% of girls in Burkina Faso and Tanzania were attending school at the time of their marriage, compared to 43% of girls in Ethiopia. Only one quarter of Ethiopian girls and half of Burkinabe and Tanzanian girls knew about the wedding beforehand. Levels of polygamy also varied considerably between countries.

CONCLUSIONS/NEXT STEPS: Many child marriage prevention programs do not take into account the patterns of child marriage that predominate in project locations. For example, while it is common for initiatives to form protective structures in schools, our research shows that the majority of girls who are at risk of child marriage are already out-of-school. Moreover, they are not aware of the marriage plans, making reporting the child marriage to authorities an impossibility. Program managers should take account of child marriage practices and patterns in the design of programs to address the practice.

IAAH170120

Saathiya scheme for Adolescents of India

Rohini Sharma Bhardwaj¹

¹IGNOU

BACKGROUND: The Saathiya scheme has recently been launched by the Government of India for the purpose of educating and exposing the adolescents about the important issues which affect the youngsters including Gender, Homosexuality and abortion.

DESCRIPTION: Saathiya scheme involves the provision of educational material aiming at providing a knowledge data bank to the adolescents regarding issues like gender, sex and so forth to remove shyness, myths and misconceptions to provide a platform of healthy adolescent development. It gives them a platform to gain knowledge, reach out for help and avoid shying away from their problems which is very common in adolescents who feel that no one understands them.

LESSONS LEARNED: The lessons learned so far include the following: - it is a resource material - a kit with necessary material for educating the adolescent. - It accepts the homo-sexuality to be normal (a burning issue as far as the conservative Indian Society is concerned and as per section 377). - It teaches the importance of consent in relationships. It is important in two aspects -first the idea is important to limit the sexual crimes against against/ among adolescents. Secondly, it is important since the Indians are now opening up to the idea of pre-marital sex. -It also emphasizes on the mental health, curtailment of aggression, conflicts and positive body image. - Training of trainers.

CONCLUSIONS/NEXT STEPS: What else needs to be taught- Talking about many issues of LGBT adolescents, the training of trainers must be sensitive and genuine. - Adolescent health must be promoted and parents must be involved for which written material must also be made available to the parents. - Video/ Audio programmes, counselling and guidance linkages / referrals must be readily available. - Also linked with this scheme, must be a Health Scheme for the adolescents to take care of the various physical, psychological, social and spiritual needs. - Promotion of positive self- image and confidence by collaborative approach.

IAAH170123

Livewire: An Australian program to improve adolescents' wellbeing, both in-hospital and at home through creativity and connection

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¹Starlight Children's Foundation

BACKGROUND: The Starlight Children's Foundation (Starlight) delivers programs across Australia and New Zealand in partnership with health professionals to support children, adolescents and their families who are living with a serious illness, disability or health condition. Adolescence is a time of

physical, psychological, emotional and social change. For adolescents with a serious illness, disability or chronic health condition, these normal changes and development stages can be delayed or compromised.

DESCRIPTION: Out of this need, Starlight's adolescent program, Livewire, was launched in 2012. The program operates in six major hospitals across Australia and is delivered in two ways. 1) Livewire In-Hospital provides creative and skill-development workshops which are designed to meet the needs of seriously ill adolescents in-hospital. In 2016, the program delivered over 2000 workshops from live music sessions to gaming competitions. 2) Livewire.org is a moderated online community for chronically ill adolescents that provides them with opportunities for self-expression, and allows them to connect with others who are dealing with the same issues.

LESSONS LEARNED: In 2016, Starlight undertook a mixed methods evaluation of the Livewire In-Hospital program in partnership with the Royal Children's Hospital (RCH), Melbourne Australia. The evaluation measured the satisfaction of adolescents and health professionals with the program and assessed how well the program meets the needs of adolescents receiving treatment in mental health units. Starlight recognises the key role adolescents play in their own health and actively involves adolescents in program evaluation. Results show the Livewire program is highly valued by adolescents and health professionals. The program was reported to increase and facilitate social connections between adolescents; lift the mood of participants; and, build their self-esteem and self-efficacy. In addition, the program supports the work of health professionals. The evaluation also provided valuable insights into how to effectively engage with adolescents in mental health wards.

CONCLUSIONS/NEXT STEPS: The paper will provide practical insights into successful on-the-ground service delivery of an adolescent program, drawing out lessons learnt and highlighting the impact of the program on adolescent wellbeing. Overall, this presentation will showcase an innovative and highly successful program model and provide strategies for implementing interventions in the field of adolescent health.

IAAH170162

Teenage Pregnancies: A Threat to Harnessing Demographic Dividend in Tanzania

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BACKGROUND: In order for Tanzania to achieve sustainable development through industrialization, harnessing demographic dividend (DD) is inevitable. About 65% of Tanzania's population of 44 million is below 25 years with the 10-24 years constituting a third of its total population. Investing in this group can not only ensure achievement of sustainable development but also help with its acceleration. This literature review highlights the recent increase in teenage pregnancy rate and its effect in national fertility rate and its impact to sustainable development.

METHODS: Data from this review has been obtained through searching the current country's databases and policies. Mainly we looked into TDHS-MIS 2015/16 and TDHS 2010. More highlight is revealed from the National Road Map Strategic Plan to Improve Reproductive, Maternal, Newborn, Child and Adolescent Health in Tanzania (2016-2020): One Plan II.

RESULTS: Tanzania has strong favorable policy environment with respect to adolescents and youth sexual and reproductive health and rights. However, over one quarter of young women ages 15 to 19 have begun childbearing; teenage pregnancy rates have risen from 22% to the current 27%; modern contraceptive use among 15-19 years remains low at 13% even though one in every four young married women age 15-19 years have a desire to use contraception but are not using any method; Access to adolescent friendly SRH and FP services is still a challenge, only 30% of service delivery points are available. The median age at sexual debut is 18 years, and early marriages is still a common practice in some parts of the country, hence exposing women to risk of pregnancy, and contribute to overall total high fertility of 5.2 children per woman of the reproductive age.

CONCLUSIONS/NEXT STEPS: In order for Tanzania nurture a responsible cohort of adolescents, investment should focus on providing Comprehensive Sexuality Education, Adolescent friendly SRH services and reach all adolescents and target teen mothers with post-partum FP services. These initiative should focus the most marginalized and rural communities where numbers are high. DD could be harnessed only if Tanzania reduces fertility rate and when less teens have dependents and they could reach their potential through education and economic empowerment.

IAAH170165

Why Ethnicity and Gender matters for Fertility Intention among Married Adolescents: A Baseline Evaluation from a Gender Transformative Intervention in Rural India

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BACKGROUND: Social inequities in early child bearing persist among married adolescents, especially among tribal populations in India. Rural women belonging to Scheduled Tribes (ST) and those coming from poor households are more likely to have a birth before age 18. This study explores inter-connection between ethnicity and gender with early fertility intention among adolescents.

METHODS: The survey data is drawn from a cross sectional baseline evaluation of an intervention program in rural Rajasthan and Madhya Pradesh. A subset of sample (407 boys and girls) was taken. Respondents were selected using systematic random sampling. Multinomial logistic regression was used to model the effects of selected covariates on intention to have early child bearing. Qualitative data is analysed using deductive content analysis approach.

RESULTS: Mean age 17.1 (SD=0.99) is for girls and 19.7 (SD=1.32) for boys. Bivariate results showed that most ST adolescents, and especially boys hold attitudes that are less supportive of gender equity towards early child bearing (<0.001). Multinomial logistic regression indicated a strong association between gender, ethnicity, and education with fertility intention. Adolescents from tribal community were relatively more at risk to plan a child within one year than other caste (RRR=0.53, pvalue=0.08). Girls as compared to boys were more at risk for planning a child within one year of marriage (RRR=0.44, p-value=0.062). The relative risk of planning a child within one year is strongly associated with gender norms (RRR=0.23, p-value.01). Qualitative investigation confirms that adolescent's fertility desires are strongly influenced by gender norms and expectations especially among tribal populations.

CONCLUSIONS/NEXT STEPS: Early child bearing is underpinned by complex ethnic factors and gender norms. Gender attitudes are a cause of concern among ST groups especially among boys. Preference for early child bearing is seen most among tribal community who are overall less educated, belong to poor families, have less exposure to mass media. This analysis reaffirms that effort to be better directed towards tribal populations as needed the most. The findings are relevant for interventions seeking to target rural vulnerable adolescents (tribal) in India to design and tailor appropriate family planning interventions for tribal adolescents to meet their current and future fertility desire needs.

IAAH170179

Swedish Youth Clinic - accessible, acceptable, equitable, appropriate and effective for the youth population – are beneficial for youth health

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¹Sollentuna Youth Clinic

BACKGROUND: The establishment of youth clinics in Sweden has its roots in health promotion and prevention based on professional counselling from specialists in the medical and psychosocial fields. Youth clinics were established from the 1970ties. Today we see now more than 250 centers all over the country.

DESCRIPTION: The general objective for Swedish youth clinics is to promote physical and mental well-being, focusing mainly on sexual and reproductive health and the rights of youth and young adults. This is achieved through a comprehensive medical, psychological, and psychosocial perspective. The target group is between 12 and 25 years old. Personnel at youth clinics have medical, psychological, and social work qualifications and collaborate closely, using a cross-professional working method. The working group consists of a registered R.N nurse-midwife, a counsellor/psychologist, and a physician. These professions are compulsory, since youth clinics must be able to prescribe contraception and offer counselling, and have a physician with medical responsibility. The personnel shall also engage in outreach work with young people in groups. This work includes study visits by school classes at clinics, information in schools and being a complement to teaching in schools on sexuality and interpersonal relations. All activities in Swedish youth clinics respect human rights and the right of the child (UN). All young people are welcome regardless of sex, gender, ethnicity, religion or faith, sexual orientation. A constant norm-critical perspective improves the ability to make each visitor feel that they are seen and recognized on their own terms. The work have a

salutogenic perspective focuses on factors that lead to and support health and well-being. Swedish youth clinics are low-threshold clinics. It means making it easy for young people to seek the help that they are entitled to, of their own free will and free of charge.

CONCLUSIONS/NEXT STEPS: To promote physical and mental well-being, focusing mainly on sexual and reproductive health and the rights of youth and young adults is of the utmost importance, knowledge means power, power over your own life, young persons have the right to knowledge and education, counselling and treatment.

IAAH170183

Tau Dauru – We Care: A health education program for adolescent men in PNG.

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¹Burnet Institute

BACKGROUND: The Burnet Institute's PNG Program implemented a pilot project in recognition of limited initiatives focusing on providing young men with information relevant to their own gender-specific health needs. Named by the young men, Tau Durua (We Care) provides them with opportunities to explore, discuss, & learn in a safe environment, while having fun.

DESCRIPTION: The program encourages young-men to reflect on their risk behaviour and the possible consequences (on themselves / others, including partners). In particular, the activities aim to: 1) Increase young men's knowledge about sexual health, alcohol and drug use. 2) Increase young men's understanding of gender and encourage them to reflect on gender norms. 3) Improve young men's decision-making skills so they can make informed decisions about sexual health, alcohol and drugs use and healthy relationships. This presentation will share some of the insights gained in developing the program and it's acceptability with young men. The project involved developing a toolkit, training local facilitators and supporting them to use the toolkit in their respective communities. Through 60 training activities, the facilitators piloted the toolkit with over 300 young men. Using pre and post training evaluation forms, feedback was sought regarding acceptability & effectiveness of the activities and learning materials.

LESSONS LEARNED: Evaluation Workshop In 2015 an evaluation workshop was conducted with the facilitators and some participants. The workshop provided in-depth feedback regarding the activities, toolkit contents and style of facilitation. Feedback was collated and the toolkit was revised accordingly. It concluded that the activities are well designed to support young men to reflect on their behaviour and gain skills and knowledge to make informed decisions. Young men note that the focus on storytelling and learning by 'seeing and doing' is well suited to the PNG context. The project has also shown that thoughtful product design is vital when developing tools targeted at young people. The fun, colourful design of the toolkit has been very well received by young men.

CONCLUSIONS/NEXT STEPS: The program is currently being adapted so that it can be used in other settings and a similar program has been designed for adolescent girls and is currently being trailed in PNG.

IAAH170187

A New Lease on Life for Young Parents

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BACKGROUND: The Philippines has seen an alarming rise in teen pregnancies. The National Demographic and Health Survey (NDHS) 2013 showed that one in ten women aged 15 to 19 years has begun childbearing, with live births in this age group increasing from 126,025 in 2000 to 207,898 in 2010. Corollary to this, the Young Adult Fertility and Sexuality (YAFS) Study revealed a significant increase in the number of sexually active youth 15 to 24 years old from 23% in 2002 to 32% in 2012. Recognizing the risks to young mothers and their infants, the Department of Health (DOH) issued Administrative Order 2008-0029 requiring young mothers to deliver in facilities qualified to administer Comprehensive Emergency Obstetric and Newborn Care (CEmONC).

DESCRIPTION: The United States Agency for International Development

(USAID)-supported Visayas Health Project is implementing a Program for Young Parents (PYP) to help reduce births to women 19 years old or younger. Since 2014, 24 PYP Centers have been established in the Visayas. A total of 558 young women enrolled in 2014, 4,060 in 2015, and 8,638 in 2016. Facility-based deliveries increased from 3,470 in 2015 to 5,457 in 2016. Breastfeeding initiation rates improved from 88% in 2014 to 97% in 2016. Users of modern contraceptives increased from 884 in 2015 to 2,081 in 2016, with the proportion of IUD users increasing from 23% to 53%. Clients “graduate” from the PYP when they complete four prenatal consultations, deliver in the hospital, participate in family planning counseling, initiate breastfeeding, and attend educational sessions. They are linked with partner organizations that provide education and livelihood opportunities, so they can support their family and prevent subsequent pregnancy. As of February 2017, 332 clients have “graduated”.

LESSONS LEARNED: The PYP experience shows increased attendance in prenatal visits, institutional deliveries, breastfeeding initiation, and use of LARCs postpartum among young mothers.

CONCLUSIONS/NEXT STEPS: The PYP applies a holistic approach shown to be more effective at preventing subsequent pregnancy by facilitating access to educational and livelihood opportunities. Results of PYP might be helpful for program managers and policy planners for developing effective interventions for healthy pregnancy and safe delivery of among young mothers.

IAAH170192

The Perceived Benefits and Disadvantages of Girls' Education in the Context of Early Marriage among Girls and Decision Makers in India and Ethiopia

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BACKGROUND: Early marriage (marriage under age 18) is associated with many negative mental and physical health outcomes among women and girls, but also serves as a barrier to girls' educational attainment. While research documents connections between education and early marriage, little is known regarding how education is perceived in the context of early marriage by girls and their marital decision-makers. This study aims to identify perceived benefits and disadvantages of girls' education in the context of early marriage among girls in Jharkand, India and Oromia, Ethiopia, to better understand the underlying structural gender inequities that perpetuate early marriage of girls.

METHODS: In-depth, qualitative interviews (n=195) were conducted among girls who participated in early marriage prevention programs and either married prior to age 18 or cancelled/postponed their proposed early marriage. Additionally, up to three of the participants' marital decision makers were invited to participate. Interviews explored participants' views on early marriage, including perceived the benefits and disadvantages of education within the context of early marriage. Interviews were transcribed, coded and analyzed using Atlas.ti.

RESULTS: Participants reported several tangible and intangible benefits of education including: improved knowledge, economic self-sufficiency, career aspirations, improved ability to run a household, improved ability to parent, increased self-efficacy, and being perceived as a community role model. Perceived disadvantages of education, such as community backlash and gender inequities faced when pursuing an education, were briefly discussed.

CONCLUSIONS/NEXT STEPS: Girls and their marital decision-makers perceived the benefits of education to be multidimensional and the skills gained therefrom to be advantageous in multiple settings. Education cessation was often tied to early marriage, and education was perceived as beneficial in preventing early marriages. While some discussed community backlash to girls' education, educated girls were also viewed as role models, suggesting conflict between the desire for girls to be self-sufficient and compliant with traditional gender roles. These findings capture the struggle girls face in attempting to be autonomous in a society in which they are structurally disadvantaged, and highlight the need for interventions that address community norms as part of individual early marriage prevention efforts.

IAAH170194

Exploring the process of early marriage decision-making: Qualitative findings from Ethiopia and India

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BACKGROUND: Early marriage (EM), defined as marriage before age 18, disproportionately affects girls, and carries substantial adverse health implications. Adolescent brides generally have decreased autonomy and empowerment, and heightened vulnerability to gender-based violence; EM prevention is thus key to adolescent health and well-being. While EM is often described as an outcome, the goal of this research is to explore the process of EM decision-making, to better inform prevention efforts and improve adolescent health.

METHODS: This study uses data collected from participants in EM prevention programs in Oromia Region, Ethiopia, and Jharkhand, India. Girl participants who married <18 and who delayed/cancelled proposed EMs were recruited (n=43 in Ethiopia; n=48 in India), as well as associated decision-makers (n=62 in Ethiopia; n=52 in India). Interviews included questions on the EM decision-making process. Data were analyzed using latent content analysis.

RESULTS: The EM decision-making process occurred in three stages: initial discussion, negotiation and final decision-making; each had unique groups of participants. Initial discussions of EM varied across settings, with proposed grooms most commonly beginning the conversation in Ethiopia, while in India, non-parental family members generally broached the topic. The negotiation phase included the most external influence, with the Ethiopian sample showcasing the role of teachers in negotiating against EM and elders in advocating for EM. Indian participants noted fathers as the main actors negotiating against EM, and mothers as the primary negotiators in favor of EM, though other family members and prevention program workers were also influential. Final decision-makers in both countries among girls who married early were the fathers; among Indian girls who delayed/cancelled marriage, fathers were also the most common final-decision-maker, while Ethiopian girls who delayed/cancelled marriage most often served as their own final decision-makers.

CONCLUSIONS/NEXT STEPS: While the initial stages of EM discussions are rooted in norms, the negotiation phase is more open to external influences. This may be an important window in the EM decision-making process in which to influence outcomes, as final decisions are made within the family. Results emphasize the need to understand the process of EM decision-making in order to better structure and target prevention efforts.

IAAH170218

Promoting Positive development and empowering adolescents – Experience of Workshops

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BACKGROUND: For empowering adolescents and promoting their positive development it is very important to involve the pillars in their life: parents at home and teachers in school. AACCI was established in 2008 in Mumbai, India by a group of physicians from various specialties to work for adolescents and children through these stake holders. We work on voluntary basis as a passion in addition to our main professional assignments and have a team in Mumbai, Pune and Delhi. We have no sustained grants or full time employees.

DESCRIPTION: Our modus operandi consists of approaching various schools and holding awareness programs for parents and teachers on various aspects: adolescent brain development, body image issues, enhancing academic performance, mental health issues including substance abuse etc. Permission is then taken from them, to do youth behaviour surveys using standardized tools – eg GHQ, Test Anxiety, Self -esteem etc. The results are shared with the school and customized workshops developed by AACCI team are held in the school as an intervention. Workshops are also held for parents and teachers separately. Ethical research declaration approval was taken for Institutional ethical committee AACCI.

LESSONS LEARNED: 1) Taking parents and teachers on board by creating awareness and educating them about adolescence and the need of harnessing

their potential for positive development, gives us easy access to adolescents for our interventions. 2) Roping them in helps to reinforce our interventions at home and school as an ongoing exercise which benefit adolescents in the long term. 3) Doing Multicentric - youth behavior surveys gives insight into the changing trends of behavior in Indian youth over last many years. 4) Based on the survey results of each school, customizing standard programs e.g. LSE and creating specific new modules, are much more meaningful and effective. The scales can also be used to see the effectiveness of the interventions.

CONCLUSIONS/NEXT STEPS: Next steps : we are now going forward with a youth wing of AACCI to expand our Peer educator program for the various training modules and increasing our presence on social media which we have not done so far.

IAAH170223

Perception of menstruation differences and life quality of adolescent girls

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BACKGROUND: Menarche is a kind of vital sign for girls. Perception of normal and abnormal menstruation considerations and expression is very important for quality of life and medical care.

METHODS: 216 adolescent girls were enrolled at single center with this prospective survey study on March, 2016 – March, 2017. Menstruation period day and menorrhagia were been evaluated with pictorial bleeding assessment chart (PBAC). Toronto alexithymia scale, life quality scale for adolescents and parents were been used to evaluate to ability of expression and life quality.

RESULTS: Menarche age was 12.5 years , 62.5% high school and 12.5% smoking. Although 82.9% of total participations was been expression of dysmenorrhea but 36.1% was been using drug for pain during period. 43.3% was been expression of irregular period but 14.4% had been medical care. Mean menstruation period was 6 days and 139.3(4-846) point for bleeding and bleeding score of 58.5% (n=121) was e¹⁰⁰ point was seen on PABC. Adolescent life quality score 72.0 (10.8-100) and 70.3 (21.7-100) for mothers and 66.3 (45.6-91.3) for PBAC e¹⁰⁰ points. Toronto alexithymia A 15 (7-35), B 12 (5-24), C 21 (10-31) and A 18.7 (8-33), B 12.8(5-23), C 20.1(11-27) for menorrhagia on PBAC. Mothers education level was more associated with alexithymia B levels of adolescents. Also, menarche age, number of brothers and person of household were been correlated with alexithymia B levels of adolescents. But no correlation was found between menarche age and quality of life scores of adolescents.

CONCLUSIONS/NEXT STEPS: Menstruation knowledge is very specific for girls to expression of a normal or abnormal signs of herself. Menorrhagia expression and perception own herself is more difficult for adolescent girls and so PBAC could be useful for expression. And mother education is more essential for right expression of adolescent girl emotion. Expression and perception of menstruation normality and/or abnormality is a vital sign for medical care. Menstruation adaptation can be more difficult so that support of knowledge could be began with earlier ages before menarche.

IAAH170230

Investing in Adolescents - A multi-directional partnership towards an Adolescent Research Agenda in Lao PDR and the greater Mekong Region

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BACKGROUND: Since the Lancet Commission on Adolescent health highlighted the need for research from low-income settings, high-income countries have been the key drivers of research. It is time to go beyond this traditional approach and establish a multi-directional partnership with low-resource countries in the driving seat. This initiative wants to establish a research agenda addressing urgent research priorities within adolescent health as well as bring together actors in the region to facilitate dialogue.

DESCRIPTION: On the 25th of October 2016 in Vientiane, Lao PDR, the

National Institute of Public Health (NIOPH) in partnership with UNFPA and MCNV/EU-LEARN hosted a regional seminar on adolescent sexual and reproductive health (ASRH) research where national and international experts on ASRH and decision-makers came together to review evidence from the region and to establish a research agenda on ASRH to guide future work, and stimulate collaboration and resource mobilization. Researchers from Lao PDR, Bangladesh, Cambodia, India, Myanmar, Vietnam and Zimbabwe shared evidence and experiences through presentations, posters and panel discussions.

LESSONS LEARNED: Twelve key issues with related research questions were identified and endorsed by participants to lay the basis of the regional research agenda. In addition to researchers and technical experts within the field of ASRH from the region, high-level representatives from government, embassies and development partners attended. The combination of attendees allowed for lively discussions and great input from the floor in the shaping of the key issues and defining of the research questions relevant for Lao PDR and the region. Additionally, NIOPH launched the SDG4A Network for Researchers, Development partners, and Stakeholders within the field of Adolescent Health in the greater Mekong Region along with a network website (www.sdg4a.org) to facilitate collaboration.

CONCLUSIONS/NEXT STEPS: The purpose of the Research Agenda is to promote research with relevance to public health focusing on ASRH, pertaining to the following points; a) filling the knowledge gap with regard to ASRH, b) reducing scientific uncertainties of what works in adolescent programming, including young adolescents (10-14 years), and c) going beyond numbers and explore root causes of issues in relation to ASRH.

IAAH170234

Trends and Patterns of Positive Sexual Behaviours among Youth in Nigeria

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BACKGROUND: Youth today are growing up in complex and changing environments that have been characterized by limited educational and employment opportunities, urbanization and breakdown in their traditional norms. Research has suggested that these put them at risk of risky sexual behaviour thereby increasing chances of sexually transmitted infections. Although numerous studies have documented patterns and factors associated with risky sexual behaviour among youth, less is known about their counterparts who choose to engage in positive behaviours. Examining the youth who choose to engage in positive sexual behaviours despite growing up in difficult environments will enable policy makers enhance the internal and external protective factors that influence their behaviours.

METHODS: Using the 2003, 2008 and 2013 Demographic and Health Surveys (DHS) from Nigeria, this paper investigates the trends and patterns of positive sexual behaviours among youth in Nigeria. Logistic regression would be used to examine associations between selected socio-demographic and positive sexual behaviours which will be measured as condom use at last sex and delay in sexual debut.

RESULTS: Results show that there has been a slight increase in positive sexual behaviours among youth in Nigeria. For instance, percentage of youth engaging in first sex after 15 increased from 72% in 2003 to 79% in 2013. For condom use, 8% of youth used condoms at most recent sex with partner compared to 6% in 2003.

CONCLUSIONS/NEXT STEPS: Young people face multiple challenges in their environment that may put them at risk but some have developed coping mechanisms and engaged in positive behaviours. Knowledge of strength based approaches for youth development is timely since there is growing political will in the international community and among many national governments and civil society groups to develop more effective policies for youth.

IAAH170236

Examination anxiety in school children: Age, Gender and No of siblings - Customized AACCI interventions

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BACKGROUND: Indian children have great Examination anxiety (EA) as their "self-worth" is influenced by parents and teachers evaluations. EA can be

factored into Social Derogation (SD), Cognitive Blocking (CB), and Nervous Tension (NT) -three key variables. Examination Anxiety adversely affects performance. The results of subset scores are an eye opener for parents and teachers. Customized interventions are planned through AACCI workshops targeted at the key variables (i) Self-esteem building and life skills, (ii) Study habits and exam going skills, (iii) Relaxation techniques, respectively.

METHODS: Ethical Research Declaration Approval taken from AACCI - Institutional ethics committee. Permission was taken from Principal for conducting study and consent taken from students before filling the forms. Tool - Friedman and Benda-Jacob's Test Anxiety Scale (23 items -3 sub-factors) self-filled after explanation. No Names were asked for to promote honest answers -only Age, Gender, no. of Siblings. Sample: 964 school children (2 Delhi +1 Gurgaon HES, Coed, English Medium) Age: 13 - 17. Divided into Group I: 11 - 14 and Group II: 15 - 17 years.

RESULTS: Age and Gender School I: Gr II>Gr I :CB Females :: 2.39 v/s 1.66 (p = 0.020) School II: GR II>Gr I:CB Males:3.22 v/s 1.69 (p = 0.007)/NT: Females :3.07 v/s 2.80 (p =0.017) No siblings: School I- and III: GR I >Gr II: CB: 2.30 v/s 1.15 (p = 0.004) and 2.90 v/s 1.71 (p=0 .040) With siblings: School I and II: GR I >Gr II: CB: 2.59 v/s 2.02(p=0.021) and 2.99 v/s 2.269 (p =0 .003).

CONCLUSIONS/NEXT STEPS: Cognitive Blocking scores were high especially in the older Gr II. This could be due to increasing academic load and they need to learn good study habits and examination skills. In school I- higher in girls and school II in boys. Nervous tension was high in older females in School II, which requires additional teaching of relaxation techniques .This emphasizes the need of pre-workshop surveys to do customized interventions for maximum effective results – a methodology followed by AACCI .In our previous studies we had high Social derogation which is not seen in this sample.

IAAH170238

Screening of school students': Appreciation -Motivation

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BACKGROUND: Most parents and teachers learn early that by differentially rewarding good behavior and discouraging unpleasant behavior, one can encourage young persons to behave in ways that are appreciated by society. But what may happen if the child gets overly dependent on appreciation and the motivation that stems from it? AACCI assesses the degree of Appreciation - motivation by using a standardized scale to plan behavioral intervention in School

METHODS: Ethical Research Declaration taken from AACCI -Institutional ethics committee. Permission was taken from Principal for conducting study and consent taken from students before filling the forms. Tool: Martin H.J. (1984) approval motivation scale. This 5 point Likert type scale has 20 items- . (6 items- reverse scoring). Average score is 53.6 SD 9.02 .Higher the score shows more the need for social approval. Reliability index (Cronbach alpha coefficient) .75; Test-retest reliability coefficient 0.72 Sample: 712 school children (8th,9th STD) -two schools English Medium ,Coed ,HSE from Delhi, India- divided- Group I -10-14 yrs and Group II 15-18 yrs. To encourage honest answers, no names were asked for only age, Gender and no of siblings

RESULTS: Age and Gender: Total sample - scores were higher in older Girls i.e. Gr II -60.49 vs 57.76 (p=0.010). On comparison between schools – School 1- higher scores in younger boys -Gr I: 59.14 vs 54.40 (p=0.008) No Siblings: Total sample: Higher score in Older girls i.e. II 59.67 vs 55.72 (p=0.008)

CONCLUSIONS/NEXT STEPS: In this study, older girls specially who had no siblings , show a very high need for approval which can put them risk for “wanting to fit in or be appreciated a lot “,tempting them into high risk behavior .Single child is becoming a norm in India today in educated families for various reasons. The single girl child becomes “the male scion” in terms of achievements. She gets used to high praise - parents often saying “she is as good as a son”. AACCI will conduct customized program to teach these children to learn to follow their own self-motivation rather than be dependent upon or crave approval from others specially the younger boys in School 1.

IAAH170243

Teachers attitude and perception on sex education for adolescents in the school

Sophia cyrilvincent¹

¹SQU

BACKGROUND: Sex is a natural part of life, and it happens with or without sex education. Adolescent age is a time to experiment with sex. In the course of experimentation, adolescents often encounter high risk situation like exposing to STD, exposed to unintended pregnancy & abortions, alcoholism and drug addiction for their sexual excitement. Hence, sex education is just as important as any other subjects, it needs to be emphasized in schools. This study was conducted to assess the teachers attitude and perception on sex education at selected schools of Bangalore in the year 2015.

METHODS: The teachers were selected randomly using cluster sampling. Data were collected using self-reported questionnaires, surveying the teachers' perception and attitude on sex education. Teachers were being explained about the objective and confidentiality of the study while distributing and collecting the questionnaires.

RESULTS: Most teachers agreed that sex education is one of the adolescents' fundamental rights (82%), (65.2%) stated it helps to reduce sexual risk behavior. (50%) of the participants appreciated the sex education in schools is essential., while 50% it lead to early initiation of sexual activities and Most teachers (51%) believed it should be taught by the medical person or the educational counsellor. 80% of the teachers claimed that sex education should be taught through educational pamphlets, videos and as moral stories. There was a significant difference between the school type and the attitude towards sex education (P=0.01). Teachers' perception on sex education is mostly about issues regarding, menstruation, hygiene, moral values for pre-marital sex. School authorities to should incorporate with the medical professionals and arrange sex education workshops or seminars and distribute the sex educational pamphlets.

CONCLUSIONS/NEXT STEPS: Teachers play a vital role in shaping students future and responsible for preparing children to be a great citizen ,which is attainable through training both physically and mentally. In my study, most teachers believed that the sex education is also an important component like any other subject, and it should be taught by right person. They also though that the best time to start the training was before marriage, followed by in high school and content must be based on the students' mental maturity.

IAAH170244

Self -control – important for positive health Behavior

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BACKGROUND: Self-control is a cognitive process that helps an individual to regulate behavior in achieving goals and very important to sustain positive behaviours that are conducive to healthy life style in adolescents and they should be trained to learn it. This study has been done to assess perceived self- control in different school students with a standardized tool.

METHODS: Ethical Research Declaration approval taken from AACCI - Institutional ethics committee. Permission was taken from Principal for conducting study and consent taken from students before filling the forms. Tool Used: Perceived Self Control (PSC) test by Humprey (1982) Higher the score more is the self-control. Reliability coefficient i- 0.71. four factors (a) Personal SC (b) Interpersonal SC (c) Self-Evaluation, (d) Consequential Thinking. Sample: 964 school children (2 Delhi +1 Gurgaon: HES, Coed, English Medium). Divided Group I: 11 - 14 years; Group II: 15 - 17 years.

RESULTS: No significant difference on PSC (mean scores 4.28 - 5.04). Age and Gender: School 1: Gr II>I: Girls :SC .86 v/s 4.38 (p=0 .025); Interpersonal SC: 1.87 v/s 1.44 (p = 0.009) School 2: Gr II>I: Boys: PSC: 5.20 v/s 4.33(p=0.001); Interpersonal SC: 2.28 v/s 1.43(p=0.000) Girls: 2.08 v/s 1.61(p =0 .007) School 3: Gr: I>II Personal: SC: Boys: 1.12 v/s .69 (p=0.006); Self -evaluation: Girls 1.18 vs .72 (p =0 .005) Analysis of siblings: statistical difference seen in School 2.:With siblings: GR II >Gr I PSC 5.04 v/s 4.56(p=0

.003.); Interpersonal SC: 2.09 v/s 1.51(p =0 .000) School 3: Single Child: Gr II > Gr I Self- evaluation 1.21 v/s .60 (p =0.014.)

CONCLUSIONS/NEXT STEPS: In this study perceived self-control is better in older age group II which is consistent with better cortical maturity at older age. In school III -boys from younger group I scored higher on personal self-control than older boys - which needs further analysis. The sub-scores are different in the 3 schools and not comparable. But since self-control affects various cognitive and non-cognitive aspects of human behavior the results have given crucial information in designing customized training programs in the individual schools, which AACCI has planned after this survey.

IAAH170246

NOI- The adolescent girl. An advocacy strategy to make adolescent girls a national priority in Lao PDR

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¹UNFPA

BACKGROUND: To increase awareness and understanding of the challenges that adolescent girls face every day, government partners in collaboration with UNFPA introduced “Noi”. Noi represents all adolescent girls and their diversity in Lao PDR. The objective of this strategy is to join partners standing behind Noi and through her, ensure targeted investments in girls.

DESCRIPTION: Noi was designed as a clay puppet by a Lao artist in consultations with government and UNFPA. Her outline was tested among partners and young people to ensure representation of adolescent girls. To launch Noi, UNFPA and partners made an animated film explaining issues and challenges that girls face every day, emphasizing opportunities that Noi can have if correct investments are made. In the quest for the sustainable development goals, Noi will continue to give girls a voice to ensure that she will not be left behind.

LESSONS LEARNED: Noi was launched in October 2016 and has so far received endorsements from Lao Women’s Union, Lao Youth Union, Ministry of Planning and Investment, Ministry of Education and Sports and Ministry of Health. Noi is the face of the Adolescent Research Network and online platform SDG4A (www.sdg4a.org) and Noi will be the face of a new phone application to provide sexual and reproductive health information for young people in Lao PDR. Several partnerships and other initiatives around and involving Noi are currently under way. Noi has received attention and acceptance among stakeholders, and using her in advocacy contexts allows discussions to focus on adolescent girls. Over the coming years, UNFPA expect the Noi Campaign to receive more recognition, contributing towards effective communication, and girl-centred programming and policy-making.

CONCLUSIONS/NEXT STEPS: The Noi Campaign is a culturally-sensitive approach to advocate for the rights of adolescent girls and bring about changes in social norms to support gender equality and the abandonment of harmful practices such as early pregnancy and early marriage. This approach can be adapted and applied globally and within this strategy, Noi can receive sisters in other countries to create a global sisterhood. Finally, Noi’s progress means progress towards the SDGs.

IAAH170247

Sex positive sex education: empowering through pleasure

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BACKGROUND: Sexual pleasure is a primary motivating factor for sexual behaviour. It is understood in culturally diverse ways; however, it is associated with shame, and the pursuit of sexual pleasure is positioned as a cause or contributor to disease by public health and sex education. We argue that sex-negative attitudes have biased the nature of research into sexuality and sexual health and pre-empted a disease- and risk-focused public health understanding of the role of porn in wellbeing.

DESCRIPTION: Unsafe sex is the biggest risk factor for young women’s deaths globally and second biggest for young men. Alongside this, pornography, which rarely shows safer sex, is one of the key channels for sex education globally. Higher quality research needs to explore the positive and negative impact of porn while sex education needs to engage with it to ensure that viewing porn

promotes safe sex choices and consent, as well as pleasure. We need unbiased research and innovation into the impact of porn and recognition that it can have a positive impact for public health.

LESSONS LEARNED: Porn is a primary source of education on sex and sexuality, particularly among young people. This is combined with limited school-based sex education focusing primarily on biological aspects of sexuality and avoiding pleasure. Increasing proportions of young people cite the internet and sexually explicit websites as their main source of information on sexual practices, and refer to the importance of porn as a guide for knowing what to do sexually. However, there are documented examples of creating safer sex porn or breaking down the sex education/porn binary to reach audiences with sexual health information in an arousing way.

CONCLUSIONS/NEXT STEPS: Research in this field has followed the ‘risk-focused’ norm of linking to biomedical outcomes, with reluctance and/or lack of funding to address sexuality more broadly. The evidence in support of a public health case against porn is not a reflection of the immense risk and harm, rather of the lack of research into non-harmful effects of porn and lack of willingness to challenge prevailing moral concern among the global public health community.

IAAH170257

Sedentary Lifestyle, Physical Activity, and Psychological Stress among Junior High School Students in Kintamani District, Bali

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BACKGROUND: Sedentary lifestyle and physical inactivity have been considered the most contributing predisposing factors for many chronic diseases. The prevalence of sedentary lifestyle among adolescents often high, creating the need of special attention from various parties. Adolescence is the most critical time for the prevention of mental illness. This study was aimed to assess sedentary lifestyle, physical activity, and psychological stress among Junior High School Students in Kintamani, Bali.

METHODS: This is a descriptive study with cross-sectional approach. Samples were taken from 134 junior high school students in Public Junior High School 1 Kintamani. Data were taken using questionnaires and interview includes: demographic characteristic (age, gender, and socio-economy), sedentary lifestyle, physical activity, and psychological stress. Data were then analyzed by SPSS version 20 with univariate analysis and would be presented through table and diagram.

RESULTS: Samples who use gadget three or more hours per day was 54.5% (49.2% of boys and 42.3% of girls). Overall 45.5% had spent three or more hours per day watching television (54% for boys and 54.9% for girls). Nearly all (96.3% of the samples) doing exercise routinely in a week; 83.6% were doing outdoor activity routinely in a week. The prevalence of psychological stress was 74.6% (mild, moderate, severe, and very severe stress respectively 28.4%, 28.4%, 14.9%, and 3%).

CONCLUSIONS/NEXT STEPS: The proportion of sedentary lifestyle among Junior High School students in Kintamani was slightly high. High prevalence of psychological stress was also found. These findings emphasize an urgent need for applying an appropriate intervention for reducing sedentary lifestyle and avoiding predisposition factors that lead to stress.

IAAH170261

“Doctors in schools” - A partnership project between a GP clinic and local high schools

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BACKGROUND: There are many barriers that prevent teenagers from readily seeking medical advice in the primary health setting, two of which are accessibility to a medical practitioner or practice and the lack of trust or rapport with a medical professional. As a private GP clinic based in Adelaide, South Australia, we have a strong focus on adolescent health and the development of programs to bridge the gap in the primary care setting. As such, we provide an outreach program to local schools to improve the delivery of health services to adolescent patients and help to overcome the barriers.

DESCRIPTION: The outreach program is primarily delivered by Dr Lane Hinchcliffe who is the Principal GP of the clinic. The program has been developed in partnership with Keryn Hinchcliffe (a school Principal) and with the input of local high school teacher, Garreth Hutton. The program itself includes several components: 1) Breakfast club – a gathering of invited students, teachers and health professionals before school to informally discuss relevant health issues in a friendly and safe environment 2) Formal health education sessions and student workshops delivered by Dr Lane Hinchcliffe, covering topics such as sexual health, drug and alcohol awareness and mental health. 3) On-site clinics – GP's and nurses from the clinic visit schools on a regular basis to increase accessibility to health care for teenagers 4) Parent information sessions – evening workshops for parents coordinated by schools in addition to the programs offered to students.

LESSONS LEARNED: Our clinic has observed a vast increase in the number of new and returning teenage patients from the schools at which the program is offered. We have also found that the partnership has allowed for the development of a unique working relationship between education and health professionals.

CONCLUSIONS/NEXT STEPS: Our data shows that most patients who attend our clinic are aged between 15-19. We attribute this largely to the success of our outreach program. We strongly feel that this program has the potential to be replicated by other clinics and health professionals wishing to further build rapport with teenagers to ultimately increase their accessibility to health care.

IAAH170281

Education of Adolescents in India: Status and challenges

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School education particularly secondary education plays an important role in well-being adolescents. The emerging evidence points to critical role of completion of secondary education in opening opportunities for higher education and to compete for decent work opportunities. Further many cross country studies establish that higher proportion of population with completed secondary education significantly related with economic growth. It is asserted that secondary education of 10 to 12 years is emerging as basic minimum level of education that every person should have opportunities to complete. In line with this, the SDGs particularly those related to education (SDG 4) affirm that 'by 2030, all girls and boys complete free, equitable and quality primary and secondary education...'. In India also efforts to expand and bring all children of relevant age into the fold of secondary education like expanding network of schools, providing bicycle children, etc. were initiated during the last few years. The efforts resulted in increasing participation in secondary education but still a large number of children continue to dropout before reaching secondary education. The present paper examines current status of participation and attendance of adolescents in secondary education in India. Drawing data from multiple sources such as Census, NSSO, DISE the paper critically examines trends in participation in secondary education. Preliminary results indicate that though participation in secondary education is increasing but with persisting social and gender disparities. Further many adolescents were found to be enrolled in grades below corresponding to their age. This will have implications for completion of secondary education. The paper discusses factors that are contributing to uneven progress of secondary education.

IAAH170282

Leveraging the developmental science of adolescence to improve sexuality education and sexual health interventions

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BACKGROUND: Adolescence begins with the biological transition of the onset of puberty and ends with the social transition of assuming adult roles and responsibilities. Globally, this period has elongated as the onset of puberty has trended earlier and the social transition into adulthood has trended later. As young people enter adolescence, one of their primary tasks is to gain knowledge and experience that will allow them to take on the social roles of adults, including engaging in romantic and sexual relationships. The biological event of puberty, in addition to leading to sexual maturity, facilitates profound changes in motivation, cognition, behavior, and social relationships. On one hand, from an anthropological

perspective, these changes are highly normative and adaptive; on the other hand, early childbearing is undesirable for many health and social reasons.

DESCRIPTION: In this interactive session, we will explore current models of adolescent development, with a specific focus on brain development, and explore how this period of plasticity and dynamic change influences individuals' early experiences related to romantic and sexual behavior. In addition to reviewing the latest developmental science literature, participants will discuss recent advances in developmental science and generate practical ways to apply the concepts in their sexual and reproductive health interventions. Participants will also review effective and ineffective examples of translation of developmental science.

LESSONS LEARNED: The translational bridges, from developmental science to programs and policies, are vast and far from linear. Oversimplification of developmental science concepts can result in inaccurate (and at times even dangerous) interventions. The same developmental mechanisms that result in adolescence being a period of vulnerability can also be leveraged to maximize adolescence as a period of opportunity. This is particularly true in the context of adolescent sexual and reproductive health.

CONCLUSIONS/NEXT STEPS: As the developmental science of adolescence expands, we have a great opportunity to leverage this science to transform adolescent health interventions. Many existing sexual and reproductive interventions effectively increase knowledge, intentions, and beliefs needed to support positive SRH trajectories but often fall short of changing behavior. As we begin to integrate developmental science principles into interventions, we have the opportunity to significantly enhance their impact.

IAAH170284

Can we accelerate the reduction of adolescent pregnancy in the Americas?

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BACKGROUND: Pregnancy and childbearing in adolescence profoundly affect girls' life trajectories, hindering their psychosocial development and educational attainment, and contributing to the perpetuation of intergenerational cycles of poverty. Adolescent fertility rates in Latin America and the Caribbean (LAC) are unacceptably high, especially compared to the region's declining total fertility rates. Although the total fertility rate has substantially declined in LAC, adolescent specific rates have declined only slightly over the past 15 years and continue to be the second highest in the world, surpassed only by Sub-Saharan Africa. The Region has experienced the slowest progress of all regions in the world, and shows major differences between countries and between subgroups in countries. In 2013, LAC was also noted as the only region with a rising trend in pregnancies in adolescents younger than 15 years.

DESCRIPTION: In response to the lack of progress in the LAC region, PAHO/WHO, UNFPA and UNICEF held a technical consultation with global, regional and country-level stakeholders in August 2016, to take stock of the situation, review progress and reflect on hindering factors, and agree on strategic approaches and priority actions to accelerate progress.

LESSONS LEARNED: Lack of knowledge about their sexual and reproductive health and rights, poor access to and inadequate use of contraceptives, restrictive laws and policies, limited education and income, sexual violence and abuse, and unequal gender relations were identified as key factors contributing to adolescent pregnancy in LAC. Priority actions identified to accelerate progress included: Making adolescent pregnancy, its drivers and impact more visible with data and stories; investing resources in evidence-based interventions and abandoning ineffective ones; strengthening inter-sectoral collaboration; moving from boutique projects to large-scale and sustainable programs, and creating an enabling environment for gender equality and adolescent sexual and reproductive health and rights.

CONCLUSIONS/NEXT STEPS: The meeting emphasized the need to act now to address adolescent pregnancy in the LAC Region, employing multi-faceted evidence-based approaches tailored to local needs, and focusing on quality and equity, utilizing the momentum generated by the Sustainable Development Goals (SDGs) and the Global Strategy for Women's, Children's, and Adolescent Health to mobilize the needed political support.

IAAH170291

Saathiya-A step towards Adolescent Empowerment

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BACKGROUND: Somewhere between adolescence and youth lies India's often overlooked demographic dividend. The overlapping age groups of adolescents (10 to 19 years) and youth (15 to 24 years) give India her sizable population of young people. Since 1971, while the proportion of adolescent population has remained around 21 per cent the proportion of youth has increased from 16.5 to 19.2 per cent; as per the Indian Census of 2011, we have 253 million adolescents and 232 million youth.

DESCRIPTION: The Saathiya Resource Kit – a result of the partnership between the Health Ministry, PFI, and United Nations Population Fund (UNFPA) – includes, apart from the eight films from MKBKSH, games, materials for Saathiyas to use at the field level and information on the Saathiya Salah app, a mobile app for adolescents, dealing with nutrition, substance misuse, sexual and reproductive health (SRH) and mental health among others. The kit is aimed at easing out the path to adulthood from adolescence, enabling holistic development and changing existing mindsets – if a girl says no, it means no, same-sex attraction is normal, and boys can cry.

LESSONS LEARNED: The first learning for all of us has been that sometimes all that's needed is coming together – we all are involved in developing communication interventions and materials, but rarely get the opportunity, or find the opportunity, to bring together our resources to make something bigger in order to reach scale. Secondly, the government took the first step in the right direction by looking at existing partners and resources to develop the kit rather than reinventing the wheel. Thirdly, and most importantly, it once again strengthened our belief that if you want to reach scale in India you need to partner with the government.

CONCLUSIONS/NEXT STEPS: Thus it can be effectively noted that PFI in collaboration with UNFPA has created a Saathiya toolkit - the eight films and the visual diary are among the different types of information and materials developed by PFI, UNFPA, UNICEF that will help the Saathiya to work with the community as well as help the peer educator identify with the community. This was officially launched on February 2017.

IAAH170306

Professional collaboration for adolescent health in drugs support based on Motivational Interviewing: together to care us

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BACKGROUND: One-third of hospitalized young people in our Adolescent Health Care Unit use regularly tobacco. Managing this symptom is essential, especially through the crisis. Our patients, aged between 11 and 18, are hospitalized for psychological-medical-social problems. The first experience of partnership between clinical pharmacists and medical team to manage tobacco dependence in teenagers has begun in 2010. The efficiency of this management let us extend to other drugs.

DESCRIPTION: The impulse to introduce another partner in hospitalized young people care was born to free up medical time, particularly psychological time. Pharmacist evaluates teenager's dependence and proposes substitutes of nicotine to reduce the withdrawal syndrome. He supports the adolescent throughout the hospitalization, as a consultant, and shares information with medical team. Feedbacks have shown that adolescents are satisfied of this care. So, clinical pharmacists and medical team have proposed a new protocol of screening (based on DEP-ADO) and support for all drugs. Together, they were trained in Motivational Interviewing whom is really efficiency in addiction and teenagers care. Hospitalized young people with drug issue have several consultations by clinical pharmacist and medical team to help them in their weaning. Moreover, they receive information flyers, address and phone number of young consumer consultations and a list of website with true data.

LESSONS LEARNED: Managing drugs issue with hospitalized adolescents is essential in crisis care. The goal is to create a dialog space about drugs, risk reduction and resource places and also to provide continuity of care. At the end of hospitalization, they're really satisfied to have found motivation and their

own way to manage the weaning (Motivational Interviewing effects). More than that, they're proud of them and take ownership of this part of health education, facilitating peer education.

CONCLUSIONS/NEXT STEPS: The partnership between clinical pharmacists and medical team using the same tool as Motivational Interviewing to take care of hospitalized adolescent's drugs issue is really efficiency. The weaning is carried out with the adolescent adherence for a long-term effectiveness. The adolescent takes ownership of his success and all information about health education, for a best handover to his peers.

IAAH170309

Health promoting school- Key to nurturing healthy adolescents in rural India

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BACKGROUND: In the remote parts of the country, nurturing healthy adolescents is challenging task. Thuamul Rampur block in Kalahandi district of Orissa is one such location with large number of public health challenges. It has a population of 77,840 with 58% tribal population. 65 out of 184 schools in the block are either upper primary or high schools with an average of 42% in their adolescent age. Malaria (>10/1000 Annual Malarial incidence), continues to be the top challenge followed by other water borne and communicable diseases. Behavioral changes can prevent some of the common health problems in these schools. As a SBI Youth for India fellow, I am working on a project titled "Creating and Nurturing Health Promoting Schools". In the past 5 months, I have piloted the project in three residential schools in my panchayat, catering to ~350 adolescent students.

DESCRIPTION: A school Health Committee consisting of 14-16 senior student and teacher members has been formed in each HPS as recommended by WHO guidelines. Apart from monitoring the health status and healthy habits of the students, peer health awareness and community health programs in the form of rallies, role plays/ dance, intra-school events on topics such as anti-tobacco and nutrition awareness were also undertaken by the student committee. Brushing twice a day, periodic cutting of nails, proper hand washing and bathing daily are some of the simple practices that the committee looks after.

LESSONS LEARNED: - Peer health education and community health programs by the students can bring about changes in the overall school's health. - If implemented in a structured manner, HPS can bring about changes on a larger scale in the tribal/ rural community.

CONCLUSIONS/NEXT STEPS: - A standard curriculum needs to be formed for use by the HPS. - HPS concept is most often implemented in urban and semi urban setting. In remote locations and rural settings, there are several schools where the concept of HPS can be effectively implemented. - HPS can instill a positive and healthy mindset in adolescents which they will hopefully carry forward to the future.

IAAH170325

The health of justice-involved adolescents: A global scoping review

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BACKGROUND: Young people who cycle through the juvenile justice system are distinguished by a high prevalence of complex, co-occurring health conditions, typically set against a backdrop of profound social disadvantage and trauma. Health outcomes after release from juvenile detention are typically poor, and rates of preventable mortality are high. Effective care coordination for these highly vulnerable young people requires a detailed understanding of the prevalence, co-occurrence and natural history of health conditions, but evidence regarding the health of this population has never been fully synthesised.

METHODS: We undertook a global scoping review of the health of adolescents exposed to the juvenile justice system, following PRISMA guidelines. We included studies of adolescents in detention, and those under supervision in the community. We systematically searched PubMed, PsycInfo, Web of Science, ERIC, NCJRS and the Cochrane Library, without any language restrictions, for papers published since 1980 and reporting the prevalence and/or incidence of

health-related conditions in this population. Additional papers were identified through backward and forward snowballing.

RESULTS: We screened more than 8000 titles/abstracts and identified more than 500 eligible studies, however many of these were compromised by crude or invalidated measurement, or by sampling bias which was often poorly characterised. Focussing primarily on the evidence from higher quality studies, we provide a narrative review of the health of justice-involved adolescents in eight interrelated domains: mental health, substance use, communicable diseases, chronic diseases, injury, disability, mortality, and health service utilisation.

CONCLUSIONS/NEXT STEPS: We conclude with recommendations for future research, focussing on the need for greater methodological rigour, reduced publication bias, longitudinal studies and randomised trials, and increased investment in research in low- and middle-income countries.

IAAH170339

Using Story Circles and Character Card Games as narrative-based research methods to explore issues of gender in sexual and reproductive health among youth in Uttar Pradesh

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BACKGROUND: Project KissaKahani (PKK) is a two-year project to understand how gender influences adolescent sexual and reproductive health (SRH) in Lucknow, Uttar Pradesh. Story circles and a character card game were used as innovative participatory research methods.

METHODS: Story circles are a facilitated small group storytelling process. The methodology is used for research, program development, and community organizing. In PKK youth ages 15-24 conceptualized and told personal stories related to gender. All sessions were audio recorded, transcribed, translated and verified. Transcripts were coded and analyzed for major themes. Character card games combine narrative, game play, and research. In small-group sessions, participants ages 15-17 chose a theme, location, and activities for their characters, and narrated scenarios from their lives, taking on identities to tell stories about their lives and relationships. All game narratives were translated and analyzed for major themes. Participants for both activities were recruited through community partners working in Lucknow slums.

RESULTS: Eighty-one youth participated in story circles and 40 participated in the character game. Findings from both activities reveal differences in the way boys and girls experience gender and SRH in Lucknow. Female participants more commonly shared stories about being restricted by gender norms compared to male participants. Girls related stories about being harassed on streets and social media, attempts to fight gender norms, and the role of education in empowering them. In contrast, stories from boys centered on challenges related to household poverty. Boys mostly discussed gender-based discrimination as experienced by a female family member or acquaintance. Additionally, relationships between youth are generally forbidden; however, girls face more negative consequences compared to boys.

CONCLUSIONS/NEXT STEPS: Both story circles and games engage youth and create spaces wherein stories and experiences can be shared. Participatory research methods may be an ideal way for youth to share information on issues related to gender and sexuality.

IAAH170341

Using an asset based framework to explore issues related to gender and adolescent sexual and reproductive health among youth in Lucknow, Uttar Pradesh, India

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BACKGROUND: Asset-based frameworks help researchers design interventions by drawing on a community's strengths. Project KissaKahani used

an asset-based approach to identify sexual and reproductive health (SRH) needs of youth in Lucknow, Uttar Pradesh and help them design solutions.

METHODS: KissaKahani had four phases. Phase one included four narrative-based participatory research methods designed to help youth discuss gender and SRH. In phase two, grassroots organizations in India applied for funding to develop innovative, youth-led interventions, to address the issues identified through Phase I activities. In phase three, youth participated in a 2.5 week design workshop to create novel and locally relevant gender and SRH solutions. Phase four involved funding local organizations to refine and implement youth generated solutions. Participants in all phases were between the ages of 15-25 and were recruited through community partners in Lucknow.

RESULTS: A total of 335 young boys and girls participated in the study. There were 30 digital stories made with young people about their experiences with gender-based discrimination and SRH. Topics included: dowry, infertility, menstrual taboos, eve teasing, and social media. For Phase two, five local organizations implemented youth-led projects. Additional three organizations are implementing projects stemming from the design workshop. These projects include: building a space for young men and their parents to discuss SRH with experts, bystander training for public transportation operators to reduce harassment of girls, and designing comic books to promote gender equality.

CONCLUSIONS/NEXT STEPS: Using asset-based frameworks and participatory methods can help youth partner in research.

IAAH170343

Youth and their decision-makers' perspectives on the value of community-based early marriage prevention programs: findings from a qualitative evaluation

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BACKGROUND: This component of the panel: Evaluating Participants' Perceptions of and Experiences with Programs to Prevent Girls' Early Marriage in Rural Jharkhand, India and Oromia, Ethiopia will share qualitative findings on perspectives and experiences of girls who participated in the programs, including those who did and did not marry as minors, as well as the perspectives of their marital decision-makers.

METHODS: In-depth interviews were conducted with women and girls aged 13-24 (n=105), all of whom either married as a minor or cancelled/postponed marriage as a minor and up to three of their marital decision-makers (n=160). Participants were recruited from Jharkhand, India and Oromia, Ethiopia, in rural areas that had received a sustained, multiyear, community-wide early marriage prevention program, either through a peer-led model (Project RISHTA-Jharkhand) or a school-based teacher-led model (ODA-Oromia). Both programs were designed to support adolescent sexual and reproductive health (SRH) education and youth development. Interviews evaluated participants' perceptions of what the programs provided and whether and what impact the program had on them or girls in the community. Interview data were coded and analyzed by trained coders using Atlas.ti software and a latent content analysis approach.

RESULTS: Participants from India and Ethiopia both described comparable program content- SRH education and awareness building on the negative social and health effects of early marriage, as well as girl economic empowerment strategies including embroidery/sewing for livelihood generation in India and a girls' savings program in Ethiopia. Participants described the value of the program in terms of supporting girls' self-efficacy to voice their preferences and engage allies to cancel or postpone marriage or to stay in school. Most recommended program continuation, but advised strengthening of community engagement and vocational skills building. Dissatisfaction with the programs was expressed only by those who married early, and these recommended need for more intensive efforts and support for married girls.

CONCLUSIONS/NEXT STEPS: Findings suggest that ODA and Project RISHTA are promising models to prevent early marriage of girls, but may benefit from more focus on vocational skills, more intensive efforts for girls at greater risk for early marriage, and better support for already married girls.

IAAH170380

Empowering adolescents with chronic illness to reach their full potential: ChIPS has the flavour of success.

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BACKGROUND: Positive social networks are important for adolescent development but can be lacking in those with severe chronic illness. The experience of illness, compounded by recurrent medical appointments, hospitalisations and school absence, can reduce access to supportive peer networks. Furthermore, adolescents with chronic illness frequently miss out on wider opportunities for peer relationships and social learning, such as school excursions and camps. This culmination of isolating factors can lead to low self-esteem, depression and anxiety, greatly impairing an individual's quality of life. Peer support groups catering for the needs of this vulnerable population need to promote positive youth development (PYD) and resiliency. A recent systematic review identified the Chronic Illness Peer Support (ChIPS) program, run by the Department of Adolescent Medicine, Royal Children's Hospital (RCH), Melbourne, Australia, as one of only three peer support programs for adolescents with chronic illness which address the fundamental elements of PYD, and the only one that catered for a wide variety of illnesses.

DESCRIPTION: For 23 years, ChIPS has incorporated components of PYD theory, providing young people opportunities to engage in youth leadership and skill-based activities, whilst facilitating the development of sustained youth-adult relationships. The program provides opportunities for members to build self-esteem and gain acceptance through positive social connections and facilitates healthy risk taking. With members ranging from 12 to 25 years, engagement with ChIPS can provide continuity and stability across the adolescent years and through transition from paediatric to adult healthcare.

LESSONS LEARNED: This presentation will describe how the ChIPS program supports adolescents to manage their illness and identify meaningful pathways in adulthood. It is apparent that acceptance and positive regard by other young people with chronic illness is a strong element of the program's success. These results are consistent with an evaluation of ChIPS in Sydney that suggested that participation in the program leads to personal growth and development of essential PYD assets.

CONCLUSIONS/NEXT STEPS: This program has been shown to be effective in high income settings. Young people with chronic illness face even greater challenges in low and middle income settings, but the ChIPS model has not (yet) been implemented in these contexts.

IAAH170417

Effect of Gender equitable program to shift attitude towards early marriage and marital rights to uplift their impending wellbeing and health among adolescents

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BACKGROUND: Child marriage often occurs in the shadows of poverty and gender inequality, impeding efforts to empower girls and boys to achieve long term sustainable development. Child marriage is most common in poorest and vulnerable households where a girl is twice as likely to marry before the age of 18 as girls from wealthier families. The current paper draws inference from an impact evaluation which used gender equitable approach to improve age at marriage and its related perceptions.

METHODS: Quasi-experimental design was used to assign young men and

women aged 10 to 20 years (820 participants from control area and 1468 from intervention area). Methods: ANOVA one side test for group means, chi-square and logistic regressions were conducted to assess the impact.

RESULTS: The intervention was quiet effective in improving school enrolment, improving correct knowledge on legal age at marriage, improved perception on expected age at marriage, marriage choices and awareness on consequences of child marriage. The young boys and girls who were exposed to intervention and had higher education were more likely to have correct knowledge about legal age at marriage for (OR=5.62, SE=0.963), and also were more likely to be aware of risk of immature pregnancy/child birth due to child marriage (OR=1.92, SE= 0.415). Boys and girls in the intervention area had a higher likelihood of having positive choices on marriage who belonged to higher gender equitable value. Intervention and higher gender attitude together shown (interaction) a greater impact on awareness associated with disadvantages of early marriage (OR: 3.5, SE= 0.143) and pregnancy (OR=3.1, SE=0.150) outcomes rather individual effect (OR: 2.8 and 2.3 respectively).

CONCLUSIONS/NEXT STEPS: Findings indicate that the Gender Norms Initiative in rural settings of India successfully influenced participants' attitudes toward both gender norms and child marriage. A strong connection between positive shifts in attitudes towards child marriage and views toward gender norms over study groups was found. Study suggests that programs implemented through improved knowledge on legal age and rights of marriage; and promoting gender equity can interplay to delay the earliest marriages.

IAAH170431

A longitudinal investigation of health inequalities and adolescent equalisation

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BACKGROUND: Previous studies suggest that the socioeconomic gradient in health among adolescents is less pronounced than that observed during childhood and adulthood. This reduction of health inequalities in adolescence has been termed 'equalisation'. However, most research in this area has been conducted cross-sectionally and there is little consensus regarding the mechanisms of equalisation. This study aims to longitudinally examine socio-economic inequalities from childhood to late adolescence in the prevalence of chronic conditions. In addition, the study examines the potential contribution of three mediating health behaviours: tobacco use, alcohol use and sedentary behaviour.

METHODS: We used data from seven waves of the Longitudinal Study of Young People in England. Data was available from age 13 to 19. We examined inequalities across parent-reported chronic conditions as well as self-reported tobacco use, alcohol use and physical exercise. Concentration indices (CI) served as our measure of inequality; CIs measure the disproportionality of a share of a given outcome (in our case, health) with regards to a ranking variable (parent-reported household income). We calculated CIs and tested for significant inequalities at each wave, stratified by gender.

RESULTS: We identified significant inequalities in longstanding illness in early adolescence with deprived young people at increased risk. However, these inequalities were reduced substantially in mid/late adolescence, falling to non-significance by age 16 for females and age 19 for males. Inequalities in engagement in exercise were detected across all waves (with deprived young people less likely to exercise) but these decreased substantially across adolescence in both genders. Deprived adolescents were more likely to smoke with this inequality increasing across adolescence. Deprived adolescents were less likely to drink alcohol, with this inequality also increasing across adolescence.

CONCLUSIONS/NEXT STEPS: We found strong support for the equalisation hypothesis regarding longstanding illness, with a later period of equalisation in males. We found mixed support for the role of health behaviours as mediators. The lack of clarity regarding the mechanisms of equalisation is problematic due to their potential to inform policy strategies to sustain health equality into adulthood.

IAAH170433

Creating a Wellness Service for Children and Young People in Ayrshire and Arran: Cluster modelling in Schools and Communities

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BACKGROUND: The wellbeing of young people is a key area for action outlined within the Scottish Government's recent mental health strategy (2017). Against a background of increasing need, Child and Adolescent Mental Health Services (CAMHS) can struggle to meet demand, often remaining locked into medical and systems oriented services which under-serve people.

DESCRIPTION: Taking advantage of the integration of health and social care in Scotland, the Ayrshire CAMHS has embarked on a radical re-design process, involving a range of community, third and public sector partners. Opportunities to streamline services to significantly reduce waiting times have been successfully seized, and new posts and teams have been created (through restructuring) to facilitate better liaison between acute and community settings, promote better responding to those with the most complex needs, and support looked after and accommodated children. Dialogue with schools has highlighted the potential in modelling services around clusters of schools, with a view to embedding accessible services, of relevance to the community, centered on prevention and resilience building.

LESSONS LEARNED: Local events have made clear the importance of involving young people and their families in change. Honest conversations regarding current practice have been crucial to this, and have challenged professional boundaries. The critical nature of successful relationships with children and young people, unconstrained by job titles, has been clearly highlighted. This, along with a focus on up-skilling the workforce, has affirmed the need for reconfiguration of role expectations, in the interests of developing a truly integrated model. The need to identify relevant outcome measures, while also being prepared to work in conditions of uncertainty at times, has also been clearly established.

CONCLUSIONS/NEXT STEPS: Using partnerships to evolve the functioning of the Ayrshire CAMHS has allowed for significant progress. Further work with school clusters will allow the service and its partners to redefine the traditional CAMH team, into one where education becomes a critical partner along with health and social care colleagues, the Third sector, advocacy, peer groups and families. Community presence and effective networking will be critical to this, as will a preparedness to move beyond traditional professional and hierarchical service structures.

IAAH170445

Mainstreaming Youth Friendly services in urban public health facilities in Tanzania

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BACKGROUND: In Tanzania, access to contraceptives for youth and adolescent is critical to prevent unintended pregnancies, yet the percentage of adolescents using modern contraception remains low (13.3%). For decades, organizations and governments have supported implementation of youth-friendly services (YFS) to increase uptake of services, however experience suggests that stand-alone youth clinics and separate-space YFS can be unsustainable. Therefore, it is critical to implement and learn from mainstreamed models of service delivery that are responsive to the needs of adolescents and youth and have the potential to be scaled and sustained.

DESCRIPTION: The Chaguo la Maisha project in Tanzania mainstreamed YFS in existing public health facility contraceptive services. Health care providers were trained to offer contraceptive services and YFS, and they were then mentored to ensure skills acquisition through an innovative digital mentorship app. Some facilities were upgraded and equipment supplied to increase privacy and confidentiality of services. Demand generation targeting young people, client follow up, and collection of client feedback were conducted by community-based mobilizers using a digital app with an embedded contraception counseling algorithm, including LARC. Over two years of project implementation, 34% of clients receiving contraceptives were between 10-24 years. At baseline, 28% of young people (10-24) selected LARC. Currently, implant was used by 49% of young people served, 32%

used injectable, 10% IUCD, 9% pills. Among clients referred to facilities by community mobilizers, 24% were between 10-24 years old, and implants were the predominant contraceptive method referred for. Among those referred, follow-up visits revealed that 75% of clients received the method they were referred for.

LESSONS LEARNED: Mainstreaming YFS in existing contraceptive services through ensuring competent providers, community support and follow up, and improving facility characteristics is an effective approach to increase the uptake of LARC as part of a full method choice for adolescents and youth. Additional efforts are needed at community level to increase the overall proportion of contraceptive clients that are young.

CONCLUSIONS/NEXT STEPS: Learning from the implementation and results, the project hopes to scale up to other districts and regions, gather more lessons to increasing proportion of youth uptake of contraceptives.

IAAH170447

Strengthening Adolescent Friendly Health Clinics through Supportive Supervision

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BACKGROUND: With a view to address the health and development needs of 253 million adolescents, Government of India (GoI) launched the Rashtriya Kishor SwasthyaKaryakram (RKSK). Core programming principles for RKSK are health promotion through health facilities and community based approach. Vriddhi project supports GoI by facilitating programming in 26 districts of 6 states in the country.

DESCRIPTION: Supportive Supervision is an effective method to achieve national health goals by ensuring that necessary resources are available to support service delivery. Through Supportive Supervision we evaluated the readiness, operationalization and quality of services at 99 dedicated Adolescent Friendly Health Clinics (AFHCs) which further addressed gaps to set up systems and processes that facilitate access to quality services as per the standards of care. A baseline was established through a cross sectional survey. Based on the findings, specific AFHC strengthening action plans and monitoring framework were developed and regular monitoring was undertaken through more than 2000 monthly visits.

LESSONS LEARNED: The above process ensured that the states could quickly and effectively scale-up service provisioning through dedicated clinics. Facility lay-out such as dedicated rooms, privacy, signage, clinic branding are now increasingly available. Availability of commodities, equipment and communication materials also improved. Almost all clinics streamlined the recording and reporting mechanisms. Supportive Supervision mechanism also deepened the impact of initial capacity building efforts by providing on-site mentoring to counselors and doctors thus ensuring non-discrimination, non-judgmental and respectful attitude of providers. All these factors led to increased off-take of services at the clinic.

CONCLUSIONS/NEXT STEPS: Feedback on monitoring data on the key indicators is being continually shared at the district, state and national levels. The results and lessons learned have supported decisions to improve availability of supplies, commodities, consumables and improved knowledge and skills of the health care providers. The findings also feed into district and state action plans and supports central government to improve national programming. While the monitoring data are resource intensive to collect and analyze across settings, it provides unique insights for bridging the gaps. Cumulative trends over time will support strengthening of health systems. Coupled with community outreach activities the service uptake at these clinics can increase.

IAAH170461

RAILWAY CHILDREN: fighting for street children

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¹The Hope House

BACKGROUND: Railway Children (RC) is an international non-profit organization, working since 1995 in the United Kingdom and India. RC believes in "a world where no child ever has to live on the streets". Railway

Children's work strives for sustainable changes in the lives of children alone and at risk on the streets. Commonly referred to as 'street children', they decide or are forced to leave home because of reasons such as abuse, violence, neglect and poverty. While on the street, they are exposed to all forms of vulnerabilities.

DESCRIPTION: Railway Child India's (RCI) own survey shows that 112,000 children arrive in 35 major railways stations in a year. Early intervention is crucial in the prevention of abuse and exploitation of such children and it gives a greater chance for enabling their rehabilitation. Indian Railways has become an important stakeholder for care and protection of children. With an early intervention focus, Railway Children India is working in 13 railways stations. Since July 2017, The Hope House (THH), a non-profit making organization, runs a children's home, has been partnering with RCI, does a commendable work to make Katpadi railway junction a child-friendly station. THH's 13 member team as rescued over 171 children out of which 148 boys and 23 girls in the past nine months. When a child is rescued he/ she is presented to the District Child Welfare Committee for facilitating their rehabilitation. 155 have been reunited with their family. The team then makes regular follow up once the child is reunified with the family, to ensure retention at home and further rehabilitation of the whole family. THH, through this project works at three levels namely street level, community level and Government level.

LESSONS LEARNED: Community and the state bodies require rededicated emphasize on the topic of child's rights and protection. We've learned to respect each child and to create an enabling environment.

CONCLUSIONS/NEXT STEPS: This program reaches out to vulnerable children who are never considered on the conscience of the community. Katpadi railway junction will be transformed as a child friendly station which will be a model replicate at other places.

IAAH170498

Evaluation of Adolescent 360: building the evidence base in the application of human-centred design in adolescent sexual and reproductive health

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BACKGROUND: Adolescent 360 (A360) is a US\$30 million investment to increase modern contraceptive use and reduce unplanned pregnancy among girls aged 15 to 19 years in Ethiopia, Tanzania and Nigeria. The innovative A360 approach to adolescent sexual and reproductive health (ASRH) combines human-centered design (HCD) with social marketing, developmental neuroscience, sociocultural anthropology and youth engagement to create context specific youth driven solutions that respond to their needs. The final package of interventions will be country specific and will include a combination of SRH education (through mass media campaigns and community events), counselling, and improved contraceptive provision through "adolescent friendly" services. The key rationale for the evaluation is the lack of evidence of health impact and outcomes data associated with projects that employ HCD.

METHODS: Our overall evaluation design is composed of four components – a Process Evaluation, an Outcome Evaluation, a Cost-Effectiveness Study and a cross-cutting Engagement and Research Uptake component. The different components are mutually reinforcing and complementary, thus providing the scope to generate a rich analytical and descriptive account of change, causality and attribution to tell the story of A360. The Process Evaluation and Costing analysis started in 2016, tracking the intervention design process. Outcome evaluation surveys will be conducted before and after intervention scale-up, in 2017 and 2019.

RESULTS: We will present the results that have been generated during the first year of the A360 Evaluation, through the periodic data collection exercises that are currently ongoing. The evaluation is generating rich learning about

how to implement a program for adolescents such as A360, as well as how to evaluate it.

CONCLUSIONS/NEXT STEPS: Initial findings have provided important insights into using HCD in intervention design processes. This multi-component evaluation will ensure credible, accumulated findings are available to feed into programmatic decision-making and will provide a clear understanding of how much it would cost to scale and replicate HCD-inspired interventions in different contexts and countries.

IAAH170512

Sexual and Reproductive Health Needs and Problems of Internally Displaced Adolescents (IDAs) in Nigeria: Addressing developmental challenges of IDAs

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BACKGROUND: The rising insurgency and other kinds of violence worldwide have left many people including adolescents displaced in their own country. In Nigeria, the upsurge of Boko Haram insurgency in the Northeast has left millions of adolescents internally displaced, with deplorable living conditions that affect their health especially their sexual and reproductive health. The objective of the study was to identify the sexual and reproductive health needs and problems of Internally Displaced Adolescents (IDAs) in Borno State, Nigeria.

METHODS: The cross-sectional research design was used for the study. Official camps in Borno State were visited and data collected from 396 adolescents within the ages of 10 and 24 years. Instrument for data collection was self-structured questionnaire called Internally Displaced Adolescents' Sexual and Reproductive Health Needs Questionnaire (IDASNQ). Frequencies, percentages and Chi-square statistics were used to analyze the data.

RESULTS: Majority of the respondents reported that sexuality education (83.2%), safe motherhood services (81.6%), and family planning services (71.9%) were important sexual and reproductive health needs of IDAs. Socio-demographic factors of gender, education, age, religion, and marital status of the respondents differed significantly ($d^* .05$) on their responses to sexuality education need ($p = .003$) and family planning services need ($p = .000$). The result also identified IDAs' sexual and reproductive health problems to include: complications of pregnancy (83.1%), early sex experimentation (81.8%), unsafe sex (80.1%), and maternal mortality (80.1%), among others.

CONCLUSIONS/NEXT STEPS: Internally displaced adolescents in the camps need adequate and effective sexual and reproductive health services in order to prevent sexual and reproductive health problems, and lead a healthy sexual and reproductive live. Youth-friendly mobile clinics should be made available and accessible to IDAs.

IAAH170513

Positive Youth Development in Low and Middle Income Countries: Why is it important for better youth outcomes, and how do we measure it?

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BACKGROUND: Positive Youth Development (PYD) is an approach that aims to build and support the competencies, skills and abilities of youth so that they are empowered to reach their full potential. There is strong evidence that PYD strategies can prevent a wide range of negative outcomes and increase positive outcomes for youth in higher income countries. The evidence from low and middle income countries (LMIC) is sparse, but growing. There are few resources available to implementers and researchers in LMICs that clearly explain PYD and how to incorporate PYD into program design, monitoring and evaluation. There is also little consensus on which PYD constructs are the most important ones to measure that link directly to improved outcomes for youth, such as in the health area.

DESCRIPTION: The United States Agency for International Development (USAID) has made a substantial investment in PYD as the strategy promoting positive outcomes for young people in LMICs. USAID's Youth Power Learning

developed a PYD Measurement Toolkit geared toward helping program implementers, researchers and funders integrate PYD principles into program monitoring and evaluation, and to adjust and improve program performance. The toolkit provides a framework for measuring PYD, resources and references for implementers and evaluators, illustrative PYD indicators that can be applied across multiple sectors including health, and information on major considerations for adapting measures cross-culturally. The main emphasis on this presentation will be on the PYD Measurement Framework and illustrative PYD indicators for adolescent sexual and reproductive health, including HIV.

LESSONS LEARNED: Youth Power Learning's toolkit synthesizes the evidence and field-to-date to provide a tangible, practical definition of PYD along with a measurement framework, constructs and associated indicators that have the most potential to effectively measure PYD in LMICs. In addition, the toolkit outlines the key considerations—such as gender and methodological constraints—that will likely impact use of PYD tools across various LMIC settings.

CONCLUSIONS/NEXT STEPS: The PYD Measurement Toolkit will inform more robust program and research evaluation design of PYD programs.

IAAH170520

Development and evaluation of a practical training workshop for adolescent health in Indonesia

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BACKGROUND: In Indonesia, pediatricians provide clinical care up to 18 years of age. However, most pediatricians have received very little training around adolescent health, many unsure how to provide adolescent friendly health care. Moreover, many pediatricians are not confident enough to explore sexual health or substance use given religious and cultural sensitivities, and are also unsure if current laws allow the provision of confidential health care in Indonesia.

DESCRIPTION: The Indonesian Pediatric Society's Adolescent Health Taskforce developed and evaluated a professional development workshop around adolescent health. The morning of the 1- day workshop provided an overview of adolescent health and development, psychosocial screening, and also explored specific adolescent health issue such as mental health, nutrition and immunization. In the afternoon session, resident medical officers 'acted' as adolescents (three different scripts were provided) so that every participants could practice the clinical approach to adolescents and psychosocial screening. Prior to this some tips and a demonstration on counselling skill were also presented. A pre and post evaluation was conducted using case vignettes.

LESSONS LEARNED: 21 pediatrician aged 40s to 60s participated in this workshop. The practical sessions worked well, especially on practicing the approach to the adolescent consultation, including negotiating with parents the opportunity to see the adolescent alone for part of the consultation. Participants practiced exploring sexual health, one of the most sensitive issues in daily practice. Participants particularly valued the opportunity to practice the psychosocial assessment and the counselling skill. Counselling knowledge improved 20% from the baseline data although in general the post test result was only 15% increase from the pretest. Of note, this workshop was different to typical training in that it involved role plays and practical sessions for specific skill - these allowed for exploration of some very challenging issues.

CONCLUSIONS/NEXT STEPS: We plan to improve the content and the method of this training as the basic to develop a clinical training module for adolescent health. Following this, we plan to merge this module to the existing Indonesia pediatric training curriculum.

IAAH170542

Are Tribal adolescent more vulnerable to utilize the maternal health care services? A Study of Tribal Dominant EAG States, India

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BACKGROUND: Adolescent mothers have quite different needs, regarding reproductive and maternal health services, from adults' mothers in various

important ways, but most of the developing nations like India, it remains poorly underserved. In India, the EAG States are one of the most backwards regions and recognises the need of addressing health inequity existing in the region. Since the region has a maximum percentage of the socioeconomically disadvantaged population that contribute about 50% of all maternal deaths, the disparities among the different sections of the population are quite prominent, especially in early age mothers. Regarding maternal mortality ratio, the position is much poor in these EAG. Coupled with the largest number of maternal deaths, maternal care in the EAG States has received overriding importance due to the early age of marriage and poor accessibility of maternal health services. The objective of the study is to recognise the determinants of maternal health care services that are responsible for explaining the gap in use of these services among tribal and non-tribal adolescent months in the study region.

METHODS: DLHS-3 data have been used for the study. Bivariate & multivariate models have used for analysis. Oaxaca decomposition technique has employed to decompose the gap between social groups in use of maternal healthcare.

RESULTS: Results indicate that after controlling other factors, the coverage of all two services is lower among tribal adolescent mothers than non-tribal adolescent mothers. The probability of full ANC and safe delivery are 0.150 and 0.359 respectively among STs compared with 0.215 and 0.628 respectively among non-tribal. Household wealth is the main contributor explaining 33% for full antenatal care and 62% for the safe delivery of the gap in between tribal and non-tribal adolescent mothers.

CONCLUSIONS/NEXT STEPS: As the part of the conclusion, it would be said that there is a high degree of inequity that exists among adolescent mothers of different social groups needs to look in for addressing the health inequities. Social status more specifically the caste wise health inequity is quite visible. The geographical remoteness or inaccessibility is another crucial factor which needs to be looked in a while strategising the health services in those areas.

IAAH170582

The impact of place on life and death: life expectancy and death rate differentials for youth in the Arab world

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BACKGROUND: The landmark document - 'closing the gap in a generation: Health equity through action on the social determinants of health' squarely puts social determinants of health on the global agenda as main drivers of population wellbeing. Nascent analyses of the impact of social determinants on health in the Arab world have confirmed international evidence. Yet none has specifically measured such links among youth in the region. The objective of this research was to explore possible inequities in health status of young people in the Arab world based on the country in which they lived.

METHODS: We utilized 2015 Global Burden of Disease (GBD) housed at the Institute for Health Metrics for this analysis. Data was compiled for health adjusted life expectancy (HALE) and death rates per 100,000 for the age categories 15-19, 20-24 and 25-29 years for all countries of the Arab league. We categorized countries based on the World Bank (WB) income groupings, and used the Global Peace Index to further divide countries by peace status.

RESULTS: Preliminary results have been analyzed for GBD data up to 2010 using WB country grouping. The remaining results (up to 2015, and dichotomizing countries based on peace) will be presented at the conference. Our results to date indicate that youth living in poorer Arab countries have worse health outcomes than those living in richer ones. The differences are not trivial; rather, they accounted in 2010 for a difference of 10 years in healthy life expectancy between young people living in Lower Income Countries (LIC) and Upper Income Countries (UIC), and a five-fold increase in death rate per 100,000 for LIC over UIC. The comparison over time also indicates increasing inequities between 1990 and 2010.

CONCLUSIONS/NEXT STEPS: The data confirms the international literature. With increasing violent conflict in the region and the continuous deterioration of the macro-economic environment and social fabric, there is an urgent need to address the growing inequities in the health status of youth living in countries with different income. These differentials are considered unjust, unfair and preventable, and programs and policies must be implemented to control them.

IAAH170587

Documenting ‘Good Practices’ in Adolescent Programming for the MENA region: What do we know about effective youth participation?

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BACKGROUND: Young people (10-24 years old) comprise an estimated 122.4 million people in the MENA region - 28 % of the population. Several socio-demographic trends affect young people, including high unemployment and exposure to conflict/ war. Gender and other inequities remain significant barriers to wellbeing. Youth agency, however, is flourishing. Youth are assets to their communities, and have engaged positively with these circumstances to craft creative solutions. Despite many programs being implemented with/for youth in the region, few have been evaluated for effectiveness. Evidence-based approaches are needed that allow youth to achieve their full potential and grow and thrive. The extent to which youth are involved in programming is unclear.

METHODS: With the aim of identifying such interventions, we undertook a documentation of good practices in adolescence in the areas of i) health, ii) civic engagement, iii) resilience, and iv) skills development. The process of documenting the Good Practices included: (i) Identification of adolescent (12-24 years) programs globally and in the MENA region; (ii) Rating of every program using eight criteria: Effectiveness, Sustainability, Replication, Equity Analysis, Evidence-base, Innovation, Values Orientation, Youth Involvement. Programs that met criteria were judged as ‘potential good practices’; (iii) Conducting in-depth interview with program implementers to validate the judgment and collect additional data. (iv) Writing up the program in a standardized template.

RESULTS: A total of 221 programs were identified through phase 1 above, but only 22 were retained as good practices: 12 in skills building, 5 in health, 3 in civic engagement, and 2 in resilience. In the area of participatory youth involvement, many of the programs limit this engagement to youth as program participants, who take part in the evaluation of activities (process evaluation) or are ‘subjects’ in the impact evaluation (pre-and post-intervention assessments). Youth active involvement in identification of needs, designing the program and implementing and evaluating the program was rare.

CONCLUSIONS/NEXT STEPS: Youth involvement in programming for them remains at the lower rungs of the ladder of participation. Several mechanisms for active youth involvement have been implemented by some good practices and these will be highlighted. Youth involvement is critical to their own and their community’s wellbeing.

IAAH170590

Reaching the Unreached: A life skills based targeted intervention approach for adolescents in difficult circumstances

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BACKGROUND: The numbers residing in urban India has risen five times since 1961. The urban population is 377 million constituting 31.6% of the total population. 17.4% of urban households live in slums. Of the five metro cities, Mumbai has 41.3% of its population in slums followed by Kolkata and Chennai with nearly 30%. Delhi follows with 14.6% and Bengaluru with 8.5% (census 2011).

DESCRIPTION: The largest garbage dumping grounds in Asia and the largest sex worker settlement in India were identified as the cauldron and a line-list of 1585 adolescents with 817 boys, 751 girls and 17 of alternate sexuality were involved in an assessment of the reach of organized programs and linkages thereof. A series of focus group discussions and interviews led to an understanding and consensus on the situation and needs of the adolescents. This was followed by the development of an implementation model which hinges on a context driven tool kit with a fun filled approach and methodology. It was spearheaded by 33 champions from amongst the adolescents in difficult circumstances.

LESSONS LEARNED: There is a disconnection between RSKS program prongs and the adolescents in slums. Though 73% were in schools at the

primaries and 46% at middle level, there is a marked tendency of living in cocoons with friendships mostly limited within the neighborhood. Low self-esteem and identity crisis was a marked feature among those who had migrated in within the last 5 years. Educational mentoring and support in community settings could bridge gaps and facilitate retention, particularly in early adolescence. Adequate access to counselling outreach is also imperative in the backdrop of fluid family structures. Substance use, violence and abuse including GBV, under-nutrition and teen pregnancies are major issues on the health front. Livelihood skilling was a felt need of late stage adolescents.

CONCLUSIONS/NEXT STEPS: One size does not fit all. Community based targeted interventions for adolescents in difficult circumstances with a life skills centered syndemic approach was owned by the adolescents. A life skills assessment tool is nearing readiness for measuring progress. Positioning targeted interventions within RSKS under the NUHM umbrella can be a way forward towards inclusion and mainstreaming.

IAAH170602

A study on substance abuse among school going male adolescents in Kanpur

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BACKGROUND: Substance abuse commonly begins in adolescence. Earlier considered to be a problem of street children, working children and trafficked children, it has now become a widespread phenomenon affecting all segments of the society. It is associated with wide range of negative impacts on young people’s mental and physical health and has also proven to be linked with poor school performance and school dropout. This study was conducted to know the prevalence of substance abuse among school going male adolescents and to find out any influencing factor.

METHODS: The cross-sectional study was conducted among male adolescents of 10th to 12th standard from an intermediate school in Kanpur, Uttar Pradesh during the period of November-December, 2016. Data was recorded in a pre-designed and pre-tested questionnaire and analysed using standard statistical tools (percentages, chi-square test, and multinomial logistic regression).

RESULTS: 39.5% of respondents accepted doing substance abuse. Peer pressure (40.5%) was the commonest reason for initiation. Substance abuse by parents was found to be significantly associated with substance abuse by respondents (P<.001).

CONCLUSIONS/NEXT STEPS: A wide range of factors contribute to substance abuse. Education sector involvement is important in prevention and control of substance abuse as it engages children and young people at a crucial stage of their development. Also, there is need of developing a supporting environment at home so that adolescents can decide and sustain with the right choices for healthy life.

IAAH170605

The psychometric properties and factorial structure of Proactive Coping Inventory in Indian adolescent sample.

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BACKGROUND: Coping is an important construct in psychological research. Various theoretical and conceptual frameworks have made the abstract concept of coping amenable to measurement. There are various standardized scales to measure coping. However, taking into account the role of cultural context in coping behaviour, there is a felt need to scientifically study the scales developed in west on Indian population.

METHODS: The present study aimed to investigate the factor structure of Proactive coping Inventory- Adolescent version on sample of adolescents in Indian setting. Proactive coping Inventory- Adolescent version was administered on a total of 300 adolescents.

RESULTS: The Principal Axis Factor (PAF) with a varimax (orthogonal) rotation was performed to get the simple structure. The five factor solution was considered as best fit. (Using parallel analysis). The reliability of the scale was assessed using cronbach alpha.

CONCLUSIONS/NEXT STEPS: All subscales of PCI had satisfactory alpha values except avoidance coping.

IAAH170619

Investing in young adolescents: An exploratory study

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BACKGROUND: Most adolescent health interventions tend to focus on the 15-19 age group. Yet, the norms, values and (dis)entitlements that underpin social inequity are ingrained in children even before they turn 10. Vulnerabilities stemming from abuses of power can be hard to dissolve unless tackled early. In on-going work, we explore whether investing in children before they turn 12 can help mitigate or even prevent vulnerabilities and allow adolescents to reach their potential. This paper reports on formative research that examines NGO experiences and reflections on programming for adolescent health, education, work, income and gender equity in urban economies.

METHODS: After reviewing the literature on adolescent programs, we conducted in-depth interviews with the heads of six longstanding urban NGOs that worked on child sexual abuse, child labor and/or provided education, vocational training, medico-legal and psychological support.

RESULTS: Although the organizations initially focused on older adolescents, they were invariably forced to recognize the importance of the 6 to 12 age group. Exploratory sex began much earlier than expected, as did physical and sexual abuse. Yet, poor awareness and the absence of fora to address issues linked to sexuality and personal safety exacerbated the vulnerability of these children, and adversely affected their health/wellbeing. The organizations realized that gender-biased norms could be tackled more easily among children under 12 than in the older age group. Moreover, the opportunities for working with boys and girls under 12 were greater than among teenagers. Values such as mutual respect and non-violence were also inculcated more effectively when life skill programs addressed children under 12. The organizations working on child protection and rights had to constantly battle the law enforcement and judicial systems, which tend to be insensitive, child-unfriendly and in need of reform.

CONCLUSIONS/NEXT STEPS: Our preliminary findings suggest that interventions which focus on older adolescents without investing in children under 12 can amount to too little too late. Policies, programs and legal enforcement systems geared towards this younger group are also weak or absent. Programs for adolescents must include children below 12 if the social inequities giving rise to poor health are to be effectively tackled.

IAAH170636

Health, nutrition, education and wellbeing among 3324 adolescent girls aged 10-19 in Jharkhand, eastern India: a cross-sectional baseline survey

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BACKGROUND: India's national adolescent health programme - Rashtriya Kishor SwasthyaKaryakram (RKSK) - supports the formation of peer-facilitated groups for adolescents aged 10-19 years. Coverage of this intervention is currently low. As part of a randomised controlled trial of a peer-led intervention for adolescent health aligned with RKSK, we conducted a cross-sectional baseline survey of girls aged 10-19 in Jharkhand, a state where RKSK groups are not yet operating at full coverage.

METHODS: We identified and recruited 50 villages in Khuntpani block, West Singhbhum district, Jharkhand, and sought to interview all adolescent girls aged 10-19 years. Between July 2016 and February 2017, twelve monitors visited each household to identify and interview eligible girls.

RESULTS: We surveyed 3324 (81.7%) of an estimated 4068 girls aged 10-19 years. Girls had a mean age of 14.3 (SD 2.9). 82.2% belonged to Scheduled Tribes. Half of girls aged 10-14 and 22.5% of girls aged 15-19 could not read. 89% of younger and 46% of older girls were in school or college. Girls dropped out of school because they were required for household work (37.5%) or for work on the family farm or business (22.5%). Over 20% of girls aged 15-19 were married. 38% of girls reported symptoms of anaemia in the past month, but less than 20% received a blood test. 7.8% of younger girls were moderately to severely underweight. Stunting affected a third of younger girls and 58.2% of older girls. 30% of married girls and girls aged 15-19 years had heard of contraception. Among married adolescents, 26.5% had had a pregnancy before 18 and 24.4% had a child by this age. 39.8% of girls reported emotional violence in the past year, 13.9% physical violence, and 0.7% sexual violence.

CONCLUSIONS/NEXT STEPS: Our survey identified several areas for a community intervention to support RKSK in rural, underserved, tribal areas of Jharkhand: helping girls stay in school, addressing violence, early marriage, lack of knowledge about contraception and undernutrition.

IAAH170646

Youthful nation: Opportunity or risk to realizing the demographic dividend in Rwanda?

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BACKGROUND: In pre-colonial Rwanda, having many children was considered as an investment; having more children was considered a blessing in the traditional sense. Rapid population growth has, therefore, been a long-standing reality in Rwanda. A constant annual population growth rate of 2.6% has been observed in 2010 and 2015. Rwanda's youth would be the driving force behind economic prosperity in future decades, hence great potential to realize the demographic dividend. However, this only possible if policies and programs are in place to enhance their opportunities and encourage smaller families. This literature review outlines opportunities and risks that can result from the large numbers of youth growing up in Rwanda today and its potential to attain the Demographic dividend. The question to be addressed: As a youthful nation, what are the opportunities or risks to realizing the demographic dividend in Rwanda?

METHODS: This is a literature review composed of mainly database searches. The World Health Organization library, Pubmed, Google scholar and the National Institute of statistics of Rwanda (NISIR) website were used to retrieve total of 16 publications including articles and reports. The formulated research question guided the development of inclusion and exclusion criteria of articles.

RESULTS: In total 44.6%, 52.4% and 3.1% of the Rwandan population are made of children under 14 years, working age adults 16-65 years and elderly of more than 65 respectively. Rwanda has taken different actions to seize upon the potential of young people increasing the job market, education especially to women, reducing the fertility and mortality, and expanding and reinvigorating family planning programs. However, despite an uptake of 41% of contraceptives in sexually active women, Rwanda still experiences 13% of unwanted pregnancies.

CONCLUSIONS/NEXT STEPS: As reported by David Bloom and colleagues two major factors that will determine Africa's future economic growth prospects are growth in the working-age share of the population and institutional quality. The proportion of Rwandans in working age is slightly large and to attain the Demographic dividend, there is a crucial need to invest in adolescent health especially access to contraception services and commodities.

IAAH170657

Revitalizing the global Adolescent Sexual and Reproductive Health agenda: the role of gender norms transformation

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BACKGROUND: Promoting gender-equitable attitudes through strengthened social networks lays the groundwork for positive SRH (Viner et al., 2012; Sawyer

et al., 2012). Conditions in the post-conflict setting of northern Uganda may contribute to the adoption and reinforcement of inequitable gender norms, unhealthy behaviors, and sexualization of vulnerable youth. The Gender Roles, Equality and Transformations (GREAT) Project used a research-to-action lens to develop and test an intervention package to improve adolescent SRH and GBV outcomes in Lira and Amuru districts. The package includes: 1) Serial radio drama to catalyze discussion at scale; 2) Toolkit (Radio discussion guide, Puberty Flipbooks, Community Engagement Game, and Activity Cards) to promote reflection and dialogue in existing community groups; 3) Community mobilization using the Community Action Cycle (CAC) to strengthen community leaders' capacity to promote and sustain change; and 4) Engaging Village Health Teams to improve youth-friendly SRH services.

METHODS: A baseline-endline study of 4,500 randomly sampled individuals was conducted in intervention and control areas to assess acceptability and feasibility of the intervention and knowledge, attitudes and behaviors among males and females in four life stages: 10-14 year old Very young adolescents (VYA), 15-19 year old unmarried and childless Older adolescents (OA), 15-19 year old Newly married/parenting adolescents (NM/NP), and adults. Analysis was done using SPSS and validated scales.

RESULTS: There was a 19% decrease in attitudes towards early marriage among cohorts as well as improvements in relation to FP use: 16% increase in FP use and 10% increase for partner support of FP use among newly married adolescents (NM/NP). In terms of gender equality attitudes, significant improvements were observed: 15% increase in female newly marrieds' involvement in decision-making, 6% increase in male NM/NP's involvement in household role-sharing, and increase in sharing of household chores among male OAs (18%) and VYAs (21%).

CONCLUSIONS/NEXT STEPS: The GREAT model demonstrates the importance of life stage and gender-sensitive considerations in developing culturally appropriate, effective gender transformative interventions which facilitate adolescents' healthy passage into adult lives free of violence, coerced sex, and unintended pregnancy. Multi-sectorial linkages that catalyze widespread sustainable movements at the individual and community levels can revitalize the ASRH agenda long-term.

IAAH170669

Adolescent Population in India: A Socio-Economic, Demographic and Health Profile

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BACKGROUND: Demographically India is a young country comparing to other world's nations. The recent census data reveals that every fifth person of India is adolescent (10-19 age categories). It has been found through many research papers and reports that adolescent population need special care and attention by the government and other stake holders which are directly or indirectly associated with the formulation and implementation of programmes and policies for the overall development of human resources. Adolescent population needs special focus in over all socio-economic and demographic improvements in general and health, education, and skill development in particular for the equitable and sustainable development of country.

METHODS: The present paper has elaborated and examined the status of adolescent population in India at states and districts level. Data from Census of India (2011) has been used for the analysis. Methods which have been used for data analysis are univariate, bivariate and multivariate along with some cartographic maps and graphical representation of data.

RESULTS: The result shows that state like Uttar Pradesh, Bihar have even higher percentage of adolescent population in comparison to national average. EAG states need special attention to deal with adolescent health as it is not up to the mark compared to other states of the country.

CONCLUSIONS/NEXT STEPS: There should be requirements of more focused programmes and policies towards health and overall development of adolescent population with active participation of service providers and beneficiaries.

IAAH170769

Cross-country learnings from formative research on first-time/young parents in Nigeria and Madagascar using a socioecological approach to inform the development of an intervention strategy

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BACKGROUND: Globally, 13 million adolescents give birth annually. Consequences of early pregnancy and birth include higher risk of maternal, neonatal and child mortality; rapid repeat pregnancy further increases risk of poor outcomes. Interventions to connect pregnant and parenting youth to key sexual and reproductive health (SRH) services, including antenatal care, maternal and newborn care, and postpartum family planning (PPFP), are critically needed. Yet globally, few models reach first-time/young parents (FT/YPs); most youth programs focus on delaying marriage and first pregnancy and do not target those who have started childbearing. Madagascar and Nigeria have among the highest rates of teen pregnancy, with 39% and 32% of girls, respectively, initiating childbearing before age 19.

METHODS: To inform interventions to increase FT/YPs' SRH service use, the Maternal and Child Survival Program (MCSP) conducted formative research in Madagascar, then adapted and utilized the approach and tools in Nigeria. The research used participatory influence mapping and employed a socioecological model to explore individual, couple, family, community, and health system level influences via service data; focus group discussions with FT/YPs who did not use services and their families, and community health workers (CHWs); interviews with FT/YPs who used services, influential adults, and providers; and health facility assessments.

RESULTS: Factors influencing use/non-use of SRH services were analyzed by socioecological model. Cross-country findings include limited awareness of available services and financial resources (individual); gender dynamics (couple); pressure from mothers and in-laws and family tradition of using traditional birth attendants (TBAs) (family); stigmatization of adolescent pregnancy (community); and services that are not friendly to young people (health system). Key differences between countries included reasons for TBA use and the magnitude of influence of service costs.

CONCLUSIONS/NEXT STEPS: A socioecological model provides a useful framework for understanding factors facilitating and limiting use of SRH services; the nature and extent of influence varies by health service and this approach allows tailoring of messages and activities by life stage. To further reduce maternal mortality, programs must engage FT/YPs, consider how relationships, influences, gender, power, and intergenerational dynamics influence service use, and address broad SRH needs.

IAAH170788

Utilization of health care services among adolescent girls in urban slums

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BACKGROUND: Studies show that adolescent girls living in urban slums have poorer health because of co-existence of several factors. Despite of these vulnerabilities, there are lacks of studies related to utilization of health services among adolescent girls in urban slums. Hence, to understand the utilization of health-care services among girls in urban slums, a study was undertaken.

METHODS: Total 240 adolescent girls living in urban slums in Jaipur in the age-group of 10-19 years were interviewed. Girls were stratified in two groups

i.e. 10-14 years and 15-19 years. To select the slums for study, Probability Proportional to Size (PPS) technique was used and 10 slums were selected. Within slums, respondents were selected on the basis of simple random sampling.

RESULTS: 50% girls have health problems in last 12 months, mostly related to menstruation (33%) followed by fever (26%), RTI & STI (20%) and other health issues including weakness. However, only 33% girls accessed health services, 7% didn't avail any service and most of the girls (59%) took medicines based on the advice given by their parents, friends and pharmacists. Of the girls who availed health services, around 67% went to government health facilities and rest went to private health facilities. The key criteria for selecting a particular facility was availability of lady doctors (44%), service provider's expertise (22%), privacy (11%), distance from home (11%) and timing of the health facilities (11%). Around 50% girls said that they didn't pay any fees for availing health facilities, while remaining paid fee between Rs 50-100. It was also found that 52% of the girls interviewed have mental stress and primary reasons were pressure of studies (54%) & pressure for earning livelihood (25%).

CONCLUSIONS/NEXT STEPS: It was observed that large number of girls, despite of having health problems were not availing health services and mostly depended on self-medication for cure. Percentage of girls feeling mental stress is also high. Government needs to strengthen availability of health services specially by providing health services from lady doctor, counselling for mental stress, ensuring privacy and low cost & convenient timings.

Health System Strengthening

IAAH170031

Understanding the SRH needs of unmarried adolescent girls in rural areas: A qualitative study of Adolescent Friendly Health Corners (AFHCs) at Government health facilities

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BACKGROUND: Providing adolescent friendly health services (AFHS) to unmarried adolescents at public health facilities is a new approach in Bangladesh. The Directorate General of Family Planning (DGFP) has recently introduced Adolescent Friendly Health Corners (AFHCs) at two types of existing health facilities (UHFWC and MCWC) at the District, Upazila, and Union levels. This paper is based on the findings of a large qualitative study that assessed the quality of services of ten AFHCs supported by UNFPA located in five districts. This paper captures the voices of unmarried adolescent girls, to assess their experiences accessing information and services from AFHCs.

METHODS: Qualitative approach: Conducted 50 in-depth interviews (IDIs) with unmarried adolescent girls ages 15-19 years old, 10 IDIs with service providers (Family Welfare Visitor (FWV) and Sub-Assistant Community Medical Officer (SACMO)) who received training on AFHS; 10 focus group discussions (FGDs) with community members, and 10 facility assessments.

RESULTS: Study findings demonstrate that unmarried adolescent girls and community members are not aware of the new AFHS initiative at nearby Government facilities. This study found that involving school teachers, field level health workers, and community members can increase awareness of AFHS and encourage unmarried adolescents to visit AFHCs. Adolescent girls who did receive services and information from AFHCs reported lack of privacy, lack of separate waiting room, shortage of medicines, inadequate educational materials, and inconvenient service hours. However, they also expressed satisfaction with the behavior of the service providers, which indicates that AFHS training for service providers has had a positive impact. Most service providers used the outdoor service points for adolescents, due to workloads and lack of manpower, rather than using the AFHC space. Besides, lack of publicity, popular perceptions of UHFWC and MCWC as 'family planning clinics,' and inadequate privacy are some major challenges that must be addressed to make the AFHCs functional and effective.

CONCLUSIONS/NEXT STEPS: In this study adolescent girls show a clear understanding and expectation of the required SRH services but lack of sources of open, reliable information and services from AFHC could serve as an inclusive information hub for unmarried adolescent girls by mitigating the intervention gaps and associated challenges.

IAAH170034

The transition process from pediatric to adult services: perspectives from adolescents with chronic diseases, caregivers and health professionals

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BACKGROUND: In Chile there is a lack of studies, guidelines and policies regarding the transition process from pediatric to adult services for adolescents with chronic diseases (CDs). Moving to adult services create new barriers to accessing health care, and a high drop out rate, impacting in morbidity, mortality and quality of life of young people with CDs. The aim of the current study is to describe critical points, barriers and facilitators of the transition process from pediatric to adult health care services from the perspective of adolescents with CDs, caregivers and health professionals in Santiago, Chile.

METHODS: Comprehensive exploratory study with a qualitative approach focused on a purposive sample of 32 young people between 15 and 25 years old with CDs, 32 caregivers and 20 health professionals. Data was collected from semi-structured interviews at two general university hospitals in Santiago, Chile. Grounded Theory was used for data analysis.

RESULTS: Five key themes emerged as critical points of adolescents, caregivers and health professionals, with high agreement between all participants: 1. Strong attachment between adolescents and caregivers with their pediatric providers: they perceive preferential, comprehensive and empathetic treatment, continued medical team availability and participation of caregivers during medical care while they are in pediatrics services, with difficult engagement in adults services 2. Resistance to transference to adult services of both adolescents and their caregivers as well as health professionals, given the absence of a timely preparation 3. Lack of coordination and joint working between pediatric and adult services during the transference 4. Difficulty in developing autonomy and selfcare in adolescents with CD 5. Invisibilization of the process of adolescence in both pediatrics and adult services, including lack of developmentally appropriate approach.

CONCLUSIONS/NEXT STEPS: Good clinical relationships, timely preparation, joint working, and the assessment of self management skills of adolescents with CDs facilitate the process of transition to adult services and should be encouraged in the implementation of transition services for adolescents with CDs. Also there is a need for developmentally appropriate health services. Based on the critical points detected in this study, national policies and programs for transition services for adolescents with CDs has been recommended.

IAAH170036

Trends of Preeclampsia/ Eclampsia and Maternal and Neonatal Outcomes among Women Delivering in Addis Ababa Government Hospitals, Ethiopia: a retrospective Cross-sectional Study

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BACKGROUND: The burden of preeclampsia has been a major concern worldwide, particularly in developing countries such as Ethiopia. Preeclampsia is associated with substantial maternal complications, both acute and long-term. The aim of this research is to determine the magnitude and trends of preeclampsia /eclampsia, as well as maternal and neonatal complications among women delivering at government hospitals.

METHODS: Retrospectively, data collected by looking at mothers with preeclampsia/ eclampsia medical records using data abstraction tools, in 1809 cases from 2009 to 2013. Descriptive analyses were employed. In addition, extended Mantel Haenszel chi square for linear trend was used to check for significance of the trends.

RESULTS: The five-year average proportion of preeclampsia/ eclampsia was 4.2% [95% CI (4.02%, 4.4%)]. The proportion of preeclampsia was 2.2% in 2009 and increased to a proportion of 5.58 % in 2013 (p<0.001). The percentage increase over five-years was 154%. Of the total preeclampsia/eclampsia mothers, 36% [95% CI (33.85%, 38.28%)] had at least one maternal complication in the five-year period. It showed a percentage change of maternal complication over time of 26.5% (p<0.01). The main complications were HELLP syndrome, 257 (39.5%), aspiration pneumonia 114 (17.5%), pulmonary edema, 114 (17.5%), and abruption placenta, 100(15.3%). Moreover, 66.4% [95% CI (64.24%, 68.59%)] of women had at least one neonatal complication in the five-year study. Regarding neonatal complication, a decreasing trend was observed from 2009 (76%) to 2013 (66%), which showed that the percentage change of neonatal complication over time was -13.2%. Still births, which accounted for 363 (30.2%) of the complications, prematurity, with 395 (32.8%), respiratory distress syndrome, with 456 (37.9%), and low birth weight, with 363 (30.2%), were the most common causes of neonatal complication.

CONCLUSIONS/NEXT STEPS: The trend of preeclampsia/ eclampsia and maternal complication over a five-year period has increased. In contrast, neonatal complication experienced significant decrease over the past five years. Raise awareness among mothers in the community regarding early sign and symptoms of preeclampsia / eclampsia and it is essential to design a better tracking system for ANC program.

IAAH170039

The EU Mocha Project: Developing Models of Primary Care for Adolescents Using a Set of Core Indicators

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BACKGROUND: Several institutions and agencies have developed indicators of adolescent health care, but the extent to which they allow for an assessment of the effectiveness and quality of various health care organization and settings is not often addressed on a large scale. To fill the gap, the E.U. MOCHA research (“model, of child care appraised”) aims to study the benefits and disadvantages of different systems and organizations of pediatric care in Europe. One working group of the research consortium is specifically focusing on benefits and disadvantages of different systems and organizations of adolescent primary care, in collaboration with the World Health Organization.

METHODS: Besides a review of the literature focusing on the gathering of measurable achievable, relevant and time bound system process and outcome indicators, the working group is currently running a survey among the 30 involved European countries to collect data on the structure and functioning of the adolescent primary health care.

RESULTS: The questionnaire addresses issues such as 1) the respective roles of pediatricians, family practitioners, the school health setting, the hospital and specialized units; 2) the extent to which health care settings and professionals address crucial aspects such as autonomy, confidentiality and children rights; 3) the accessibility of health care in emergency or non emergency situations, including the care of young people with chronic conditions; 4) the capacity of the workforce to respond to issues such as sexual & reproductive health and rights, substance use, eating disorders, etc.; 5) the extent and content of under- and postgraduate training of health professionals in the field.

CONCLUSIONS/NEXT STEPS: The use of a multidimensional set of indicators and descriptors of health care functioning will represent a useful tool in the future to assist European stakeholders in choosing sound approaches to the delivery of care to adolescents

IAAH170054

Adolescent mothers hospitalized with their children in a Pediatric Hospital. An invisible reality

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BACKGROUND: In Argentina, 17% of all newborns are a result of pregnancies to adolescent mothers. The Garrahan Pediatric Hospital is a third level care hospital in the city of Buenos Aires. As the department in charge of adolescent care we began to observe that our services were requested not only by patients, but also many mothers under 20 years old who were hospitalized with their children in silence and frequently in solidarity without contention.

DESCRIPTION: When the situation became recognized, we decided to start the Garrahan Hospital Adolescent mothers care program, which includes the following: • Performing a diagnosis of the current situation and a retrospective analysis of adolescent mothers who are admitted with their children to the different rooms of our hospital. (Approximately 6% of the 25,000 hospitalizations per year) • Implementing actions that allow early detection as well as generating resources to conduct workshops on sexual and reproductive health, health controls, emotional restraint and timely contraception.

LESSONS LEARNED: It is common in our institutions for adolescent mothers to remain unnoticed and “invisible” to the health team that assists their children. Once detected, there are multiple needs and requirements of this group such as loneliness and lack of containment along with lack of adequate medical controls despite often being in the immediate postpartum. In addition, the lack of adequate contraceptive methods and lack of knowledge in family planning and sexual reproductive health is present in most cases.

CONCLUSIONS/NEXT STEPS : Becoming aware of this daily reality in our hospital rooms and the realization of almost 1500 teenage mothers annually that accompany their children in our hospital allowed us to take

measures and generate actions to improve and reverse the situation. With the current measures and actions implemented we are able to provide assistance to approximately 50% of adolescent mothers, however much remains to be done and improved. The alertness and commitment of all members of the health team and raising awareness of the invisible mothers is a great challenge.

IAAH170076

Adolescent Health Programmes in India: Impediments and the Way Forward

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BACKGROUND: Adolescence is a phase of rapid growth and development during which physical, physiological and behavioural changes occur. They constitute more than 1.2 billion worldwide, and about 21% of Indian population. Adolescents face a range of health challenges, including malnutrition and anemia, lack of knowledge on SRH, substance misuse, communicable and non-communicable diseases, mental health concerns, and injuries and violence. Empirical evidence shows us that more than 33% of the disease burden and almost 60% of premature deaths among adults can be associated with behaviour or conditions that began or occurred during adolescence.

DESCRIPTION: The Government of India has launched various programmes namely RMNCH+A, Rashtriya Kishore Swashtya Karyakram and SABLA that encompass the health needs of adolescents like immunization, health education for sexual and reproductive health, nutritional education and supplementation, anemia control measures and counseling. Though Adolescent Friendly Health Services (AFHS) based adolescent clinics are said to address all the health needs of adolescents, the delivery of services mainly targets reproductive and sexual health and all other issues are not adequately focused. Even with this great focus on ARSH, NFHS data shows no significant decrease in adolescent pregnancy.

LESSONS LEARNED: A closer look will reveal that Adolescent health programmes are fragmentary at present and there is no comprehensive programme addressing all the needs of adolescents. Access and availability of health care services are severely limited. Lack of accurate information, absence of proper guidance, parent's ignorance, lack of skills and insufficient services from health care delivery system are the major barriers.

CONCLUSIONS/NEXT STEPS: While planning it is important to identify the felt needs of the adolescents and the services should be demand driven. All the existing adolescent related programmes should come under single umbrella and a comprehensive scheme has to be envisaged. Empower and involve adolescents in decisions that affect them and facilitate them with every opportunity for developing into a successful adult. Also in the target population we should include parents and teachers in defining, planning, implementing and evaluating specific programmes for adolescents. Nation and States wise detailed investigation and reports on adolescent's health issues, is the need of the hour.

IAAH170133

Investigating The Impact Of Involving Male Caregivers In Improving Art Adherence And Family Support System At Baylor Malawi Centre Of Excellence (Coe)

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BACKGROUND: As children's health care is increasingly complex in Malawi, fathers are needed even more to assist overburdened female caregivers. At Children's Foundation of Malawi Baylor Centre of Excellence (COE) challenges noted among HIV positive/exposed children include poor adherence, missed appointments, lack of transport needs, nutritional deficits, this exploratory study reports some of the first in-depth evidence of fathers' experiences in Malawi and presents a research agenda in this critically under-researched area.

METHODS: We conducted in-depth qualitative interviews with 30 fathers who provided a substantial amount of complex technical and nursing care for their child at home. The aim was to describe their experiences of fathering, parenting and caring. Interviews were recorded, transcribed and analysed using Burnard's

approach, which has commonalities with phenomenological and content analysis.

RESULTS: Fathers enjoyed their caring role and found it rewarding and at times stressful. They instituted structured regimes, which focused on the father/child/family. Performing intimate care posed specific challenges for which there is no guidance. Children's community nursing was highly valued. Fathers generally rejected the need for specific father-focused services; as such provision would induce guilt feelings. Fathers reported positive relationships with their children and partners.

CONCLUSIONS/NEXT STEPS: Key areas for future exploration include gaining a better understanding of fathers' motivations and styles of caring, developing interventions to support fathers' caring role, developing guidance on intimate care, and delivering tailored services to fathers in a family context. There is little understanding of fathering and caring by non-resident, teenage and step-fathers in Malawi. Understanding the involved and un-involved fathers in their children's health care may inform public health interventions which may increase male participation, motivate uninvolved male peers, engage men in recognition as stakeholders in Malawian health care systems delivery, and increase male participation in the care of HIV infected children.

IAAH170139

Reality through the lens of adolescent girls: using formative research to involve and engage adolescents' girls in the conceptualization of the GAP year program

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¹Wits RHI

BACKGROUND: Adolescents face a multitude of structural barriers which place them at risk of HIV acquisition, school drop-out and violence. Development of interventions to mitigate the impact of such negative outcomes must be a priority. It has become clear that the voice and involvement of adolescents in the development of targeted programs and research is absent. In the context of growing evidence for the need to include adolescents as agents of change we conducted formative research with adolescent girls in two major townships in South Africa. The study was aimed at understanding and contextualising adolescent's girls experience, needs and challenges to inform the design of a Girls Achieve Power (GAP) Year program. GAP Year is a Cluster Randomised Controlled Trial that will be implemented in secondary schools in three South African townships among grade 8 learners. The trial is the first of its kind in South Africa, and aims to empower adolescent's girls as they progress through high school.

METHODS: Six Focus Group Discussions (FGD) were conducted with grade eight and nine girls in two South African townships, Soweto and Khayelitsha. The raw data for the study consisted of field notes and transcripts which were subjected to thematic analysis.

RESULTS: The participants' ages ranged from 13 to 18 years. The key themes that emerged reflected the participant's perceptions of safety, violence, and parental involvement. Although the adolescents brought their unique sets of personalities, experiences and challenges. Their shared experiences allowed for them to express their needs in-depth and explore what programs can be beneficial for them. One of the key things highlighted was the need to have single sex social groups and safe public meeting spaces for girls.

CONCLUSIONS/NEXT STEPS: Our findings emphasize that the notion of "one size fits all" does not apply when it comes to programs targeted at adolescent girls. Contextual issues and challenges needs to be taken into account when designing programs for adolescents' girls. Findings showed that meaningful engagement with young people is a necessary step in conceptualization process of any program targeted at them, so as to ensure that it meets the needs of the beneficiaries.

IAAH170143

Practical Guidance to Develop National Strategies for evidence-based Integrated Health Services for Adolescents and Young people in West Africa

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BACKGROUND: Adolescents in the ECOWAS region (West Africa) are confronted by formidable health challenges. While several initiatives have been

implemented to improve adolescent health in the region, there is a lack of integrated, evidence-based and relevant approaches to respond to adolescents' diverse health needs. The West African Health Organization (WAHO), in collaboration with partners, produced a guide for developing national strategies for integrated health services for adolescents and youth (AY). The guide was piloted in Niger in 2016.

DESCRIPTION: WAHO's "Orientation Guide for Developing National Strategies for Integrated Health Services for Adolescents and Youth in the ECOWAS Region" was developed in 2016 with the aim of harmonizing the approach for developing or revising national strategies, policies and programs for AY health. The guide outlines 11 steps that Governments can take to develop evidence-based national strategies for integrated and appropriate AY health services. The Niger government applied the 11 steps through a participatory process to develop the country's new national multisectoral strategy AY in 2016.

LESSONS LEARNED: Lessons learned from applying the guide in Niger include: • Involving stakeholders from diverse sectors (health, youth, education, population and social protection), with support from partners and meaningful participation of youth were key for identifying health priorities and appropriate solutions to include in Niger's new strategy. • The 11 steps in the guide allowed stakeholders to identify opportunities strengthen integrated health services for adolescents and youth. • WAHO's regional policy-making guide is a valuable tool to support national governments to develop evidence-based and appropriate national strategies for adolescent and youth health.

CONCLUSIONS/NEXT STEPS: The health of adolescents and young people is global concern and a top priority for African countries. It is therefore imperative for countries to develop and use evidence-based national strategies for integrated relevant health services of adolescents and youth. WAHO's guide can help countries in West Africa to systematize the process of developing or reviewing national strategy while allowing each country to operationalize the strategy in a context-specific way.

IAAH170144

Responses to Adolescent Health Priorities in West Africa

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BACKGROUND: In 2015, the West African Health Organization (WAHO) conducted a situational analysis of adolescent health in West Africa, which highlighted the need to bolster efforts for responding to diverse adolescent health priorities and needs in an integrated manner. In 2016, WAHO convened its 2nd Good Practices Forum for maternal, child and adolescent health. A one-day preconference was organized to examine responses to identified adolescent health priorities.

DESCRIPTION: WAHO organized a preconference on adolescent health, with the Implementing Best Practices Initiatives' AYSRH taskforce. The preconference joined around 90 participants representing ministries of health, youth associations, civil society and partners to build a shared understanding of the nature and scale of select adolescent health priorities in West Africa, as well as evidenced-based approaches to address these priorities and strategies for their scale-up.

LESSONS LEARNED: The priorities included: early and unintended pregnancies, including contraception; maternal mortality and morbidity among adolescents; STI/HIV/AIDS among adolescents; gender-based violence in adolescents, including FGM; child, early and forced marriage. Participants examined the application of evidence-based practices to respond to these priorities and proposed the following: • Strengthen national health information systems by including age-disaggregated data and introducing comparable adolescent health indicators for all ECOWAS countries. • Increase investment in research from West Africa to inform adolescent health policies and programs, including evaluations of promising practices and mechanisms to share evidence on proven practices. • Focus adolescent health investments on scaling-up proven and high-impact practices, while adapting to local contexts. • Ensure meaningful youth participation in all stages of policy and program processes. • Expand use of new technologies to more youth holistically. Health is considered one aspect of youth development and health outcomes can be improved through integrated interventions with other sectors, including education, employment and women's empowerment. • Increase domestic investments.

CONCLUSIONS/NEXT STEPS: Adolescents are an extremely important segment of West Africa's population due to their number and role in development. There is increasing evidence on what works and doesn't work to improve adolescent health. This evidence must be applied more systematically in West Africa to capitalize on the region's demographic dividend.

IAAH170169

Youth and community views on need of sexual reproductive health services in rural India

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BACKGROUND: Despite of the fact that more than 20% of Indian population is youth, their sexual reproductive health (SRH) needs and views are not fully explored because of cultural taboos and non-involvement of youth, while designing and executing the program. The aim of this analysis is to present views of adolescents', Panchayat Raj Institutions (PRI) leaders', health functionaries and teachers' on need of SRH services for adolescents in rural India.

METHODS: Data from "Strengthening Youth Friendly Health Services through Community-Based Interventions in Rural India" project were used in this abstract. We have analyzed data collected from 746 youth (baseline and end line survey), 141 PRI leaders, 135 health functionaries and 43 teachers. The project was funded by Ministry of Foreign Affairs – Finland with technical support of Physician for Social Responsibility and implemented by Mamta-Health Institute for Mother and Child in three locations of India.

RESULTS: Mean age of youth were 17.6 ± 1.5 and 18 ± 1.8 in baseline and end line survey. At baseline 89.3% of youth and at end line 96.6% youth thought that they need SRH services. More than 97% of PRI leaders had the same opinion, however only 58% of PRI leaders discussed SRH issues in village health plan. Moreover, 57.5% PRI met health functionaries to strengthen SRH services for youth in their respective villages. Need of SRH information and services were clearly articulated by concerned stakeholders. According to teacher's, information related to HIV/AIDS, changes during growth and development, importance of sociocultural norms of sexual behavior, gender role in respect to SRH, youth reproductive sexual health and interpersonal relationships with opposite sex should be provide to the adolescents and young population. Moreover, PRIs and teachers also realized the need to training and appropriate tools for communication of SRH information to the adolescent.

CONCLUSIONS/NEXT STEPS: These results provide clear indication of readiness of community and community intuitions to support SRH need of adolescent and young people. It provides evident that youth can be provided information on SRH concerned by involving frontline functionaries in the community and teachers in the school setting.

IAAH170189

Embracing uncertainty: outcome evaluation of a human centered- designed programme for adolescent health

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BACKGROUND: Adolescent 360 (A360) is a US\$30 million investment to increase modern contraceptive use and reduce unplanned pregnancy among girls aged 15 to 19 years in Ethiopia, Tanzania and Nigeria. The innovative Population Services International (PSI)-led A360 approach incorporates human-centred design (HCD) to develop population-specific solutions. After piloting, A360 will be scaled up and its impact on contraceptive use evaluated. It is important to evaluate the impact of innovative NGO-led interventions such as A360, but programmatic priorities and resource constraints often preclude the more robust study designs, such as randomised controlled trials, that are favoured by evaluators. Here we describe the challenges of designing the evaluation of a programmatic intervention that is still under development.

METHODS: We started the design process by requesting three key pieces of information from the implementers: likely components of the A360 intervention, target population, and the timeline for implementation. We then explored the feasibility of various study designs given the resources available, political situation, and estimated effect of the intervention on the primary outcome of modern contraceptive use among adolescent girls.

RESULTS: The iterative HCD process meant that information on the components of the intervention, target population and timeline were unclear and changed over the course of protocol development. This uncertainty led to the examination of many study design scenarios. Evaluation protocols submitted for ethical review, in the absence of a defined intervention, have explained a range of likely interventions and data collection tools have been designed to capture exposure to multiple potential interventions. The final choice of design for A360 was five pairs of before and after cross-sectional surveys that will be conducted in 4 settings in 3 countries (Ethiopia, Nigeria, and Tanzania). In the two Nigerian settings, a comparison group will be interviewed to allow for a difference in differences analysis.

CONCLUSIONS/NEXT STEPS: Designing the evaluation of this HCD intervention was complicated by the uncertainty in the content, delivery mechanism, and target populations for the interventions. Attempting to design the A360 evaluation at the same time as the intervention was inefficient but may lead to more timely evidence of public health impact.

IAAH170191

Adolescent Health: Designing a Successful Elective for Medical Students at the University of Colorado, USA

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BACKGROUND: The Institute of Medicine report noted that existing adolescent healthcare training fails to address adolescents' specific health needs. Professional organizations [American Academy of Pediatrics and Society for Adolescent Health and Medicine (SAHM)], recognizing the unique needs of adolescents, have advocated for more training for residents and medical students. In 2007, the educational leadership of the University of Colorado, School of Medicine requested a four-week adolescent medicine elective for 4th (final) year medical students (MS).

DESCRIPTION: To identify topics we consulted the literature, the SAHM list serve and adolescent medicine requirements from the American Board of Pediatrics, then categorized the topics into high priority areas. An educational specialist helped write objectives and develop educational experiences. The goal of the elective was to develop appreciation for the uniqueness of adolescent healthcare. The course stressed clinical and attitudinal skills that prepare MS to provide optimal care for adolescents. Educational tools included an Adolescent Health textbook, web-based resources, and reflective writing. Educational settings have included adolescent medicine clinics, school based health centers, substance abuse treatment centers, and clinics for eating disorders, family planning, and adolescent mothers.

LESSONS LEARNED: Since the elective began in 2007, 2-4 students have enrolled each academic year. Evaluations have included open-ended comments and ratings. Students gave the maximum possible rating for faculty availability, responsiveness, teaching ability and role modeling. On recent student evaluations (N=5) students rated the learning experience 5/5; didactic teaching 4.33/5; clinical teaching 4.6/5; extent goals and objectives were met 4.0/5; elective overall 4.4/5. Qualitative comments indicated self-reflection pushed students to thoughtfully consider their role as a physician and the doctor-patient relationship. "This was one of my best experiences in medical school". "No other preceptor or rotation has pushed me as hard or rewarded me so much".

CONCLUSIONS/NEXT STEPS: Students were excited to take care of adolescents and gained medical knowledge and skills in caring for this unique population. They felt challenged and supported in their growth into physicians. Allowing students to rotate through multiple clinical sites taught them diverse facets of adolescent health and provided opportunities for educational scholarship. Next steps include collection of performance data and involvement of more teaching faculty.

IAAH170195

DIFFERENTIAL SERVICES OF COMPREHENSIVE HEALTH CARE FOR ADOLESCENTS IN PERU

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BACKGROUND: Differentiated Services in Peru seeks to identify risks and

strengthen protective factors in adolescent health in the dimensions of mental health, sexual and reproductive health and physical health, according to the Guidelines on Adolescent Health Policy And the Technical Standards in the Adolescent Life Stage 2005-2012 and with continuous improvement through the Criteria and Standards Guide. The Financing is done by a product that describes comprehensive care especially in differentiated and programmed services according to decentralized functions in the regions of the country.

DESCRIPTION: Differentiated services were implemented from 8% in 2009 to 42% in 2016. Modalities were implemented in higher percentage with differentiated schedules: 92.4%; Exclusive environments: 6.5%; Specialized differentiators: 0.1% Comprehensive health care increased from 9.8% in 2011 to 19.2% in 2016, 56.2% in differentiated services. The services were self-assessed since 2012 and were evaluated externally by their health networks since 2013, reporting from 79.2% (2015) to 89.7% (2016). The 2016 results were 68.6%, for Strength 22.6% in Process and 9% in Optimum, the latter increased by 6% points (2015). The exclusive environments were evaluated only 80% and only 6% is Optimo.

LESSONS LEARNED: Adolescents come to services not only for sexual and reproductive health, but according to their needs. The evaluation of the processes must achieve optimization of the services. The high turnover of human resources at different levels does not contribute to the improvement of processes.

CONCLUSIONS/NEXT STEPS: The greater the number of services, the greater the access of adolescents to comprehensive health care. / Strengthening of competencies. Greater investment in exclusive environments. Competition of good practices of the services. Align to international standards.

IAAH170210

Results-oriented budgetary programs in Peru and their limitations in relation to adolescent health

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BACKGROUND: Until 2007, social programs in Peru were programmed in function to the budget of the previous year, without the measurement of any result. Since 2008, this changed and implemented the results-oriented budgeting strategy, for which programs were designed in the different sectors.

DESCRIPTION: The health sector currently has 10 programs, which are: maternal neonatal, nutritional articulation, STI/HIV-AIDS and Tuberculosis, non-communicable diseases, metastatic diseases, cancer, vulnerability reduction and emergency response by disasters, prevention and management of secondary health conditions in people with disabilities, and mental health. Each program should include products related to the regulations of the Ministry of Health, and with the most cost-effective interventions for each population group.

LESSONS LEARNED: Because the design of these programs focuses on health problems, and not necessarily on the needs of people, most of their products are targeted at the general population. Only 4 programs consider specific products for adolescents: The maternal neonatal program that has a product for the prevention of adolescent pregnancy, the STI-HIV/AIDS program that has a product for adolescents' access to STI/HIV-AIDS information, the cancer program that contains a product for the prevention of lung cancer in schoolchildren, and the mental health program that has a product with 2 activities for adolescents; family benefits to improve communication between adolescents and their parents, and social skills sessions for adolescents.

CONCLUSIONS/NEXT STEPS: Because the other programs do not provide specific products for each population group, it is not possible to know exactly what the real public investment in favor of adolescent health in Perú. Although it is more cost-effective for the country to invest in prevention and in adolescents due to the current Demographic Bonus period, the current designation of products by each health program does not yet reflect the consideration of these technical aspects, that the number of products by the total of programs of the health sector ascends to 153, and of this total only 4 are specific for adolescents, representing the 2.6% of the total products. The fact that programs focus on health problems and not on the needs of people limit the investment in favor of the integral health of adolescent.

IAAH170224

Qualitative study of treatment compliance among adolescents with a chronic illness, in a tertiary care centre in India

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BACKGROUND: Chronic illness affects 10–20% of patients during childhood and adolescence. WHO estimates that among pediatric patients with a chronic illness, 40- 50% are adherent. A quantitative study done in this center revealed a one third of patients with a chronic illness to be adherent. Various factors contribute to poor adherence including psychosocial, emotional, healthcare and treatment related issues. This qualitative study was carried out to delve deeper into factors that might influence adherence. This would inform frontline health care professionals, who in turn could develop strategies to improve compliance and hence a good outcome of illness. Adolescent patients attending the various paediatric subspecialty clinics at CMC, Vellore were recruited.

METHODS: Adolescents with chronic illness attending various paediatric subspecialty clinics at CMC, Vellore from November 2015 – June 2016 were recruited after obtaining parental consent and a written assent from adolescents themselves. Three focus group discussions were conducted. Proceedings of each were audiotaped while a scribe made notes simultaneously. The transcribed notes were analysed using the grounded theory method.

RESULTS: The transcribed raw data was analysed using the grounded theory format. Responses by the participants from each of the 3 FGDs was arranged in sequential order based on responses to each of open ended question asked during FGD. Quotes were coded using different colors in Microsoft word for each response. Focussed coding was derived using initial codes. From focussed codes, the qualitative data was interpreted. On analysing responses of all the participants, the important factors that were observed to be influencing adherence in our study population were forgetfulness, fear of being stigmatised, significant financial constraints, anxiety about possible side effects. Most of them had good parental involvement in medical care.

CONCLUSIONS/NEXT STEPS: Qualitative research among adolescents with chronic illness helped in understanding their practical problems, beliefs and fears regarding their treatment.

IAAH170225

Adherence to therapy among adolescents with a chronic illness, in a tertiary care centre in India

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BACKGROUND: Chronic illness affects 10–20% of patients during their childhood and adolescence. For adolescents with a chronic illness compliance might involve a prescribed diet and exercise regimen, medications and regular follow up. Factors that contribute to poor adherence are psychosocial, emotional, health care related and treatment related factors. WHO reported a 40- 50% compliance for medication in adolescents with chronic illness. This study was conducted to identify factors that influence adherence and to assess adherence rates among adolescents with a chronic illness. It was carried out among adolescents with chronic illness attending the subspecialty clinics in the Department of Paediatrics, Christian Medical College(CMC), Vellore, Tamilnadu, India.

METHODS: 240 Adolescents with chronic illness from November 2015 – June 2016 were recruited after parental consent and verbal assent from adolescents. MMAS-8(Morisky Medication Adherence Scale - 8), a validated self administered questionnaire was used. Data was analysed for rate of adherence and association between various factors and adherence using chi square test.

RESULTS: 32% had good, 29% medium and 39% low adherence. There was good association between adherence and knowledge about disease and complications. There was no association between adherence and healthcare related, socioeconomic, psychological and medication related factors.

CONCLUSIONS/NEXT STEPS: 32% had good adherence. This study did not reveal a significant association between adherence and financial, psychosocial, medication and healthcare related factors.

IAAH170264

Adolescent Reproductive & Sexual Health Problems, Help Seeking Behaviour & Utilization of Adolescent Friendly health Clinic (AFHC) Services

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BACKGROUND: Adolescence is an important period where a child undergoes biological transition, which is characterized by puberty, related changes in physical appearance and the attainment of reproductive capability, etc. Approximately 16 million young females aged 15-19 give birth each year, only about 17 per cent of them use contraception. Over 35% of all reported HIV infection occurs among 15-24 years age group indicating young people are highly vulnerable. In India AFHC services is an important strategy in RCH-II for reducing IMR, MMR, TFR and reducing the incidence of HIV/AIDS, RTIs. Utilization of Reproductive and sexual services by them has been neglected in most of the studies in India. Hence, this study was conducted to explore the perceived reproductive health problems, help seeking behaviors and utilization of these services.

METHODS: A cross sectional study was conducted among 400 students of Adolescent age group in Imphal West district in August & September 2016, to determine the perceived reproductive health problems & help seeking behavior of adolescents and utilization of AFHC services among adolescents. A pretested self-administered questionnaire was used to collect information regarding perceived reproductive & sexual health problems, help seeking behavior and utilization of ARSH services. Proportions and percentages were used to present the collected data and chi-square test was used as test of significance.

RESULTS: Students were in the age group of 13-19 years of age and 58.8% of them were boys. Perceived Reproductive and Sexual Health problems were STDs (42.5%), Menstrual problems (39%), HIV/AIDS (36.8), Masturbation (17.8), Pregnancy (14.2%), etc. There was significant difference in perception of these problems between boys and girls. Majority of them (86.2%) felt that help is not needed for these problems and around 56.8% of them have discussed these problems with somebody. Only 48% of them felt free to discuss these problems with their parents. 24.8% of them considered RSH problems stigma and only 9.8% of them know about the availability of separate adolescent clinic.

CONCLUSIONS/NEXT STEPS: STD is perceived as the most common RSH problem and their help seeking behavior for RSH problems was poor. Most of our respondents have never heard of AFHC services or the availability of separate adolescent clinics and no one have ever visited these clinics.

IAAH170270

Euteach: A Model of Training Strategy to Improve Adolescent Care, Development and Health

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BACKGROUND: There are no medication to address adolescent health issues such as substance use, violence, unintended pregnancy, STIs, obesity or poor adherence to lifestyle measures. Health care professionals must be able to identify, investigate and address these situations appropriately which requires, beyond good knowledge, specific communication skills as well as counseling techniques which are often badly lacking in the current training curriculum of medical students and residents. The Euteach training program (www.euteach.com) was developed to set quality standards for adolescent health care, public health, advocacy and policy making as applied to young adolescents

DESCRIPTION: An interdisciplinary group of ~15 European experts from different disciplines & background met 1-2 times a year since 1998 and progressively built a series of training modules covering topics related to adolescent medicine and health. Moreover, they have set-up a yearly one week summer school whose structure and content is aligned with the Euteach website.

LESSONS LEARNED: Over the years, up to 26 training modules have been developed and are both freely accessible and regularly updated. They cover both clinical and public health topics. The website also provides a set of references as well as a pedagogical support, with slides, videos and assessment tools. A total of 13 summer training sessions of 5 days duration have taken place, with a usual international audience of 20-25 clinicians and public health stakeholders; several of them have in-between set up their own adolescent health program or institution. Regional Euteach training sessions have been organized

in Eastern Europe, Africa and Asia, under the auspices of WHO, UNICEF, UNFPA or ministries of health.

CONCLUSIONS/NEXT STEPS: Euteach represents and provides an example of an effective strategy to upgrade the skills of the health care workforce and thus contributes to improve the health of adolescents through better health care and public health interventions.

IAAH170297

Situational factors that influence utilization of health services by adolescents and young adults in rural South Africa

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BACKGROUND: Health seeking behaviour and service utilization is influenced by an adolescent's personal attributes, community norms and beliefs, and service accessibility and acceptability. Understanding the influence of these factors is vital for the successful development and implementation of acceptable services and public health interventions within these communities. The aim of this formative research was to explore current health service demand and provision for young people (YP, 10-24 yrs.) in rural KwaZulu-Natal and to identify potential areas for service improvement.

METHODS: Health service utilization, and the factors influencing this behaviour, were examined in two communities in the Hlabisa sub-district of KwaZulu-Natal, South Africa. We report findings from one community where we conducted four participatory mapping group discussions and 20 individual interviews. In-depth interviews were conducted with healthcare providers (2), YP (3), teachers (2), senior members of the community (7), parents (2), and exit interviews with YP leaving a clinic (4). The University of KwaZulu-Natal Biomedical Research Ethics Committee (BREC) approved the study. Written informed consent/assent was obtained from all study participants prior to participation and parental/guardian consent was obtained for participants aged <18 years.

RESULTS: YP reported that their interaction with and the attitudes of healthcare professionals was one of the largest barriers to accessing health services. In addition, they prioritise education and employment as a means to improve their economic situation rather than health concerns which impact on accessibility. YP cannot afford to travel long distances to clinics, and clinic opening times conflict with school attendance times.

CONCLUSIONS/NEXT STEPS: It is essential to increase the frequency and extent of youth friendly health service training for health providers to improve their knowledge about adolescence and communication skills. It is also imperative that policies are well implemented in rural areas such that YP are able to have priority during school times whether through dedicated youth clinics or promoting acceptance of queue-jumping for school attending youth. A young person's health is often low on their list of priorities/concerns and multi-component packages, which address the socio-economic needs of YP, may motivate YP to prioritise their health.

IAAH170298

What is the landscape of palliative care for Adolescents and Young Adults in Rural KwaZulu Natal, South Africa?

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BACKGROUND: There is clear recognition of the unmet palliative care needs of adolescents and young adults (AYA) with progressive, incurable conditions such as HIV/AIDS and cancer in developing countries. The still increasing HIV infection rate and high AIDS-related deaths among adolescents beg the question of how these young people are cared for. Children are surviving into adolescence and need specialised and specific attention due to their transitional needs. The aim of this formative research was to scope and evaluate the nature and provision of palliative care for AYA (aged 13-24 years) with cancer and/or HIV/AIDS.

METHODS: Service provision and care pathways were examined through individual interviews with 21 healthcare professionals looking after AYA with

cancer or HIV. Process mapping was used to investigate where in the care pathway each of the HCPs was involved in the care of the young person and also the referral pathways. The University of KwaZulu-Natal Biomedical Research Ethics Committee (BREC) approved the study. Written informed consent was obtained from all study participants prior to participation.

RESULTS: HCPs reported that young people from the age of 12 years are referred to adult services which were overcrowded and already overburdened. Being in an adult ward was described as terrifying for most young people. There is also still the perception even among health care professionals that palliative care is only for the dying patient which can delay the benefits that young people may receive. As AYA still want to be actively involved in life, a community approach to palliative care was suggested with a need for nurses to be able to provide pain relief such as opioids.

CONCLUSIONS/NEXT STEPS: It is essential for both health care professionals and the general public's awareness and understanding of palliative care to be improved. Age appropriate care is needed for AYA who may not have developed the ability to navigate the healthcare system and may be overwhelmed by having a life threatening illness at such a pivotal life stage. There may be benefit in training nurses to prescribe much needed pain medication at community level to improve access and limit tertiary hospital visits.

IAAH170303

Assessing adolescent and youth friendly health services in Sri Lanka

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BACKGROUND: In 2016, the revised Sri Lankan National Adolescent and Youth Friendly Health Services Standards (AYFHS), were developed after reviewing the decade-old 2006 Standards against the Global AYFHS Standards of 2014.

DESCRIPTION: This cross-sectional study in 3/9 Sri Lankan provinces assessed the Quality and Coverage of the 2016 Sri Lankan AYFHS Standards. Assessment tools from WHO were adapted for interviews in one facility per province, (with the Facility Manager, Health Care Provider, Support Staff and four Adolescent Clients) and completion of an Observation check-list. A Coverage questionnaire was applied to twenty adolescents per school in the vicinity, with males and females below and above 15 years of age, equally represented. Percentage scores for each of the eight standards and coverage of AYFHS were calculated.

LESSONS LEARNED: Facility Quality assessments (categorised according to 2014 Global AFHS Standards): Standard 1 (health empowerment of young persons), scored only 35.6% while related Standard 6, for Community Support, scored 35.4%, showing that both "need major improvement". Standard 7, scoring 42.9% on Young persons' Participation, and Standard 8 scoring 56.8% for ensuring Equity and Non-Discrimination, showed internally consistent lower scores, further explaining Standard 1's poor performance. The remaining 4 Standards representing "traditional" features of any MCH system performed better, scoring between 60-68% and "need minor improvement". Thus, Standards 2,3, 4 and 5 had respective scores 64.9% (AYFHS Centre), 67.6%, (service providers and support staff), 63.5%, (service package) and 62.8%, (information system and quality Improvement). Coverage assessments in School: • Awareness of available health services in their locality: 82.5% • Utilisation of any health services in the past year: 98% • Awareness of AYFHS: 23% • Awareness of a neighbouring facility providing AYFHS: 23%

CONCLUSIONS/NEXT STEPS: These Quality and Coverage assessments as a baseline to guide future implementation, showed: • systems were not implemented to ensure knowledgeable young persons regarding their health and where/when to obtain related services. • Young persons insufficiently participated in AYFHS delivery and were treated inequitably when they used AYFHS. • Consistent with these poor results, communities were not supportive of AYFHS • Young persons in neighbouring schools were not aware of AYFHS services, though they had all used health services in the past year.

IAAH170308

Adolescents as partners in care: their preferences and experiences regarding inpatient services in a tertiary level hospital in South India.

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BACKGROUND: Adolescent friendly services improves outcome of illness among teenaged patients. India has the largest population of adolescents in the world, from diverse economic and socio-cultural backgrounds. In a tertiary care hospital in this country, expectations of adolescents from the health care system and their actual experiences are unique because of this diversity. There is limited research on what adolescents living in India consider as “friendly health care services”. Health care professionals(HCP) need to understand adolescent preferences in order to customize care they provide in the hospital setting. Nurses spend about 8-9 hours a day with patients in this hospital. Hence this study was designed to inform nursing staff in particular and all HCP about this important area of ‘adolescent friendliness’.

METHODS: A self-administered questionnaire with a 3-point likert scale was used. Questions included aspects of care like inpatient settings, privacy, respect, participation in care, information provided, caring behaviors and leisure activities. The questionnaire was administered to patients aged 13-19 years who had been admitted for at least 3 days in the last 1-year period. Convenient sampling was used and patients were recruited based on inclusion and exclusion criteria. Sample size was calculated as 60 based on a pilot study conducted in the same settings as described above. Questionnaires were available in 3 regional languages and English.

RESULTS: Mean age was 15.3, 60% were boys and 52% were chronically ill. Aspects of care that were considered important by the participants included trustworthiness(mean of 2.75), medical expertise(2.73), honesty(2.72), respectfulness(2.63), punctuality(2.60), providing information(2.48) and approachability(2.41). Perceived gap between preferences and experiences was noted in privacy provided(p<.001), ability to participate in care(p<.05), access to information(p<.001) and availability of leisure activities(p<.001). Chronically ill adolescents reported a greater preference for participation in care(P<0.001) and wanted more leisure activities(P<.001) in the hospital.

CONCLUSIONS/NEXT STEPS: Adolescent patients rated interpersonal aspects of care as most important. Younger adolescents had difficulty understanding the questionnaire. Health care professionals including hospital administrators and care givers need training in adolescent-friendly services. Efficient and adolescent friendly management will make health care more acceptable to adolescents and result in better outcome of illness.

IAAH170311

Resources needed to scale-up national adolescent health programmes: experiences from field-testing the adolescent health module of the OneHealth Tool

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¹WHO

BACKGROUND: Effective implementation of adolescent health programmes and interventions requires information on the budgetary implications. To date, efforts to estimate costs for adolescent health programmes have been few and no costing tool exists to aid countries to systematically plan and budget for scale up. WHO and other UN agencies have developed the OneHealth Tool which is used at country level to inform planning processes and to project costs for national health plans and specific health programme strategies. To respond to country needs for including adolescents in integrated planning processes, WHO has supported the development of an adolescent health module in the OneHealth Tool (OHT-AH).

DESCRIPTION: An initial version of OHT-AH was designed around a set of evidence-based interventions and developed in 2016. Users are presented with a default set of recommended interventions with default inputs regarding the target population, the population in need, current coverage, and specific inputs required to deliver the intervention, such as medicines, supplies and health worker time. Users are able to edit defaults as needed. The OHT-AH module was field-tested in Uganda in November 2016, in Nepal and Ghana in April 2017.

LESSONS LEARNED: The AH-OHT module supports national adolescent health programmes to develop costed plans. The costing exercise helps to

prioritize and can bring various stakeholders with interest in the adolescent population around the table. The involvement of consultants with in depth knowledge of OHT is essential to successfully carry out the costing. The integration of an adolescent health module within the OHT – a tool which has to date been used in more than 40 countries – can help to integrated adolescent health planning processes within broader health sector plans.

CONCLUSIONS/NEXT STEPS: The AH-OHT module was finalized after the field-tests and capacity building of consultants through webinars on the AH module are planned in various regions.

IAAH170320

A Cross Sectional Study to Assess Quality of Services to Adolescents Hospitalized in Pediatrics Ward and in Adult Wards in a Tertiary Care Hospital

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BACKGROUND: Adolescents are hospitalized in wards for children or for adults when exclusive indoor services are not available for them. We aimed to assess quality of care of hospitalized adolescents and to find problems faced by them. This will further guide us to modify the hospital environment and policies to make it more adolescent friendly. The hospital administrators and clinicians can use this information for improving the quality of care in their hospitals.

METHODS: This observational cross-sectional study included adolescents (and parents) hospitalized in Paediatrics ward and in adult wards of LHMC New Delhi India. Quality of care was assessed by Pyramid questionnaire and through focussed group discussion (FGD) with adolescents and their parents. Scores in various domains were compared using t-test.

RESULTS: We included 30 adolescents (and parents) each from Paediatrics and Adult wards. Poorest scores were for medical treatment, staff attitude and staff work environment. Best scores were for routine information provided and accessibility. Scores were comparable in both children’s and adult hospitals. FGDs revealed general concerns about cleanliness, overcrowding and behaviour of support staff. Adolescents wanted better restrooms and bathrooms in both children’s as well as adult hospital but wanted more privacy in adult hospital. Adolescents wanted recreational facilities like television in indoor wards. Nearly half of them were satisfied with treatment.

CONCLUSIONS/NEXT STEPS: Study revealed issues related to cleanliness, overcrowding in both hospitals and privacy issues in hospital for adults. The findings underline the need of separate wards for adolescent patients.

IAAH170329

Effectiveness of mentoring for better service delivery among health providers towards “Continuum of Care” focusing on pre-conception care for young married couples in rural India

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BACKGROUND: Preconception care (PCC) is effective strategy to reduce maternal and infant mortality, as part of Continuum of Care (CoC), for holistic care before, during and after pregnancy. This study assesses the effectiveness of mentoring for health service providers on CoC package with a focus to PCC for Young Married Women (YMW 15-24yrs).

METHODS: Four districts, two each from Uttar Pradesh and Rajasthan were selected on the bases of maternal and child health indicators. The intervention approach involved: training and capacity building followed by regular mentoring and supportive supervision of health service providers and advocacy to mainstreaming CoC with a focus to PCC. Training was provided to 230 medical officers, 378 master trainers and 7800 frontline health workers (ASHA, ANM & AWW). Post training, regular mentoring was provided to 200 doctors who were attending OPD, 200 ANMs & 200 ASHA based on their coverage. Mentoring was carried out through a semi-structured questionnaire for health functionaries capturing issues related to components of PCC: family planning, behavioural factors, medical conditions, genetic disorders and infectious diseases. The findings presented here pertains to the MIS data collected quarterly during January 2015 to December 2016.

RESULTS: Initial practice on CoC and PCC among doctors (29%), ANM (30%) and ASHA (34%) was low. Regular mentoring resulted in gradual increase of PCC practices among doctors (56%), ANMs (87%) and ASHAs (77%). The other PCC components were also improved significantly such as listing of YMW increased (40% vs.70%), counselling of young married couple (29% vs.68%), screening of pre-existing disease (34% vs. 57%) showed upward trend among ASHAs. Information from YMW was collected for client's perspective on PCC services provided by health system. As per YMW, there was increase in advises for testing of anaemia (50% vs.70%), diabetes (35% vs.51%), hypertension (38% vs.55%) and counselling on contraceptive use (40% vs.67 %).

CONCLUSIONS/NEXT STEPS: Trainings followed by quarterly mentoring of health service providers suggests for better coverage of PCC and CoC as a whole, especially in the context of YMW in rural areas. Clubbing it with advocacy at different strata of Government health system is a step forward for mainstreaming CoC and PCC in order to reduce the maternal mortality and infant mortality rate.

IAAH170334

Is pertussis a problem in the community: a prospective, cross sectional, seroepidemiological survey among adolescents visiting a tertiary care centre

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BACKGROUND: Whooping cough caused by *Bordetella pertussis*, is a vaccine preventable disease (VPD). Infection among younger children causes significant morbidity and mortality. In 2015, WHO reported 1,42,512 cases of pertussis from developing nations and 89,000 deaths; 29,813 cases were from S E Asia and 29,206 from India. Waning immunity during adolescence results in a resurgence of infection and a reservoir of infection in the community. Pertussis vaccines as recommended by vaccine advisory boards, are available in India, but are expensive and accessible to a few. In India, till date there is no serosurveillance study on pertussis related burden of disease among adolescents. This pilot study was carried out to assess prevalence of infection and anti-pertussis antibody titres among adolescents. We hope that the findings will prove an impetus to develop cheaper vaccines to increase vaccine coverage among adolescents in India

METHODS: A prospective, cross sectional study was conducted in a tertiary care centre in south India from August 2013 to March 2016. A total of 233 healthy adolescents aged 10-18 years were recruited. Participants had not received any pertussis vaccine in the past year. Demographic details, relevant medical history and a serum sample were collected from all participants. Anti-Pertussis toxin IgG was estimated using Enzyme Linked Immunosorbent Assay. Concentration of anti-Pertussis toxin IgG >62.5IU/mL indicated infection in the past one year and >125 IU/mL indicated infection in the last six months.

RESULTS: The median anti-Pertussis toxin IgG value in the participants was 2.93 IU/mL with interquartile range of 0-13.5 IU/mL. Of the 233 subjects, 217 samples (93.13%) had anti-PT levels < 62.5 IU/mL. Eight participants (3.43%) had serological evidence of infection in the past year and another 8(3.43%) had evidence of infection in the past 6 months.

CONCLUSIONS/NEXT STEPS: One in 14 adolescents (6.8%), have evidence of pertussis infection in the recent past. This population is the reservoir of infection for younger children living in the community. Therefore there is an urgent need to stringently adhere to the policies and recommendations by vaccine advisory boards to increase pertussis vaccine coverage among adolescents in India.

IAAH170383

Strategic Intervention leads to social change- breaking stereotypes

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BACKGROUND: Child marriage in India is common and as per a WHO report, we testified the highest number of unregistered children under age five between the year 2000 - 2012 and the second-highest number of child marriages. The district of Ganjam as per the Annual Health Survey (2012) is one, where 38% of the married women between the ages of 20-24 had reported to have been married before they were 18 years of age. It also has acute migration among young boys and parents of girls continue to be trapped in the web of persistent

poverty and social recommendation which makes them marry their girls early.

DESCRIPTION: Jamuna a fourteen year old, class 9th student pursuing her studies had participated in few discussions on comprehensive sexuality conducted by VHAI. A key take away for her was the impact of early marriage on a young girl. A lesson she remembered, when her parents discussed her marriage plans. Her parents had arranged her wedding to a 25 year old mason from her village. She was not keen on the marriage and approached the Anganwadi worker, who then informed the ICDS supervisor. The sensitized health service providers informed the VHAI team who then took it to ICDS. A team then consisting of Child Development Project Officer, District Child Protection Office, Block Education Officer, Child Line, Local police and VHAI visited the families of both Jamuna and her prospective groom. The discussion with the families were exhaustive and interactive, the counselling of families helped in reaching a mutual consensus.

LESSONS LEARNED: Both the sides of the family, finally agreed to postpone the wedding till the time Jamuna turned 18 years and had completed her education. The families were then made to sign an Undertaking at the police station. This was publicized in the media and the CDPO was appreciative of VHAI's prompt action in this matter.

CONCLUSIONS/NEXT STEPS: VHAI shall continue to work in Odisha on issues of adolescent health, empowerment of girls and women and issues pertaining to child marriage.

IAAH170407

Adolescent Health Status is not just the Responsibility of the Health Sector

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BACKGROUND: Adolescent Health Program is a program of priorities for improving the health status of adolescents. Networking program is an effort for the successful implementation of the program. Health sector stakeholders are typically used as program leader relation to health status. Whereas according to WHO definition of Health is wellbeing condition which is affected by many factors. Thus the necessary cooperation, collaboration of various sectors to achieve the degree of health of adolescents, multisectoral stakeholder involvement is critical in supporting the successful implementation of a policy.

METHODS: This study examines the perceptions of stakeholders from various sectors related to the achievement of the health status of adolescents. Descriptive study using qualitative methods, namely 8 in-depth interviews with stakeholders (multi-sectoral) and 2 times FGD (health workers and youth).

RESULTS: The results showed that the stakeholders involved in the achievement of the health status of adolescents consists of the health sector, education, religion, arts and sports, regional planner, PKK (Family Welfare Education), social, and demographic. All stakeholders involved apparently not all of them have the perception that support the achievement of the health status of adolescents in fact there are still overlapping activities. Only the stakeholders of the health sector which has been active perception and involvement in the implementation of adolescent health program. Stakeholders who have a weak influence and involvement is passive because the perception of adolescent health status attainment is the responsibility of the stakeholders in health, not to mention because of limited resources and do not know and are aware of the health of adolescents is a state asset to be prioritized. Health workers and young people as program implementers only engage in activities that have gained the support of stakeholders in the health field.

CONCLUSIONS/NEXT STEPS: The health status of adolescents is the responsibility of the country where the need for strengthening the commitment of the various stakeholders to shape the attitudes, power, attitude that supports collaboration, coordination, forming a synergy in planning, implementation and monitoring and evaluation of the adolescent health program.

IAAH170421

Adolescent Health Status is not just the Responsibility of the Health Sector

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IAAH170453

Social Impact Bonds: Innovative financing for adolescent health

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¹Y Labs, ²Harvard T. H. Chan School of Public Health

BACKGROUND: A Social Impact Bond (SIB) is an innovative financing mechanism in which governments or commissioners enter into agreements with social service providers, such as social enterprises or non-profit organizations, and investors to pay for the delivery of pre-defined social outcomes. SIBs have been successfully implemented in several countries to finance youth-targeted interventions. Given their potential for catalyzing spending in adolescent health this landscape review provides an overview of SIBs as well as their benefits and potential pitfalls.

DESCRIPTION: Among the 42 SIBs included in this study are four broad social issue areas in SIBs to date: education, employment, criminal justice, and social welfare. While many of the first SIBs were in the social issue area of criminal justice (4), other areas have since gained traction. The social welfare (18) and employment (15) have come to represent the largest social issue areas in the SIB market in terms of numbers of deals. Social welfare includes a broad range of issues youth homelessness to teen pregnancy.

LESSONS LEARNED: So far, SIBs have focused on a handful of sectors and problems with certain characteristics. Impact bonds have the potential to contribute to adolescent health though thus far the deals have been complex and lengthy. There is significant variation in the deals with respect to the structure, mechanics, and stakeholder roles. Across the 42 SIBs we examined, four factors came out as key to getting a deal together: measurable outcomes; evidence of intervention impact; government support; and effective collaboration of stakeholders. Experimental or quasi-experimental evaluations were not always necessary for determining repayment. A key constraint for scaling SIBs for adolescent health is the lack of common outcome measures.

CONCLUSIONS/NEXT STEPS : Adolescent health is well-poised to leverage SIBs given the downstream social return in adulthood for relatively low levels of spending on prevention in adolescence. Governments, international and private finance organizations should develop standards for SIB outcomes to catalyze the growth of this field. Finally, the case for adolescent health investment should be made with rigorous cost-effectiveness data to demonstrate the potential savings to society for investing in adolescent health.

IAAH170462

Designing with youth: using human-centered design for AYSRH interventions to address provider bias toward youth and adolescents

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BACKGROUND: Disrespectful and judgmental attitudes and behaviors from providers often discourage youth and adolescents from accessing contraceptives, contributing to an unmet need; of the estimated 38 million sexually active adolescents (ages 15-19) in lower-income regions who do not want a child within the next two years, 60% have an unmet need for contraception. Provider bias is a complex and multidisciplinary problem requiring a non-traditional public health approach. There is a paucity of data and it is recommended that adolescents participate in the design and implementation of programs and policies that affect them. One option is using a human-centered design (HCD) approach to develop innovative and scalable solutions.

METHODS: Design research was conducted with providers, youth, and community stakeholders across three countries to gain insights into provider bias through interviews, observations, role playing, and participatory research activities. Because provider bias manifests differently across varying provider-client encounters, co-design workshops with youth and providers were conducted to help identify solutions to improve the quality of care young people receive. Through a collaborative synthesis and ideation process in partnership with youth and providers, insights from several rounds of data analysis were generated.

RESULTS: The design research yielded comprehensive insights from providers, and hypotheses on how their attitudes, behaviors, and community norms influence young women's experiences of care. These findings will aid the project team in generating viable solutions to: 1) engage with providers as individuals; 2) promote interactions between providers and young clients to increase empathy; and 3) to engage at the social or structural level within a facility to explore the gaps between perceived and actual norms, attitudes, and behaviors among providers and young people.

CONCLUSIONS/NEXT STEPS: HCD is a rapid and robust participatory approach to generate, test, and improve ideas before investing in implementations and evaluations at a larger scale. Solutions are being developed with direct input from youth and adolescents across the three countries. The contextualized and adaptive approach enhances the scalability of the solutions.

IAAH170469

Strengthening the regional capacity for development, implementation and monitoring of equity-based policies and programs in Latin America and the Caribbean

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¹Pan American Health Organization

BACKGROUND: One of the cornerstones of the new global health and development agenda as expressed in the Sustainable Development Goals (SDGs) and the Global Strategy for Women's, Children's and Adolescents' health is to ensure that no one is left behind, aiming to reach all, starting with the most vulnerable and underserved. This emphasis on equity poses a challenge for the LAC region, which is often referred to as one of the most inequitable regions of the world, but also provides an opportunity for the Region to make rapid progress towards the global targets, if pro-equity policies and programs are developed and effectively implemented.

DESCRIPTION: In order to support the Region in the development, implementation and monitoring of equity-based policies and programs, a regional multi-agency mechanism was established which includes UN partners, World Bank, USAID and IDB. Key collaborative actions undertaken include capacity building of national epidemiologists and program managers in the implementation of quantitative and program-level inequity analysis, support to countries for equity-based analysis of maternal, child and youth health. Currently at least 10 countries have developed country profiles summarizing social inequalities in maternal, child and youth health, and dissemination of guidance, tools and good practices related to the design of pro-equity policies and programs.

LESSONS LEARNED: Health inequality information is essential to inform the development of targeted interventions to reach the most vulnerable and

disadvantaged sub-groups with interventions. However, currently equity-based analysis of data and programs is not routinely done in most countries. This type of analysis requires specific competencies and efforts to access and in some cases generate the data on the social stratifiers such as wealth, education and ethnicity on national and sub-national levels, to facilitate health inequality analysis.

CONCLUSIONS/NEXT STEPS: Strengthening the technical capacity of countries to conduct quantitative and program-level health inequality analysis will be essential to promote and support the development, implementation and monitoring of equity-based policies and programs and achieve the Sustainable Development Goals.

IAAH170510

Leveraging District Committee for Adolescents Health for improved convergence among major stake holders in Adolescent health

Anupam Verma¹, Gunjan Taneja¹, Surajit Dey¹, Rishabh Rana¹, Sourav Dastidar¹, Sandeep Rai¹, Rajni Wadhwa¹, Jaya Prasada², D.P. Taneja¹, Jaya Mohanty¹, Amit Shah³

¹Vridhhi Scaling up RMNCH+A intervention Supported by USAID, ²Jharkhand Health Services, ³USAID

BACKGROUND: With nearly 21% of its population as adolescents, Jharkhand, has a high burden of early marriage, teen aged pregnancy, and anemia. The VRIDHHI project supported by USAID identified the needs of the state to provide technical assistance in improving the state of adolescent health in Jharkhand. Considering the convergence as unique model for integrating and harmonizing efforts of major stake holders in Adolescent health project strengthen the District committee for Adolescent Health (DCAH) to improve coordination and initiate appropriate actions

DESCRIPTION: The project intervenes at two levels - firstly, at the health systems level by leveraging institutional mechanisms like State & District Committee for Adolescent Health (SCAH & DCAH respectively) and secondly - at the facility and community level through regular supportive supervision visits in 7 High priority districts of Jharkhand. These forums leveraged opportunity in strengthening inter-departmental coordination and regularize communication at various convergence points. Gradually these efforts create an environment that Adolescents health are the joint responsibility of Health, Education, Social Welfare and Ministry of Youth affairs & sports. Supportive supervision and mentoring visits by government health officials and project team helps in identifying operational gaps related to supply and training & insured functionality of Yuwa Maitri Kendra (Adolescent friendly health Clinics).

LESSONS LEARNED: There are lack in adequate ownership among lead and coordinating departments and poor inter and intra sectoral convergence. DCAH should be used to address the compliance of all the programs implemented from Health, Social Welfare and Education and other stake holders. Inter and intra departmental convergence is the driver to increase the uptake of services. School and Aganwadi centers are having primary influence on Adolescent and should be strengthen as first service delivery points.

CONCLUSIONS/NEXT STEPS: All the require resources are provisioned with various stakeholders one need to integrate through convergence. State should integrate all the programs of various departments at a single page. There are wide scope of introducing technique based interventions to ensure accessibility of information not only to Adolescent but also to gate keeper to create a supportive environment

IAAH170554

Roll Out & Implementation of Rashtriya Kishore Swasthya Karyakram (RKSK) in the State of Uttarakhand – The Journey, Lessons Learnt & Way Forward

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¹VRIDHHI: Scaling up RMNCH+A Interventions Project, supported by USAID, ²NHM-UK Health & Family Welfare Society, ³USAID India

BACKGROUND: Uttarakhand had been implementing the Adolescent Reproductive & Sexual Health (ARSH) program in the years prior to 2014, when MOH&FW-GOI launched the broad based RKSK program.

DESCRIPTION: At the onset, State was faced with the task of smooth transition from the old program which only focused on Adolescents Reproductive and Sexual Health issues, to the new Adolescent health Program with six distinct thematic areas. The state took the bold decision to directly implement the RKSK program in six identified districts. A series of consultation meetings were held, which were technically supported by State RMNCH+A Unit (SRU). These meetings led to the development of roll out plan and checklist for introducing the RKSK program in Uttarakhand. SRU Teams continue to work with the RKSK Program Teams for strengthening program implementation. Some key activities have been listed below- 1) Standardize Recording & Reporting for timely reporting from field Level. 2) Formulate WhatsApp Group for quick and regular communication at all levels. 3) Strengthen AFHCs through Supportive Supervision. 4) Convergence with RBSK teams to support program implementation. 5) Develop Planning Tools for introducing Community Based RKSK Interventions. 6) Facilitate Innovation Workshop that is leading to AHD being organized at School Level. 7) Need for procuring projectors for displaying uniform AH messages at school and community level.

LESSONS LEARNED: These above planning process ensured that the State goal to roll-out RKSK program in the identified Districts is achieved quickly and efficiently. With time Uttarakhand has become one of the few States that has successfully rolled-out RKSK Strategy in entirety. Currently both the facility and community based approaches are being implemented at field level by 65 RKSK Counselors, 61 AFHC's, 8800 Peer Educators in the 6 selected RKSK Districts.

CONCLUSIONS/NEXT STEPS: In spite of the progress achieved, challenges do exist especially related to Program Reporting at different levels. Also there is need from Branding AFHC & optimize the benefits of Quarterly AHD's. Moving forward the State plans to address these challenge's with due support from the SRU.

IAAH170562

Step-up with Me: Towards comprehensive programming for adolescent girls' empowerment and employability

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BACKGROUND: Life-skills programs for adolescent girls in India often tend to be girl-centric. Even when the said programs incorporate stakeholders from the girls' lives, they do so in an auxiliary manner whereby the onus of measuring the success of the program is often on the girl. Programs that aim at building a girl's resourcefulness, often do so without investing in her transformative journey from building her self- identity and efficacy to resourcefulness.

DESCRIPTION: The learnings are drawn from the implementation of pilot program 'Planning Ahead for Girls' Empowerment and Employability' aimed at building life and employability skills amongst adolescent girls (aged 15-17 years) from low-income families studying in 4 government schools in Delhi, India. The two year program comprised of two components: Empowerment and Employability. The Empowerment component focused on building girls' understanding of gender & patriarchy and develop their self-efficacy skills. The Employability component included skill-building as well as interaction with employment partners through school-based career events, during which information was provided to advance the girls' understanding of and interest in various career possibilities

LESSONS LEARNED: Parent engagement is the first step towards encouraging different realities for girls, particularly to break gender stereotypes and establish positive communication. Teachers also play a strong role in motivating girls towards studying after school and creating a safe and friendly classroom environment. It is also important to engage with boys to allow them a platform to understand gender roles, patriarchy violence, and be more gender equitable. A similar such engagement is also required with community members, as they have a large influence on girls' futures. Additionally, a comprehensive gender integrated curriculum focusing on adolescence health and well being to build their self awareness, efficacy and resourcefulness is the key for girls to be decision makers.

CONCLUSIONS/NEXT STEPS: It is therefore important that programming for adolescent girls focuses not only on building their self-efficacy and skills, but also fundamentally shifting the prevailing norms – in the household, community and workplace – that hinder girls' success An inclusive eco system approach to create an enabling and empowering environment for girls is as crucial as focusing on the girls' efficacy, empowerment and employability.

IAAH170583

Profile of cases and challenges in a newly developed adolescent health clinic: A preliminary report of adolescent health clinic Cipto Mangunkusumo Hospital, Jakarta

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BACKGROUND: Indonesia has 9000 primary health services, but only 2500 who have adolescent friendly health services. Moreover, comprehensive adolescent services in hospitals are not yet well developed. The government is still working on developing guidelines for the services at secondary and tertiary health care levels. Cipto Mangunkusumo Hospital (CMH), the nation's top tertiary referral hospital, has pediatric department with 14 sub-specialties, which just developed adolescent clinics in March 2017 to provide comprehensive services such as mental and psychosocial health screening using standard instruments, especially to those with chronic diseases. There is still a lack of data to support the development of this new clinic. As such, several studies have been conducted to develop evidence-base for hospital-based adolescent clinics. Objectives. To provide data to support development of adolescent clinic in pediatric department, CMH.

METHODS: This is a two-step cross sectional study using secondary data from medical records of out-patient subspecialty clinics, at pediatric department, CMH. Retrospective data such as age, gender, group of diagnoses, were collected from January to December 2016. Following the first month of operation, data was collected from the medical records of adolescent health clinic from 1st to end of March 2017.

RESULTS: In 2016, total number of adolescent patient in out-patient pediatric clinic was 18,483 patients. Subspecialty clinics which contributed high number of adolescent patients respectively from highest were haemato-oncology (47.9%), nephrology (15.7%), neurology (10.5%), followed by general pediatric, endocrinology and allergy. Most of adolescent patients have non-communicable diseases, need long-term therapy, moreover, their mental health needs to be evaluated periodically. Data from the first month of operation showed that 33 patients from various subspecialties have been referred for mental health screening, of which two were clinically significant. The mental health screening, however, is time consuming and the clinic is currently still attached to the developmental clinic. Within the first month, referred cases included kidney, learning disability, immunization, diabetes mellitus, short stature, heart disease and others.

CONCLUSIONS/NEXT STEPS: Adolescent health clinics can play a pivotal role in supporting a comprehensive service for patients, especially those with chronic and non-communicable diseases. Further evaluation and monitoring are needed to develop a better adolescent health service.

IAAH170611

Youth's perspective on strengthening the health system for provision of adolescent and youth friendly health care in Sri Lanka

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BACKGROUND: Sri Lanka is having nearly 17% of youth of its population of 20.4 million. Country is the process of strengthening adolescent and youth friendly health services. Youth participation on this process is identified as a major need

DESCRIPTION: Qualitative assessment was conducted on finding out perception of youth on available health services for young persons and suggestions of the further improvement of the available services. Four focus group discussions (FDGs) were conducted among youth of 15-24 years from Western Province of Sri Lanka in 2015-2016 at community. Each group consisted of 10-12 youths. Informed verbal-consent obtained prior to the discussions. Steps were taken to ensure privacy and confidentiality. Notes were taken down. Meetings were audio-recorded, transcribed and analysed by identifying themes and categories according to concept of constant comparisons

LESSONS LEARNED: All youth had a firm realization on the need of specific, more youth friendly set up in the service provision for them. Main barriers identified by them were out look of place, suspicion of the maintenance of the privacy and confidentiality, lack of awareness on the available services and anticipation of lack of friendly reception. Majority wanted health services away

from the crowded out patient department of the hospitals and to have health care services at the school, training or working places. All preferred to have health services at a center with certain recreational and carrier guidance facilities. Improving outreach services was suggested. Need of a mass media campaign with youth involvement was highlighted. Preferred service provider was a medical doctor. Need of an interactive web site, availability of consultation of the doctor over phone for clarification of their health concerns and a hotline were pointed-out.

CONCLUSIONS/NEXT STEPS: Present assessment identified the lack of awareness of existing adolescent youth friendly health service among youth as a major concern. In addition to strengthening the quality of youth friendly clinic service center, establishing a hot line and increasing interactive service provision through internet were recommended as way forward.

IAAH170613

Youth's perceptions of policy-level factors and their drinking patterns: Data from Lebanon

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BACKGROUND: In Lebanon, more youth are drinking alcohol, starting at a younger age, and a harm reduction policy remains absent.

METHODS: In 2016, 1,155 university students participated in a survey (50.4% males, mean age of 21).

RESULTS: Half (51%) had had a drink in the past year, of whom 65% did not fulfil criteria for an alcohol-use disorder, 21% were classified as mild, 7% as moderate, and an additional 7% as having severe problems. About 88% felt alcohol was very easy to obtain; 77% have never been asked to show their ID when purchasing/being served alcohol. Only 34% said that alcoholic drinks were unaffordable. Majority had been exposed to alcohol advertising/marketing in past year, and about two thirds had heard a "don't drink and drive message". Only 8% of the past year drinkers who drank and drove, or rode with someone who did, were pulled over for random breath testing. Perceiving alcohol as difficult to obtain or as unaffordable reduced odds of past year drinking [OR: 0.47 (0.39, 0.55); and 0.59 (0.46, 0.78), respectively]. Students who reported seeing or hearing "don't drink and drive messages" on TV, radio, billboards, social media, or text messages were also less likely to [0.52 (0.39, 0.69)] drink in the past year. Further analyses will use path analysis to examine the direct and indirect influences of policy-relevant factors and psycho-social mediators on past year binge drinking and alcohol use disorders.

CONCLUSIONS/NEXT STEPS: The findings stress the need to initiate dialogue and push forward an effective national policy for alcohol harm reduction.

IAAH170618

Programming adolescent health in Sub-Saharan Africa: From research to policy and field implementation to improve adolescent health Experience in Sénégal (West Africa)

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BACKGROUND: Adolescent health is still in the top health priorities in many sub-Saharan Africa. In 1996, World Health Organization, Department of Reproductive Health and Research had launched an operation research project to improve adolescent health in five West African Countries. Sénégal was part of the selected countries. Thus a pilot study was performed in Sénégal. Then after, in 1999, Population Council, Frontiers in Reproductive Health in its multicenter operation research adolescent health project had selected Sénégal. The purpose of this project was to test feasible strategies to improve adolescent health services.

METHODS: The methodology before and after, here and there was applied. Three regions were selected, two for field implementation and one control. Baseline study was done to collect data and analysis. The interventions were performed in the community with a school component as well as in the health facilities. An endline survey was done at the end of the project.

RESULTS: Capacity strengthening was performed for training trainers, health professionals, peer-educators and for the target group. Competency-based

curricula were done targeting adolescents health issues, values, strategies and solutions. Field implementation of sustainable adolescent care provision was performed to make public health structures friendly for adolescents and to increase adolescents' use of health services. This research has led to policy impact within the Ministry of Health. National strategy was set up for adolescent health (10-19 years old) expended to youth (20-24 years) for multisector interventions in the country.

CONCLUSIONS/NEXT STEPS: The operation research set up in Sénégal as led to feasible and sustainable approaches to improve adolescent health within the country.

IAAH170635

Adolescent girls as active participants in intervention on Sexual Reproductive Health: Engaging girls through social mapping in planning and designing a community intervention, in rural Rajasthan

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BACKGROUND: Planning a community based intervention by active engagement of adolescent girls is likely to result in better process and space for girls to assert their agency. This paper aims to add from the Pankh program- to ensure safe spaces and SRH for adolescent girls in Rajasthan to highlight the process of how adolescent girls were not just passive recipient but active participants of the program.

METHODS: This paper will use findings based on qualitative data collected by ICRW from different community groups during the social mapping data from across 60 intervention villages in Dholpur district of rural Rajasthan. The social mapping included a series of community dialogues with community members, stakeholders, women groups and married and unmarried adolescent girls to map out the spatial reasons, and related norms, traditions and culture that limit of access of community spaces for girls, and suggest collective strategies for solutions around the same.

RESULTS: It was found that the social norms around honour of community and family, restrictions on mobility and negative beliefs around value of the girl child in the family and community were common reasons for vulnerability of all girls. In terms of early marriage, the vulnerability of the girls born subsequently after the eldest daughter in a family was higher due to the tradition of getting two or more daughters married in one event, as a cost saving measure. Majority girls were aware of causes for their marginalization and they expressed need of knowledge and understanding on menstruation, contraception, understanding marriage and preparedness to empower themselves to access to assert their rights around health, education and decisions of marriage.

CONCLUSIONS/NEXT STEPS: The girls identified that their collective imagination of a 'mental and physical safe space' encompasses need for knowledge on health, education and better relationships with families to negotiate on issues age of marriage and choice of partner. These findings guided the process of designing the content of Pankh program, including issues for the group education activities (GEA), type of sport, strategy mobilise girls of different social groups and form groups, engaging men and boys, mothers' groups, and community campaigns.

IAAH170670

Adolescent and Reproductive Health Services in India: A Mixed Method Investigation

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BACKGROUND: India has the largest share of the adolescent population in the world, with one-fifth of its population belonging to the age group of 10-19 years. This represents a huge opportunity for transforming the social and economic fortune of India. Recently launched Rashtriya Kishor Swasthya Karyakram ensures holistic development of adolescents through preventive and curative services. The present study attempts to understand accessibility, availability, and utilization of adolescent health services by exploring perspectives of health practitioners and adolescents in India, with specific reference to Himachal Pradesh, Kerala, and Odisha.

METHODS: The study used an explanatory mixed-methods design that covers

283 facilities across three study states. The facility assessment survey at different healthcare levels was conducted and the findings were corroborated using in-depth interviews with adolescent healthcare practitioners and adolescents. Descriptive statistics were used to analyze quantitative dataset and an inductive analysis was performed using qualitative data analysis software Atlas-Ti.

RESULTS: Improvement in the utilization of services and adolescent knowledge was found. The study demonstrates that although health system has the primary responsibility of addressing adolescent issues, it has limitations in its coverage and generate demand for services. The secondary and tertiary level health facilities were better equipped to provide services to that of the primary level facilities, majorly due to limitations in institutional capacities and infrastructure. Access and availability of health care services were severely limited resulting in lower service utilization rates. Lack of accurate information, competing responsibilities, high workload, poor supportive supervision, inadequate supplies and poor awareness among adolescent and parents were the major barriers.

CONCLUSIONS/NEXT STEPS: Interventions should focus on providing psycho-socio counseling for adolescents, family members and peers, especially by engaging community. The introduction of mobile adolescent health clinics with a team of doctors and counselors can help increase awareness. Efforts should also an emphasis on making services adolescent friendly by ensuring privacy through the provision of separate space for males and females. An uninterrupted supply of quality medications should be ensured to increase service utilization rates. An integration with other departments and private partners should be promoted. Findings depict need for increasing visibility of the services and demands strong political commitment.

IAAH170671

Adolescent Health in Guatemala: Provider Perspectives

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BACKGROUND: Today's generation of adolescents is the largest in history, creating a major challenge for low and middle-income countries faced with the necessity of addressing their health care. Our objectives were to (1) assess gaps in adolescent medicine competencies in Guatemala and (2) examine the extent to which health care providers are trained, knowledgeable and feel comfortable with providing services to this growing population.

METHODS: This is a mixed-methods study with two parts: 1) survey link emailed to members of the Colegio de Medicos y Cirujanos, and 2) qualitative interviews. Descriptive statistics were used to report training in 36 adolescent medicine topics, current screening practices, and availability of educational opportunities. We used chi-square tests to examine response differences by provider characteristics (specialty, years of practice, geographic location, and work setting). Twenty additional providers participated in semi-structured interviews. Interviews were analyzed for emergent themes using principles of framework analysis.

RESULTS: 171 health care providers (ongoing recruitment) have completed the survey. 43% identified as pediatricians; the majority practice in a private hospital and/or clinic 64% in a metropolitan area 66%. Equal numbers had completed training either recently (27% within five years) or more than 20 years prior (also 27%). Behavioral health (e.g. school performance, substance use, mood disorders) and communication (e.g. obtaining consent, maintaining confidentiality) related topics were perceived as poorly covered during training. Despite adolescent health guidelines recommending screening for risk behaviors during annual health visits, few providers ask "all" or the "majority" of the time about violence at home 14%, substance use 14%, depression 15%, and sexual activity 29%. OB-GYNs screened more frequently for sexual activity (p<.001). Almost all providers 97% felt strongly about additional training in adolescent medicine. Elucidated themes included 1) Need for dedicated adolescent health services; 2) Limited knowledge of adolescent specific services, programs, resources and guidelines; and 3) Gaps in medical education and training.

CONCLUSIONS/NEXT STEPS: Few providers currently caring for adolescents in Guatemala feel that they have received adequate training. The majority are not screening for risk factors and behaviors strongly linked to morbidity and mortality. However, there is strong support for the creation of a credentialed fellowship program.

IAAH170710

Challenges in Promoting Adolescent Health in the Mena Region

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BACKGROUND: There has been recent growing Global interest in advancing adolescents' health, development and wellness. Many countries have implemented supportive policies and programs and achieved significant progress toward meeting the numerous challenges facing their adolescent population. Adolescents living in the developing countries constitute 85% of the global cohort of 1.2 billion adolescents. They are less privileged and more vulnerable. Yet, they don't always get the same care and attention. The 85 million adolescents living in the MENA region share similar barriers to obtaining quality healthcare interventions. Many countries in the region have not yet considered to include the needs and expectations of their teen population as a priority.

DESCRIPTION: The Arab Coalition for Adolescent Medicine (ACAM) was established in 2014 to guide efforts in Adolescent Medicine in our region. It now includes members from 15 Arab countries. One of the main goals of ACAM is to raise awareness and enhance actions to advance adolescents' health and wellbeing. Representative members of the Coalition are working to establish national platforms for advocacy and joint action. Members of ACAM have been probing ways to detect barriers to the provision of effective and acceptable adolescent healthcare services.

LESSONS LEARNED: The challenges that interfere with providing health promoting programs to adolescents in the MENA region and many other developing countries include lack of political commitment and understanding, inadequate recognition of the unique nature of the second decade of life, deficient human and material resources and lacking of services.

CONCLUSIONS/NEXT STEPS: We need your help !

IAAH170734

Adolescent health programme in Haryana

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BACKGROUND: Haryana is first State to launch Rashtriya Kishor Swasthya Karyakram- RKSK, a new Programme of MoHFW on 10th Feb 2014, initially in Ambala, Karnal, Panchkula, Yamunanagar and one block each of Mewat and Palwal, then extending to High Priority districts i.e. Bhiwani, Jind, Panipat, and 2 more blocks of Mewat & Palwal in June 2014. Six thematic areas are Nutrition, Sexual and Reproductive Health, Injuries and Violence (including GBV), Non-Communicable Diseases, Substance Misuse and Mental Health.

DESCRIPTION: The beneficiaries (10-19 years) are provided facility based Adolescent Friendly Health Services at Clinics named as Mitrata Clinics established at (9) District Hospitals, (9) SDHs, (40) CHCs, (137) PHCs of RKSK Districts and only at District Hospitals of 9 Non RKSK Districts i.e. Faridabad, Gurgaon, Kaithal, Kurukshetra, Jhajjar, Narnaul, Rewari, Sirsa, Sonapat by trained Doctors and counselors. Community level services include Peer Education (PE) approach implemented in selected villages wherein 4 Adolescents (1 boy, 1 girl from in- school and 1 boy, 1 girl from out of school) in age of 15-19 yrs on 1000 population are identified as PE and trained on adolescent health issues to generate awareness among adolescents of their village and make referrals to AFHCs. Further at community level, Adolescent Health Days are organized which includes General health checkup, provision of IFA, Albendazole, anti-spasmodic tablets and contraceptives for adolescents. To meet the challenge of high prevalence of anemia Weekly Iron and Folic Acid Supplementation (WIFS) is implemented in Government Schools & AWCs to cover Out of school girls of all 21 districts through supervised weekly ingestion of WIFS and bi-annual deworming.

LESSONS LEARNED: Intersectoral convergence is the cornerstone for Programme implementation. Parents, teachers, community, services providers have to join hands for spreading awareness on objectives and benefits of Programme which will help to enhance the demand for services.

CONCLUSIONS/NEXT STEPS: AH Programme is a step forward to achieve the health goals of State. More efforts will be laid to strengthen and extend it to all the 21 districts.

IAAH170773

Adolescents in humanitarian and fragile settings – The ‘Global Accelerated Action for the Health of Adolescents’ addresses national planning and implementation of adolescent health programmes in humanitarian and fragile settings

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BACKGROUND: There is an unprecedented opportunity to improve the health of adolescents and respond more effectively to their needs. The Global Strategy for Women's, Children's and Adolescent's Health identifies adolescents as being central to achieving the Sustainable Development Goals. The recently-released ‘Global Accelerated Action for the Health of Adolescents (AA-HA!)’ provides guidance as countries decide what to do for adolescent health and how to do it. The highest preventable adolescent mortality and morbidity rates occur in humanitarian and fragile settings (HFSs), including areas experiencing conflict, natural disasters, epidemics, famines and/or protracted socioeconomic and political instability.

DESCRIPTION: The AA-HA! guidance includes explicit attention to adolescents in HFSs, summarizes the burden of disease, effective interventions and programming approaches and provides real-world case studies. Key adolescent health concerns in HFSs include: malnutrition, inadequate care and treatment, violence, sexual and reproductive health (SRH) problems including HIV and other STIs, mental health disorders and limited access to clean water, sanitation and hygiene. The AA-HA! guidance provides a systematic approach for countries to address these issues within their programming.

LESSONS LEARNED: The AA-HA! guidance proposes evidence-based interventions for adolescents in HFSs, such as: • Assessing conditions and ensuring adequate adolescent food intake. • Ensuring core health services to support adolescents with disabilities. • Providing physical and psychosocial screening and support to former child soldiers and to survivors of sexual and/or gender-based violence. • Implementing an initial SRH service package, followed by a more comprehensive response. • Ensuring safe access to, use, and maintenance of toilets, materials and facilities for menstrual hygiene management, water and soap or ash for handwashing, the hygienic collection and storage of water for consumption and use, hygienic food storage and preparation, and efficient waste management. • Re-starting formal or informal education, promoting recreational activities, and engaging adolescents in concrete, purposeful, common-interest activities.

CONCLUSIONS/NEXT STEPS: WHO and UN partners are building regional and national capacity for the implementation of the AA-HA! guidance and developing programme support tools. The progress of Sudan, an early adopter country, will be closely documented and evaluated, and an AA-HA! workshop in the Eastern Mediterranean will focus on HFSs in the region.

IAAH170787

Adolescent health service delivery across villages of Punjab under Community action for health program

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¹MAMTA HIMC

BACKGROUND: Efforts are being made to deliver Adolescent health services equitable, available, and effective across India. The performance of these services is assessed for its responsiveness, efficiency and equity through structured platform of Village Health, sanitation, and nutrition committees under community action for health program (CAH).

METHODS: We collected data through group discussion among high school going and non-school going adolescent girls on services related to their health in the villages of Punjab. A total of 97 groups were formed across 86 villages from 7 districts of Punjab. The data were collected, collated and analysed by block level NGOs in 2016 under the support and guidance from MAMTA, Department of Health and Family Welfare, Punjab and Population foundation of India. The questions included reception of deworming and IFA tablets by girls and their check up by the doctor for skin or ENT related problems. Adolescents were also asked about their perception on ASHA functioning in village. The villages were marked good (>75% responses were yes), average (<50% responses were no) and poor performing (>50% responses were no) based on responses from girls. Verbal consents were obtained from girls before data collection.

RESULTS: 19 out of 86 villages were good performing while 11 were poor performing overall, in relation to adolescent health services delivery. Fifty-six villages were average performing. The biannual deworming and weekly iron foliate tablet delivery was reported regular in majority of the villages from all districts, except for Fazilka district. Approximately, 50% villages reported occasional or no delivery of ENT and skin check-up services. Health worker monthly meetings with girls was reported an occasional or no event in around 70% villages (60 out of 86). Irregular or no distribution of sanitary napkins by health workers was reported among 90% villages (78 out of 86).

CONCLUSIONS/NEXT STEPS: Adolescent health services are not addressed adequately in most of the villages across India. Hence, CAH program ensures the whole process from getting people know about their entitlements, monitoring of service delivery and voice their demands through public advocacy (Jan Samwads).

IAAH170799

Improve access to SRH including Safe Abortion services for young women by involving ASHA, ANM in selected districts of West Bengal

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¹IDF

BACKGROUND: Ipas Development Foundation (IDF) in 2009, partnered with Government of West Bengal to provide technical assistance for strengthening state-level CAC training, leading to increased ownership for comprehensive abortion care (CAC) program by the state. However, there remains a significant need to increase women's knowledge on these issues to ensure effective utilization of these services.

DESCRIPTION: IDF has evidence, focused IEC involving community health intermediaries (CHIs) & strengthening them as referral linkage along with use of mid media activities help in wider dissemination of messages. We selected five public health facilities from three districts with CAC trained provider. To understand the comparative impact, we also selected similar other sites from adjoining area. Intervention started by mapping of CHIs & other social groups. Simultaneously we reviewed & re-designed CAC IEC into Bengali. Over the last one year we oriented 1550 CHIs and followed them regularly, 30 SHGs, 140 project staff of 4 NGOs using CAC IEC. We also assisted state government in effective utilization of MTP mobility support for ASHAs as envisioned under PIP. Mid media activities like street play and wall writings were used to reach wider section of audience including men. We also sensitized ARSH counsellor to improve their knowledge on SRHR including safe abortion and equipped them with new counselling tools. All this has led to steady increase in services utilization.

LESSONS LEARNED: Focused intervention and repeated follow-up with community health workers (ASHA and ANM) helps in improved CAC referral services in public health facilities. Utilization of CAC services at public health facilities depends on availability of CAC trained provider at site and is hampered by the transfer of the provider. Use of mid media activities at specific phases of program implementation helps in wider dissemination of CAC messages especially to male audience.

CONCLUSIONS/NEXT STEPS: The project is under implementation final findings are expected in December 2017. The initial results of monthly CAC caseload at all intervention sites have shown increasing trends (50% to 170%) as compared to average caseload during pre-intervention, this includes significant increase in young women availing services from these sites. However, similar increase is not registered in control sites.

IAAH170804

Adolescents-Youth-oriented service delivery innovations ad models

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¹China Youth Network

BACKGROUND: Since 2013, Chinese government has promoted "the Belt and Road Initiative". One of the four main themes is "healthy silk road". For better improvement, government calls for adolescents' involvement in the initiative. China Family Planning Association(CFPA) and China Youth Network(CYN) find it a great opportunity to improve University Program, which

was commenced in 2013, in order to promote sex and reproductive health and rights by sexual education among youth in China. In the new era, University Program is heading for revolution under the Belt and Road Initiative.

DESCRIPTION: University Program located in the whole China with support of local family planning associations. Students in universities operate the project directly, which practice CYN's value of "by youth, for youth". Before the University Program starts every year, CFPA will let out information. Universities(usually students' clubs or voluntary associations) can hand in application directly or through local family planning associations. After strict selection, chosen universities can get 10,000RMB to develop youth health activities in their school. Universities need to submit reports to inform the process of their project monthly and at the end of the year. During the project, CYN will send volunteers to universities and check with the achievement.

LESSONS LEARNED: By now, 5 batches of University Program has been carried out in 4 years. We have supported 263 universities in China, covering more than 80 universities in 18 provinces of the Belt and Road Initiative. But still, there are lessons to be learned. For one thing, students in some universities tend to be conservative when talking about sex in public. For another, quality of the project varies from school to school.

CONCLUSIONS/NEXT STEPS: Since CYN has successfully developed a pattern for sex and reproductive health and rights education in China, the next step is to bring in more fresh blood. On one hand, we are going to improve existing work according to local conditions. On the other hand, CYN is heading for more international cooperation as the Belt and Road Initiative does.

IAAH170819

Integrating youth-friendly services into public health facilities: Experiences of EngenderHealth in Ethiopia

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¹EngenderHealth

BACKGROUND: Many critical transitions in life—physical, psychological, and social—happen during adolescence and early adulthood. For this and other reasons, youth (persons aged 15-25 years) are highly vulnerable to poor sexual and reproductive health (SRH) outcomes, such as early and unintended pregnancy and unsafe abortion. In Ethiopia, specifically, youth are a large population (20%) with low contraceptive use (mCPR 12%) and high unmet need (29%). To meet their SRH needs, youth need tailored health services; youth-friendly services (YFS) delivery have been shown to effectively increase the use of SRH services among youth in some contexts.

DESCRIPTION: Since 2014, through its access to better reproductive health initiative in Ethiopia, Engender Health supported 20 public health facilities in four regions (Amhara; Harari; Oromia; and Southern Nations, Nationalities, and Peoples), including in Addis Ababa and Dire Dawa cities to increase youth access to modern contraception and comprehensive abortion care (CAC) through increasing the availability of YFS. Support includes training providers in providing YFS services (ensuring privacy and confidentiality, counseling, modern contraceptive methods, and CAC) and sensitizing all facility staff on YFS delivery. Facilities also have created linkages with schools and youth clubs.

LESSONS LEARNED: A total of 24,107 youth were served at ABRI facilities between 2014 and 2016. Between July 2015 and June 2016, YFS facilities served 20% more youth than non-YFS facilities. Challenges to sustaining YFS at supported sites include frequent attrition of trained providers and sensitized staff and lack of focus on addressing demand side barriers.

CONCLUSIONS/NEXT STEPS: The availability of YFS at public facilities is an efficient model to scale up and to integrate with other health services, and can complement efforts to implement stand-alone youth clinics at youth centers or other settings. The lessons from such integrated programs can be taken as evidence to scale up the activity to reach more facilities and address the needs of young people.

Interactive Media

IAAH170071

Impact of schooling and media exposure on premarital sex relationships among adolescent girls in small towns and villages in India

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BACKGROUND: The environment in which adolescents are currently growing places a premium on acquisition of physical wellness, education, skills, employment etc. These developments are not only leading to postponement of marriage combined with greater opportunities for mixing between the sexes, but also fostering premarital sex relationships. Importantly, this phenomenon is not confined to large cities alone, where cultural liberalization is more pronounced. Adolescents in small towns and villages are also indulging in premarital sex defying rather stronger societal hold for normative behaviour. These behavioural changes are putting youth in the depths of despair. It is potentially more problematic for girls, who shoulder most of the cost and burden of childrearing (Bledsoe and Cohen; 1993), besides the risks of sexually transmitted infections including HIV/AIDS. These vulnerabilities are particularly large for adolescents from small towns and villages. This paper attempts to examine proximate determinants of premarital sex among adolescent girls in small towns and villages.

METHODS: The research is based on quantitative and qualitative data collected from 614 adolescent girls in 12-19 years age group from small towns and adjoining villages in Rajasthan (India). A stratified random sampling procedure (with schooling status of girls as stratification variable) was used to draw the sample. Some recent studies have identified schooling and exposure to media as key determinants of adolescent's engagement in premarital sex. However, these two factors are also seen as the deterrents to premarital sex. Onus is also placed on social environment.

RESULTS: Results show that (in study areas), the extent of adolescent's engagement in premarital sex is as large as in large cities. Urban residence, out of school, gainful employment are identified as some of the key determinants of premarital sex among adolescents. Schooling has emerged as deterrent in this respect. At micro level, image among peers is recognized as an important fostering factor for premarital sex. Discrimination against girls does not seem to have any influence. On the contrary, there is evidence that girls endowed with parental love, affection and faith are more inclined to involve in premarital sex.

IAAH170093

Impact of Mothers' Involvement in a Culture Sensitive Communication Intervention on Their Sexual and Reproductive Health Communication with Their Daughters in Alexandria, Egypt

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BACKGROUND: Adolescents sexual and reproductive health (SRH) education has been identified as a global challenge for improving adolescents' health worldwide. Such issues are usually surrounded by cultural sensitivities and gender disparities. Parent- adolescent communication is increasingly being recognized as a successful strategy for improving adolescents SRH knowledge. The present study aimed to assess the impact of a culture sensitive educational intervention on a group of mothers of adolescent girls targeting the quality and quantity of their SRH communication.

METHODS: A pretest-posttest intervention targeted 63 mothers of adolescent girls. Mothers received 3 educational sessions to improve their SRH knowledge and their communication skills with their daughters.

RESULTS: Participated mothers showed significant improvement in their level of SRH knowledge regarding different SRH issues. They showed significant improvement in their perceived importance of SRH communication with their daughters. Mothers also showed significant improvement in SRH communication and significant decrease in the mean number of communication barriers. However, improvement in communication of reproductive health issues was higher than that for sexual health issues, especially for issues of sexuality and sexually transmitted infections.

CONCLUSIONS/NEXT STEPS: The study adds to the body of evidence concerning the success of parent- adolescent SRH communication interventions in different cultural and religious settings. Wider, larger scaled, similar sustainable interventions are needed to educate mothers on different SRH issues and about their adolescent girls' needs and conflicts; and to improve their communication skills considering the social, cultural and religious values and barriers.

IAAH170163

Using drama to promote healthy relationship skills with young people in Samoa: Primary prevention of intimate partner violence

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BACKGROUND: Intimate partner violence (IPV) is a major global public health issue associated with negative health and wellbeing outcomes. Young people are highlighted as an at risk population and crucial target audience for primary prevention. There is an immediate need to enhance primary prevention interventions with this population, with evidence suggesting creative approaches, such as interactive drama, may be a potentially useful strategy.

DESCRIPTION: This project included an interactive drama workshop followed by an interactive theatre production developed by young people in Samoa. Evaluation included peer-led, pre and post focus groups aimed at exploring drama as a tool for understanding the way young people experience and perceive intimate relationships; creating awareness of important issues related to IPV; and developing skills necessary for maintaining healthy, stable relationships.

LESSONS LEARNED: Outcomes highlighted an increased awareness of warning signs of abuse in intimate relationships; increased empathy; and a deeper understanding of wider social and cultural influences affecting early intimate relationships. Participants showed increased skill development related to communication, critical thinking, and confidence for building and maintaining the foundations for healthy relationships. Further, the production was an effective advocacy tool, showcasing the current challenges young people in Samoa are experiencing, while encouraging discussions around youth-led solutions and positive ways forward.

CONCLUSIONS/NEXT STEPS : Outcomes from this project suggest interactive drama can be an effective health promotion tool, providing a space for young people to explore and analyse their actions and motivations while practicing new approaches to challenging situations related to building and maintaining healthy relationships. This project highlights the importance and efficacy of youth-led health promotion programming and highlights the need for future research to explore drama as a tool for primary prevention of IPV with diverse groups.

IAAH170231

Identifying adolescents' choices of communication channels to facilitate informed decision making in Haryana, India

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BACKGROUND: Channel by which a communication message is delivered should have a broad outreach and should also be valued by target audience. In the changing communication milieu, traditional communication channels may not give optimal reach. It is important to understand and adapt to the adolescent preferences and choices of communication channels. Hence a formative research was done as a precursor to develop comprehensive communication strategy.

METHODS: A cross sectional school based student health study was done in 6 districts of Haryana in India employing gender stratified multistage cluster sampling technique. A self-administered questionnaire adapted from WHO Global school health survey 2013 core questionnaire module was used with additional questions pertaining to media exposure, preferences and stakeholders who impact decision making. Study sample consisted of 3138 students (1597 boys and 1541 girls) from 97 schools studying in classes VII to XII. 685 boys and 739 girls belonged to age group 12- 14 and 941 boys and 777 girls to 15-19 years.

RESULTS: Over three fourths of students watch television almost every day. Movies (58%) was the most watched program on television followed by news

(55%) and sports (49%). 61% students read the newspaper daily. In comparison to 44% of boys, only 13% of girls of higher classes had a personal mobile phone. For lower classes, only 15% adolescents owned a mobile phone. 80% of adolescents in lower classes were not using social networking sites. For higher classes, the use of social networking sites was 20% in girls and 43% in boys. 78% boys and 82% girls reported parents to be the source of information related to adolescent health issues. This was followed by teachers (65%) and friends (43%). Parents (83%) were also reported to have highest impact on decision making by adolescents followed by teachers (51%) and friends (43%).

CONCLUSIONS/NEXT STEPS: While television is popular, mobile phone and internet penetration is rising. The gender differential in having a personal mobile phone needs to be factored when designing mHealth interventions for adolescents. Traditionally parents have not been optimally engaged in adolescent programs. Parents should be considered as an important stakeholder in any adolescent communication strategy.

IAAH170293

Why develop a social media presence for research? Examples from the Lancet Commission on Adolescent Health and Wellbeing and the Childhood to Adolescence Transition Study (CATS)

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BACKGROUND: Social media is constantly evolving. It is used widely by individuals, businesses, organisations and governments because it provides opportunities to communicate key messages, market products and engage with target audiences. In 2016, there were 2.34 billion social media users, most of whom use social media daily. Facebook, Instagram and Twitter have become major sources for information. But what is the role of such sites for communication about research? and what is the relative cost in terms of time and effort versus the perceived benefits? This presentation will describe the benefits and costs of building an online presence for research.

DESCRIPTION: Using the Lancet Commission on Adolescent Health and Wellbeing and the Melbourne, Australia based Childhood to Adolescence Transition Study (CATS) as examples, this presentation will explore the reasons to build a social media profile. We have chosen these two examples as they are extremely different in focus and audience. The first is about global dissemination and research translation with an audience of academics, policy makers and youth health advocates. The second is about how social media can be used to engage and retain research participants where the audience is parents, students and teachers, as well as key stakeholders. We will explore the reasons for choosing different social media platforms for different types of projects, outline how two particular platforms (Twitter & Facebook) can be used to disseminate content, and demonstrate how audience engagement differs between the social networks. We will demystify the social media options from the perspective of research teams who have embraced social media to support their research agendas.

LESSONS LEARNED: Developing an online social media presence for research has many benefits but requires time and dedicated staffing.

CONCLUSIONS/NEXT STEPS: Social media has proved to be a valuable medium to assist with amplifying research messages, engaging with research participants, and academics; NGOs and other key stakeholders.

IAAH170294

Measuring the success of our digital footprint... 'Our Future: a Lancet Commission on adolescent health and wellbeing'

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BACKGROUND: Social media in all its platforms is an evolving medium that is globally used, for every facet of everyday life for individuals, businesses, organisations and governments. As more people have adopted social media, the online user base has grown more representative of the broader population. Users are employing it to connect with one another, to share information, for entertainment, and importantly, to engage with news content. But how does one measure the success of their online media campaign? Analytics can help us to better plan and design our online communication strategies, to ensure that

we are targeting the right users with the right messages and at the right times. So what did our analytics say about us?

DESCRIPTION: A truthful look at what the analytics told us about our online communication strategy for the Lancet Commission on adolescent health and wellbeing. The Commission actively used a number of online mediums: twitter, website, and a blog to engage with both the political and academic worlds but also the youth advocates. This presentation will explore whether what we need to change for the next phase of our adolescent health and wellbeing campaign. As researchers, we plan to take an evidence based approach on what the analytics data is telling us, to inform the next phase of our campaign.

LESSONS LEARNED: Plan, evaluate and plan again! Sufficient time and resources are needed and should not be underestimated, this includes. • Knowing the analytic tools and understanding them (different tools for different online platforms) • Ensuring that your analytics are correctly established at the beginning of your research project • Time to review your analytics • Time to understand what your analytics are telling you, and whether your strategy needs to change.

CONCLUSIONS/NEXT STEPS: To ensure the recommendations are achieved via effective online engagement, as the Commission evolves into a 5-year Standing Commission. We believe the best way to do this is to learn from what we have done, to help plan what the Standing Commission will do next.

IAAH170348

Young Leaders' Strategies to Improve Adolescent Health Using Technology, Innovation, and Media

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BACKGROUND: In partnership with the Packard Foundation, Rise Up's Youth Champions Initiative (YCI) invests in powerful young leaders ages 18-30, enabling them to create large-scale change through leadership, technology, innovation, and advocacy. Through this initiative, these young leaders are leading the sexual and reproductive health rights (SRHR) movement locally and globally.

DESCRIPTION: YCI improves the lives of young people by advancing innovation and quality in the field of sexual and reproductive health and rights. This presentation will showcase youth leaders' ability to leverage technology and innovation to create game-changing initiatives to improve SRHR in their communities and globally. Panelists will include YCI youth leaders and a representative of the Packard Foundation. This presentation will highlight YCI's youth-led success stories from Ethiopia, India, Pakistan, and the US South, including: - Leveraging WhatsApp in India to deliver youth-friendly mobile instant messaging on sexual and reproductive health and rights justice; - Creating the first animated TV series in Ethiopia featuring girl superheroines fighting for adolescent health and gender justice; - Designing comic books in Pakistan to deliver healthy menstrual hygiene information to girls and their families; - Teaching youth in the US South to use art, dance, and poetry to advocate for comprehensive sexuality education.

LESSONS LEARNED: Innovative approaches to youth-led technology and media are critical to advancing youth sexual and reproductive health and rights justice. Youth leaders can effectively improve sexual and reproductive health and rights outcomes, especially in low-resource settings. Peer learning and leadership development are key strategies to improve youth agency in technology and media for health.

CONCLUSIONS/NEXT STEPS: Increasing investment in youth-led technology and media are high impact ways for young people to help their peers to understand their sexual and reproductive health and take action to address their shared challenges. Panelists will highlight the importance of prioritizing youth-led solutions to advancing sexual and reproductive health and rights justice for decision-makers, policymakers, and funders.

IAAH170364

Online Youth Activism in Pakistan

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BACKGROUND: Of the 195 million population of Pakistan roughly a fifth are users of the internet. Ever since the introduction of 3G and 4G connectivity, a large proportion is being able to use the internet and most of these users

utilize these services to browse social media services such as Facebook. Most of these internet users are located in large cities and the services are being used by young people with college education. Social media research in Pakistan shows its potential for activism for social causes, especially organizing the youth for volunteer work and fulfilling other civic duties such as participation in elections.

METHODS: For this 25 expert interviews were conducted in Pakistan from Karachi, Lahore, Peshawar and Islamabad. The interviewees ranged from technology experts to journalists and social activists. A guideline was used to guide the discussion on the use of social media and its potential for social good and activism in Pakistan.

RESULTS: The analysis show internet especially social media can be a strong tool for bringing social change in Pakistan. It is a tool which the youth like to use themselves and hence they respond to this media the most. Social media is heavily influencing mainstream media as well and can be a strong voice to those in the societal margins such as religious minorities, persons with disability, transgenders, non-heterosexuals etc. However, there are certain pitfalls of using social media activism like the PEMRA cyber crime laws which can stifle free speech, dealing with trolls, hate speech and threats from other users of social media.

CONCLUSIONS/NEXT STEPS: Social media activism depends largely on personal interest of individuals and depends on their capacity to use SM well and with persistence. Any cause that has strong influencers behind them get more limelight. Internet access should be increased in remote areas and made more affordable for everyone; more research is needed to understand this phenomenon as a tool that bolsters activism either online or offline (in real life).

IAAH170371

Growing capacity in adolescent health through online education: exploration of an innovative approach

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BACKGROUND: The case for investment in the second decade from benefits of the triple dividend is increasingly accepted by the global community. Throughout the world, technical capacity is required to grow the evidence base, develop appropriate policy and programming responses. Attention also needs to turn to workforce development, with an urgent need for innovative and cost effective ways to meet professionals' learning needs across the globe.

DESCRIPTION: We set out to harness new technologies to help meet this need through developing a Massive Open Online Course (MOOC) on Global Adolescent Health. Now in its fourth iteration, this short course delivers free, quality, accessible and engaging education to anyone, anywhere in the world. Enrolled students have come from highly diverse settings and countries, including those working clinically with young people, in education and community settings, and from prevention, programming and policy settings. The course aims to: • increase knowledge and understanding about adolescent health and development in low, middle and high income countries; • increase the accessibility of education around adolescent health and development; • support the growth of a global learner community by sharing knowledge and experiences; and • advance evidence-based practice. Content is delivered through pre-recorded lectures and interviews with experts. Learning is facilitated by online discussions, quizzes, readings, and peer-assessed tasks.

LESSONS LEARNED: To date, 7,368 students from all over the world have undertaken the course. The formal post course survey of 12 questions on engagement, expectations and goals has been consistently highly rated with overwhelmingly positive comments. Informal feedback affirms its value for multidisciplinary students with highly varied experiences and responsibilities.

CONCLUSIONS/NEXT STEPS: Online learning program offers extraordinary capacity in terms of reach. Opportunities for future innovations include: creating learner cohorts based on organisation, geography, discipline, role or issue to add value through the more focused application of course content to a specific context; translating the entire course into other languages; and developing more specialised content for a linked course. This experience affirms the reach and cost-effectiveness of online technologies to help meet the immense requirement for training in adolescent health, including in countries where few learning opportunities are available.

IAAH170391

Qualitative assessment on strengthening web-based platform on adolescent and youth health in Sri Lanka

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BACKGROUND: Sri Lanka is having nearly 17% of adolescents out of total population of 20.4 million. They have diverse health needs and literature points out the existence of a knowledge gap in addition to the need of strengthening the life skills.

DESCRIPTION: Qualitative assessment was conducted on identifying modes of improving the provision of web-based knowledge and skills with the view of improving adolescent and youth health in the country. The study identified the major components needed to be addressed in this process. Four focus group discussions (FGDs) were conducted among youth trainees of 15-24 years, undergoing current training programmes in Western Province of Sri Lanka in 2015. Each group consisted of 9-10 youths and separate FGDs were conducted for males and females. Informed verbal-consent obtained prior to the discussions. Privacy and confidentiality were ensured. Meetings were audio-recorded, transcribed and analysed by identifying themes and categories using constant comparison.

LESSONS LEARNED: All the trainees had a firm realization of the need of web-based platform on adolescent health. The four FGDs revealed inadequacy of knowledge and skills on adolescent health, lack of materials and sources on getting accurate health knowledge especially in local languages and lack of awareness and motivation on available adolescent health services. The suggestions for the improvements of the programme identified were need of having adolescent health website in local languages in a youth friendly manner, having an interactive component in cooperated into it a parallel inclusion of hot line, raising awareness through social media and introduction of mobile app on health for adolescents. Need of young person's participation in the whole process was highlighted.

CONCLUSIONS/NEXT STEPS: This qualitative assessment suggested inclusion of the following component into adolescent web-based platform: • Having it in youth friendly manner in all three languages • Inclusion an interactive component • Raising awareness on the availability of website and adolescent friendly health services • Using social media for creating demand • Having a hotline and a mobile app for adolescents and youth • Improving the quality of available services in parallel to this.

IAAH170408

SRHR Conversations in Digital Media: TARSHI's Work in Online Spaces

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¹TARSHI

BACKGROUND: TARSHI, an Indian NGO, aims to help people make informed choices regarding sexuality and SRHR. These topics are still considered taboo, especially in the Global South, and with social media popularity, spaces for dialogues are moving online. TARSHI's eLearning courses aim to help equip professionals in addressing sexuality-related issues in their professional lives. TARSHI's social media initiatives aim to creatively engage with online audiences on sexuality. TARSHI's eMagazine 'In Plainspeak', is contributing to content creation by bringing together articles, images and videos on sexuality in the Global South.

DESCRIPTION: TARSHI's social media initiatives seek to disseminate information on SRHR to open up conversations on gender and sexuality. Published fortnightly, In Plainspeak aims to be informative and creative while generating dialogue among people in the digital world as well as creating content on issues of SRHR in the Global South. Additionally, TARSHI's eLearning courses incorporate dynamic exercises and external resources combined with TARSHI's content to address often sensitive and challenging issues in innovative and personalised ways.

LESSONS LEARNED: Analysis of learners' responses from TARSHI's eLearning courses displays a deepening of understanding around sexuality and SRHR. A shift in perspective is often seen on issues related to rights of marginalised communities. Over the past 8 years, TARSHI has had over 1,000 learners from nearly 15 countries around the world. In Plainspeak has over 400

subscribers. Readers have mentioned that they read the eMagazine for information, knowledge, inspiration and opinions on sexuality. TARSHI's Facebook page has more than 13,000 followers and we engage actively with our 2.5k twitter followers on issues of SRHR. TARSHI is also taking baby steps on Instagram and has more than 200 followers in a span of five months.

CONCLUSIONS/NEXT STEPS: TARSHI strongly believes in individuals' right to make choices and the need for opportunities to get accurate information to do so. Today, with over 3.7b active users of the Internet worldwide, TARSHI is working to provide a platform for discussion and dialogue around SRHR. We've been able to strengthen capacities through our eLearning courses and have reached many students, trainers and service providers.

IAAH170422

MEDIA – THE GAME CHANGER

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BACKGROUND: The news media is recognized as among the world's most influential and powerful elements. They are irreplaceable as a mechanism for turning a problem into a solution. Media Advocacy means taking the voice of the common people to the targeted audience – policymakers/ decision makers for the desired output. The voice of the common people is generally ignored/is not heard in the din of policy debate. The mass media, especially the news media can highlight their voice so that policy makers consider them while framing and taking decisions. Media advocacy is to highlight crucial issues to government officials/policy makers and the common people and conveying specific messages to the targeted audience. The advocates working on Adolescents Health issue now recognize the value of influencing news coverage; news coverage influences attitudes and behavior as well as policy progression. A constant challenge faced is keeping the media's interest sustained over a long period of time.

DESCRIPTION: To increase news coverage on the issue related to the issues of adolescent health, empowerment of girls and women; and issues pertaining to child marriage in the state of Odisha, VHAI team stepped up advocacy efforts through press releases, one to one networking and media sensitization workshops. The key strategies were to stir media interest on new story angles as a health issue through news positioning, collective advocacy with other organizations. We assisted journalists in accessing resources, important reference material, facts, evidences and photographs.

LESSONS LEARNED: Pro-active media advocacy consistently resulted in wide news coverage on the issues of adolescent health, empowerment of girls & women and issues pertaining to child marriage in Odisha media.

CONCLUSIONS/NEXT STEPS: News reportage of adolescent's health and other public health issues can be increased significantly by the strategic use of news releases alerting journalists to research reports that embody recognizable news values. This is an inexpensive strategy with great potential to advance public health objectives. VHAI will continue to use Earned Media as an advocacy tool to highlight the issues of adolescent health, empowerment of girls & women and issues pertaining to child marriage in the state of Odisha.

IAAH170470

Use of Communication Technologies for pre-natal health care, to reduce death from pregnancy related issues and improve maternal and child care

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BACKGROUND: Pregnancy-related complications are still a leading cause of death among women, especially adolescents in developing countries. There is also a direct association between adequate prenatal care and increased birth weight and increase maternal and child care. Mobile phone short message services (SMS) could increase awareness about prenatal care visits to improve health outcomes. Most pregnant women have Access to SMS and have interest in receiving SMS with educational information regarding pregnancy

DESCRIPTION: It was developed and implemented an electrónica medical record system for maternal health which is linked to a platform that sends SMS to pregnant women tailored to their health profile and gestational age. SMS include prenatal care check-up reminders, nutritional and motivational messages and general health-related messages. Furthermore, the system includes an interactive voice response system, free of charge, with relevant information. The Project was implemented in the District of Ventanilla in Peru to half other pregnant women (576) Baseline was collected during the first prenatal control. For analysis it was created three sets of dependent variables, related to prenatal care visits, behavioural outcomes and birth/ maternal health outcomes

LESSONS LEARNED: Women receiving SMS show and improvement in the number of prenatal care check-ups, comparing with the control group by 5% and the number of prenatal check-ups attended on time by 10%. Furthermore, they increase the likelihood of going to at least nine check-ups by 21%. Impacts seem to be concentrated among more educated women with easier access to the health centre. Birth weight were positively affected only in this segment.

CONCLUSIONS/NEXT STEPS: The results of this Project pose some important questions about the role of Information and Communication technologies in increasing awareness about prenatal care visits to improve health outcomes. The results also highlight the relevance of investing in the development of human capital and service coverage in order to make technology more useful and observe benefits from it. This year the Health Ministry of Peru has approved the use of this platform in the public health centres in Peru, becoming in this way a public policy

IAAH170541

Feasibility & perception of cell phone based, health related communication with teens in an economically depressed area

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BACKGROUND: Cell phones are a popular means of communication among teens. Studies suggest health-related benefits from cell-based communication with teens; however, research examining the feasibility & perception of cell phone use as a means of health-related communication with teens is lacking, particularly in lower socioeconomic (SES) populations. This study examined the feasibility & perception of cell-based (texting, voicemail [VM] & e-mail/ social media), health-related communication between teens and health providers (physician, nurse, health educators) in an economically depressed area.

METHODS: An anonymous, self-administered survey (35-items) was given to teens at Hurley Medical Center pediatric clinics & private pediatricians' offices in Genesee County, MI, USA where 1 in 5 teens resides below the poverty level.

RESULTS: Demographics of the 747 respondents were; mean age of 15.2yrs, 56.5%, female, 40% white & 60% non-white. 86% of respondents owned a cell phone, 87% had data, 96% texted, 90.5% emailed / used social media, & 68% had voice mail (VM). More white& older teens (>16yrs) had a cell phone (p<0.05). Regarding cell-based communication with health providers (physicians nurse, health educator), the majority of the teens (52%) wanted to text, (37%) VM & (31%) email / social media. Regarding health message content & means of delivery, appointment reminders was most desired (99% texting; 94% VM, 95% email/social media), then shot reminders (84.5% texting; 74.5% VM, 81% e-mail/social media), test results (71.5% texting; 75% VM, 65% e-mail/social media), medication reminders (63% texting, 54% VM, 58% e-mail/social media) & general health tips (36% texting; 18.5% VM, 73% e-mail/social media). Overall 70% of the teens believed their parents/caregivers would support cell-based, communication with their health provider. More non-white & older teens (>16yrs) perceived parents/caregivers would also support confidential communication (p<0.01).

CONCLUSIONS/NEXT STEPS: Findings suggest cell-based communication with teens for health purposes is feasible even in lower SES communities. Majority of the teens expressed interest in communicating with their health provider (physician, nurse, health educator) *via* cell phone, primarily texting for appointment reminders. They also perceived that cell phone communication would be acceptable by their parents/caregivers. In this age of technology, health providers should consider embracing cell phone as a means of communication with teens.

IAAH170639

The Communication Skills of a Group of Adolescents Studying Religion

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BACKGROUND: Communication skills for adolescents are important. These skills will help a lot in the development of the person in the future and persons in finding a path to a healthy lifestyle. The aim of this study was to investigate communication skills of adolescents studying religion.

METHODS: The study has descriptive design and includes 40 adolescent studying religion in Samsun in Turkey. The study was carried out after the necessary permits were obtained in order to be able to carry out the research from the necessary institutions in November-December 2016. The participants were asked to complete "Personal Information Form" and "Communication Skills Scale" questionnaires. The Cronbach alpha coefficient of the inventory is .88 in this study. The data analysis methods used in the study were percentage distribution, t-test, and correlation analysis.

RESULTS: The mean age of the adolescents was 17.83 ± 2.93 (min: 13, max: 24), 52.5% of them had primary education, 47.5% high school graduate and the number of siblings was 4.02 ± 1.67 . 47.5% of the adolescents lived in the city centres, 37.5% lived in the village, all of the mothers were housewives and 77.5% of the fathers were the workers. 35% of the adolescents had communication problems; 12.5% said that they had difficulty expressing themselves and 12.5% said that they were irritated quickly. Adolescents' communication skill scores were 105.00 ± 22.79 (min: 62, max: 149) and were at moderate level. Adolescents communication skills inventory subscales mean points were; the cognitive domain was 34.65 ± 7.41 , the affective domain was 36.05 ± 9.69 , the behavioural domain was 34.30 ± 9.78 , and they were at the moderate level similar to the total point. There was no difference between socio-demographic characteristics and communication skills of adolescents.

CONCLUSIONS/NEXT STEPS: The mean score of the adolescent in communication skills was found to be moderate level. According to the study results proposals have been made for the development of communication skills.

IAAH170695

Field of Health Communication Skills Training area of Foreign Students and often Experience Problems

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BACKGROUND: The aim of this research is to determine the communication skills, socio-cultural and economic problems of the foreign students studying in the health department at OndokuzMayıs University.

METHODS: This study, which was planned in accordance with descriptive research principles, has included all of the foreign students, who are willing to participate in the research and have studied between September 20, 2016 and January 5, 2017 in the health departments of OndokuzMayıs University in order to investigate the communication skills and frequent problems of foreign students studying in the health departments of OndokuzMayıs University. The data was conducted with 2 different questionnaire forms. The first form consists of 37 questions which were designed to determine the socio-demographic characteristics of the students. The second form is "Communication Skills Inventory" which was developed by Ersan and Balcı consisting of 45 questions.

RESULTS: According to the research results the scale mean score of communication skills was found as 149.6 ± 16.7 . The scale means score of communication skills is medium. Mental and behavioral scale mean scores of communication skills were found better than emotional scores. There was a significant relationship between the students' age, marital status, income status, parental education status, adoption of social environment, participation in social activities, satisfaction with education, Turkish language knowledge, preference and satisfaction with education in Turkey with communication skills ($p < 0.05$).

CONCLUSIONS/NEXT STEPS: It is thought that it will be beneficial to give more lectures about communication skills in all departments of Health Sciences.

IAAH170703

Study of pattern of usage of Social Networking Sites among College Students in Mangalore

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BACKGROUND: A social networking site (SNS) is an online location where a user can create a profile and build a personal network that connects him or her to other users. There has been rise in the number of SNSs starting from Classmates.com-1995, Sixdegree.com-1997, Friendster-2002, Orkut-2004, Myspace-2005, Yahoo 360-2005 to Twitter-2006 and Facebook-2006. The rationale behind conducting this study was to decipher the pattern of usage among college students and to find out the impact of SNSs on academic and personal interactions.

METHODS: A cross-sectional study was carried out in February at KMC and MCOODS, Mangalore included students above age of 18 yrs Non-random sampling method was employed to collect data. The data was collected using a semi-structured proforma after obtaining an informed consent from the participants. Ethical clearance was obtained from IEC. Data was entered in Microsoft Office Excel Worksheet. Analysis was done using statistical software SPSS Version 11.5. Descriptive statistics like mean, proportions and standard deviation were used for expression of the results.

RESULTS: A total of 370 students were surveyed, out of which 98.7% use Facebook. 74.3% had an SNS account for more than 5 years now. 90.8% students were aware of Privacy settings & 31.4% respondents agreed to have deactivated their account at least once, maximum due to Academic reasons. 72.7% use SNS daily and majority (90.5%) for minimum of 30 minutes. 64.9% people use SNS for downloading music & games followed by social networking and educational purposes. A 0.61 drop was seen in the mean performance of the students before and after using SNS

CONCLUSIONS/NEXT STEPS: The study found that maximum students use Facebook for over more than 5 years. SNS are used mostly for downloading, social networking and educational purposes. A drop in the mean academic performance has been observed after using SNS.

IAAH170711

Communication skills of adolescents and the effective factors

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BACKGROUND: The adolescence period is an important period in which growth and development are the fastest, from childhood to adulthood. High school students in transition from adolescence to adulthood need to acquire communication skills in order to communicate with other individuals. Increasing the communication skills of adolescents is very important. This study was conducted to determine the communication skills and the affecting factors of adolescents.

METHODS: This study was carried out between 20th April and 4th May in 2017, accordance with descriptive research principles. 9-12 grade students studying Anadolu High School have created the universe of the study. It was aimed to reach the whole of the universe without going to the sample selection and 344 students who accepted to participate in the research were included in the research. Confirmation was obtained before the research from institution and participants. The data were gathered with a questionnaire that includes the demographic characteristics of the students and communication skills inventory. In assessment of the data obtained, mean, t-test and ANOVA tests in SPSS 20.0 packaged software.

RESULTS: 59.6% of adolescents are female students, 49.4% are in 9th grade and 50.6% are in 12th grade. Male students' communication skill score averages were found to be higher than female students. In the study, the communication skills of the students were found to be 102.42 points average. It was determined that the average score of the subscale of emotional communication skill was the highest in the students with medium level of school achievement perception ($36.68'' 7.15$) ($p < 0.05$). The mean score of the emotional communication skills subscale of the students with a high school achievement level was found to be the lowest ($33.24'' 8.55$). The relationship between school achievement perception and

emotional communication skills sub-dimension was significant ($p < 0.05$). Significant differences were found between students' perception of school achievement and television monitoring and communication skills ($p < 0.05$).

CONCLUSIONS/NEXT STEPS: As the perception of school success rises, communication skills fall. It has been determined that the students have moderate communication skills. It is advisable to increase the communication skills of the students and to increase the counseling services in all classes.

IAAH170749

Internet addiction among the adolescent students of a private medical college

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BACKGROUND: As the Internet increasingly became part of our daily lives, Internet addiction disorder has received much attention now. Addictive behaviors were suggested to cause improper lifestyle and impairment to personalities, especially among the young. The present study was designed to estimate the internet addiction among the adolescents in a medical college.

METHODS: OBJECTIVES: 1) To study the prevalence of internet addiction among adolescent students of a medical college. 2) To assess the various socio-demographic factors associated with internet addiction. An analytical cross-sectional study was conducted among 403 medical students who were below 20 years of age by September 2016. Sample size was calculated by taking 50% prevalence at 95% CI and relative precision of 10%. A pre-designed, pretested and semi-structured questionnaire was used to collect the information regarding socio-demographic factors and internet addiction. Internet addiction was measured using Young's Internet Addiction Test and the score above 30 was considered as addicted to internet in the present study.

RESULTS: Internet addiction was high among the males 89.4% when compared to females 51.2% and statistically significant difference was found between them. Internet addicted students 82.1% do not have sufficient amount of sleep when compared to students who are not addicted to internet 15.6%. There was an average increase of more than 2 hours among the students after the introduction of Jio 4G in India. Those who watch adult sites 42.9% were more addicted to internet.

CONCLUSIONS/NEXT STEPS: Internet addiction was high among males. It also affects their lifestyle, leading to sleep deprivation. Cheaper internet data usage plans like Jio also facilitate internet addiction.

IAAH170766

Using Mobile and E health technologies to increase access to SRHR services among adolescents and young people in Uganda.

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BACKGROUND: Uganda has the second largest growing population of adolescents and young people in the world with 78% of the population below 30 years (UDHS, 2016). 23% of the population are adolescents and 52% of the population is below 15 years (WHO, 2016). Furthermore, on average adolescent girls begin sexual intercourse at the age of 16.3 and approximately 10% of adolescents 10 - 14 years report having had sexual intercourse at least once (MOH, UNICEF) accounting for 25% rate of teenage pregnancy in Uganda the second highest in Africa. Nearly 3% of the adolescents are HIV positive (WHO, 2016). Many reasons account for these sexual reproductive health challenges most especially myth and misconceptions, lack of access to quality health services that young people face in Uganda. Nearly 95% of these have access to mobile phones either by ownership or from a friend.

DESCRIPTION: Marie Stopes Uganda setup a toll free Hotline, Electronic Voucher system and whatsapp platform as a way of enhancing access to timely correct and accurate information, counseling and referral for adolescent SRHR responsive services. The tollfree contact center allows in and out of school adolescents to call and access accurate information and counselling and referral to service points for services. Adolescents and young people also get the opportunity to call and give feedback regarding their experiences and side effects especially those who take up family planning methods.

LESSONS LEARNED: Adolescents and young people have access to phones and embrace m health solutions to access SRHR services. Adolescents prefer high level of confidentiality. That is why they prefer SMS and toll free lines to get solutions to their SRHR challenges. Adolescents are willing to share toll free numbers with their friends. In school, adolescents prefer to use SMS as opposed to calling.

CONCLUSIONS/NEXT STEPS: There has been an observed increase in the number of adolescents and young people accessing sexual reproductive health and rights services most especially contraceptives, post-abortion care and STI checkup and treatment as a result of mobile health interventions. However there is still a need to combine m health with other community-based interventions that focus on young people.

IAAH170790

Does facebook use lead to loneliness and negative affectivity among adolescents?

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BACKGROUND: The aim of the present study was to explore the impact of Facebook use on loneliness and negative affectivity among adolescents. In recent years, social networking sites have gained phenomenal popularity among adolescents. The birth of Facebook in 2004 has enabled individuals all over the world to connect to one another, communicate, develop and maintain the friendship. Today, adolescents are the most "wired in" group of individuals and the most well positioned to utilize new technologies. In spite of promising advantages, these unique technologies offered such as social capital and friendship articulation, there have been increasing concerns regarding outcomes of excessive use on adolescent's well-being.

METHODS: Eighty-six Facebook users (age range=15-17 years) participated in the study of which 64 were females and 22 male. Data was collected using online internet network. A 27 item questionnaire was developed to measure various aspects of Facebook use and its impact. The questionnaire tapped information pertaining to demographics, duration of Facebook use, 4 items loneliness scale (Cronbach alpha =.75) which measured the experience of loneliness due to Facebook use and 6 items negative affectivity scale (Cronbach alpha=.91) which measured the level of negative emotions exhibited by individuals when Facebook is not available.

RESULTS: Results indicated that individuals who spent more time on Facebook reported more loneliness (.32, $p < .01$), and exhibited greater negative affectivity (.32, $p < .01$) as compared to individuals who spent less time on Facebook use. Males were found to be lonelier ($M=12.65$) than females ($M=10.46$, $t=3.05$, $p < .01$). Also, they exhibited greater negative affectivity ($M=16.30$) than females ($M=12.23$, $t=3.04$, $p < .01$).

CONCLUSIONS/NEXT STEPS: Time spent on Facebook increases the likelihood to develop depression and anxiety. Thus, parents should spend quality time with children, encourage open communication and maintain and supervise online activities of the children. This would help adolescents to be less lonely and exhibit positive effect.

IAAH170813

Communication is Key: Increasing Capacity and Strengthening Adolescent Sexual and Reproductive Health Program Design

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BACKGROUND: Adolescents (ages 10 to 19) comprise 20% of the world's population; most live in low- and middle- income countries (LMICs), and, increasingly, in cities. Given the higher concentration of resources, infrastructure, services and technology, balanced with heterogeneous populations, differing social and cultural norms and less social cohesion, urban zones create unique sexual and reproductive health (SRH) environments. Because SRH behaviors form during adolescence, we must find effective ways of supporting adolescents to make appropriate choices and grow into productive, fulfilled adults. Social and behavior change communication (SBCC) is indispensable to reaching this goal.

DESCRIPTION: The Health Communication Capacity Collaborative (HC3) project's Urban Adolescent SRH SBCC Implementation Kit aims to strengthen program design capacity among program managers/organizations and youth themselves. The I-Kit outlines seven "Essential Elements" of urban adolescent SRH SBCC program design through text, activities and worksheets against a backdrop of youth development stages, SBCC theories, a description of the urban environment and additional background resources. In 2016-2017, five organizations across Benin, Madagascar and Kenya applied the I-Kit to programs aiming to reduce adolescent pregnancy, increase contraceptive method use, and improve SRH communication between younger adolescents and parents.

LESSONS LEARNED: Pilot organizations remarked the I-Kit helped them appreciate the need for data-driven programs, and focus on clearer audience segmentation and outreach. The I-Kit's approach and activities provided new insights into the SRH environment in which their young beneficiaries live. SBCC itself was new and challenging to all groups. Francophone organizations lamented that additional resources were not available in French. Though the I-Kit was at first daunting in length, each organization developed a strategy to break it down and incorporate it into their work.

CONCLUSIONS/NEXT STEPS: Pilot organizations were committed to using the I-Kit in future work, and said it should be shared more broadly. To this end, HC3 is developing an I-Kit "Tips and Tricks" Supplement, which will include recommendations for organizations planning to use the I-Kit, additional resources requested/suggested by pilot teams, and pilot team case studies. The I-Kit is proving unique in Egypt, too. HC3 is adapting the tool for that country and the Middle East and North Africa context.

IAAH170822

Connecting Youth to FP INFO Through Digital Storytelling

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BACKGROUND: Many young people face challenges to accessing family planning (FP) information and services, especially when it comes to the intrauterine device and implant, also known as long-acting reversible contraceptives (LARCs). Research has identified several barriers to LARC knowledge and use among youth, including misinformation about side effects, attitudes about safety and appropriateness, limited youth-friendly services and mistrust between clients and providers. In a Health Communication Capacity Collaborative (HC3) study in Nigeria, youth expressed an interest in learning about LARCs via their mobile phones, radio soap operas and Facebook.

DESCRIPTION: Combining these preferences, HC3 developed the FP INFOcus Guide, which encourages youth-led organizations to create short videos featuring authentic voices and perspectives about FP from their own communities – all using their mobile phones. Based on "mobile first" and participatory video approaches, the Guide provides step-by-step guidance for those interested in preparing, producing and promoting mobile phone videos. The Guide was tested with a youth-focused, youth-led Nigerian organization, the HACEY Health Initiative. Using the FP INFOcus approach, HACEY created a series of videos promoting LARCs as safe and viable options for young people.

LESSONS LEARNED: The FP INFOcus Guide has not only helped young people create social media content to improve contraceptive knowledge and model essential sexual and reproductive health (SRH) skills, it has also mobilized new and existing FP champions and strengthened their digital storytelling capacity. In an evaluation, the HACEY team reported appreciating the ability to communicate with their peers in this innovative manner, and valued the practical, skill-based nature of the FP INFOcus approach. The lessons learned from HC3's work with HACEY were incorporated into the Guide.

CONCLUSIONS/NEXT STEPS: HC3 will launch the Guide in August 2017 via a webinar and an online discussion. The team will note results and lessons learned from HACEY's video promotion, as well as any other youth-led organizations that use the Guide in their work. These experiences will inform future applications for digital storytelling.

Mental Health

IAAH170013

Loneliness and health risk behaviors among ASEAN adolescents

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BACKGROUND: Loneliness is commonly experienced during adolescence and has been associated with negative health outcomes. The study aimed to assess factors associated with loneliness and investigate the relationship between loneliness and health risk behaviors among adolescents in the Association of Southeast Asian Nations (ASEAN).

METHODS: This cross-sectional study included 30284 school going children (aged 13-15 years, mean age=14.1 years, SD=0.8) from seven ASEAN countries that took part in the Global School-based Student Health Survey (GSHS) between 2007 and 2013. The measure asked about loneliness, health risk behaviors and protective factors.

RESULTS: Across the seven ASEAN countries, 7.8% of the adolescents reported mostly or always being lonely and 31.3% reported sometimes being lonely in the past 12 months. In multivariable logistic regression, female gender, older age, living in a low or lower income country, not having close friends, bullying victimization and lack of parental or guardian support were associated with mostly or always feeling lonely in the past 12 months. After adjusting for socio-demographic and social supportive factors, loneliness was associated with poor mental health, substance use, aggression and other health risk behaviors.

CONCLUSIONS/NEXT STEPS: A significant proportion of adolescents were experiencing loneliness, which was found to be associated with various health risk behaviors. It is important to recognize lonely adolescents early in order to prevent more serious poor mental health and other health risk behaviors.

IAAH170014

Hunger and Psycho-Behavioral Problems among Adolescents in the Association of Southeast Asian Nations Member Countries

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BACKGROUND: The purpose of this study was to examine the prevalence of hunger and its psycho-behavioral correlates among adolescents in "Association of Southeast Asian Nations" (ASEAN), including Cambodia, Indonesia, Malaysia, Myanmar, Thailand, Philippines, and Vietnam.

METHODS: The analysis was based on cross-sectional survey data of 30197 school children 13-15 years of age from seven ASEAN member countries participating in the "Global School-based Student Health Survey" (GSHS) from 2007 to 2013.

RESULTS: The overall prevalence of experiencing hunger in the past month across the seven ASEAN countries was 56.9% (rarely to always) and 4.2% most of the time or always (high hunger). The prevalence of high hunger differed from 0.9% in Vietnam to 7.9% in Cambodia. In adjusted multivariate logistic regression analysis, an increased frequency of having experienced hunger in the past month was associated with psychological distress (loneliness, Odds Ratio-OR=2.96, Confidence Interval-CI=2.16-4.04; suicidal ideations, OR=1.51, CI=1.13-2.03; and anxiety, OR=3.42, CI=2.54-4.62), substance use (tobacco, OR=1.90, CI= 1.34-2.41; and alcohol use, OR=1.76, CI=1.32-2.35), behavioral problems (truancy, OR=2.54, CI=1.94-3.32; having been bullied, OR=2.31, CI=1.77-3.01; and having been in a physical fight, OR=2.57, CI=1.97-3.35) and having had a serious injury in the past year (OR=2.61, CI=2.00-3.41).

CONCLUSIONS/NEXT STEPS: In improving psycho-behavioral health among adolescents in ASEAN, the possible contribution of hunger or food insecurity may be considered.

IAAH170017

Using your HEADSSS: The use of psychosocial assessments in young people admitted as inpatients in a paediatric service

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BACKGROUND: HEADSSS assessments are tools for carrying out psychosocial assessments for adolescents and provide a framework for focusing on the following areas- Home, Education, Eating, Activities, Drugs, Sexuality, Suicidality, Safety, and Strengths. They provide an opportunity for engagement with young people and identify strengths. HEADSSS assessments should be part of a comprehensive health assessment for young people, but previous studies have shown deficiencies in doing these with young people in an inpatient setting. This study aimed to determine the use of HEADSSS assessments in a paediatric inpatient setting and identify any patient factors associated with their use.

METHODS: A retrospective review of electronic and paper medical records was carried out for 13-15 years old admitted as in-patients under paediatric medicine in 2015. Patients were excluded if records were not available or if the patient was critically unwell or had a significant intellectual disability. Information obtained included patient demographics, diagnosis, and details regarding HEADSSS assessment. A HEADSSS assessment was considered partially complete if only some aspects were covered.

RESULTS: There were a total of 275 events of which 192 of which were eligible for analysis. A HEADSSS assessment was carried out for 63/192 (33%) events and a complete HEADSSS assessment in 31/192 (16%) events. Consent was documented in 5/63 of cases and whether done alone in 9/63 cases. HEADSSS assessments were carried out with 21/45 14 years old, 25/57 15 years olds, 36/87 females, and with 31/49 young people presenting with mental health problems.

CONCLUSIONS/NEXT STEPS: HEADSSS assessments were carried out for the minority of young people and numbers of complete HEADSSS assessments were low. Documentation of consent and whether the assessment was done alone was poor. HEADSSS assessments were more likely to be carried out with 14 and 15 years old, females and young people presenting with mental health conditions. There is significant room for improvement in both quality and quantity of HEADSSS assessments done with young people in a paediatric inpatient setting.

IAAH170026

Holistic Healthcare for Homeless Youth, A Program Evaluation

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BACKGROUND: Homelessness is a significant social issue in Canada, with youth representing 20% of the overall homeless population. The Inner City Youth Mental Health Program (ICY) was created to address the complex needs of homeless youth in Vancouver by providing low barrier access to a comprehensive intensive case management program, treatment for mental health and substance use issues, recreational and vocational services and dedicated housing for youth who were homeless in downtown Vancouver.

DESCRIPTION: Given the robust trend (and associated cost) of increasing use of emergency room visits by youth, the purpose of this quality improvement study was to compare the pattern of emergency department visits of homeless youth in the 6-months immediately prior to them being admitted into the intensive case management program at ICY with their use of services 6-months after intake.

LESSONS LEARNED: We found a statistically significant reduction in emergency visits for mental health reasons post ICY, however an increase in visits for physical illness. Our subgroup analysis suggested the majority of youth with highest reductions in ER visits post ICY had psychosis. Our subgroup analysis also showed a large proportion of youth with borderline personality disorder (BPD), cognitive deficits and unstable housing are presenting more frequently to hospital after being referred to ICY.

CONCLUSIONS/NEXT STEPS : Although ICY does have a dialectical behavioural therapy group, many of the youth with increases in ER visits refused to engage in this high-intensity therapy. Thus perhaps future strategies should include increasing engagement with low-intensity, low demand services that use stages of change model to identify interventions that are appropriate to their level of readiness. Orienting case managers and allied staff on the principles of DBT could also help to engage youth and reduce possible iatrogenic harm

such as inadvertently reinforcing self harm and suicidal behaviour. Our data suggests a need for more innovative ways to contact youth once they are referred to the team. Stronger outreach efforts including developing peer support programs and collaboration with organizations like the Vancouver Police department may be first steps. Utilizing social media or even providing youth with a phone or pager are other ideas.

IAAH170124

Body self-image and their relationship to the level of physical activity and drug use in adolescents

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BACKGROUND: This study aims at describing the profile of satisfaction / dissatisfaction of body self-image and its relationship to physical activity and drug use of 754 adolescent students of primary and secondary public schools.

METHODS: Questionnaires were applied concerning satisfaction with body image, the pattern of use of psychoactive substances and habits of physical activity of students.

RESULTS: Among the findings stand out from satisfied boys rates (68%) and partially met girls (40%). It was indicative of abuse and dependence on substances, satisfaction in boys (18%) and dissatisfaction in girls (28%). For both sexes, the rate dissatisfied practicing high level of physical activity was higher (20%) compared to the other categories.

CONCLUSIONS/NEXT STEPS: The efficacy of physical activity as a protective agent becomes reduced when risk behaviors are associated with a self-negative body image. The use of substances was proportional to the level of satisfaction and dissatisfaction in boys in girls. It is suggested, finally, that further investigations are carried out considering the complexity that this age group presents for his characterization in these aspects.

IAAH170138

“Black is beautiful and white is common”: Adolescent girls’ perceptions of self and body image

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¹Wits RHI

BACKGROUND: Adolescent girls face disproportionate risk to school dropout, teenage pregnancy, HIV and STI acquisition, and sexual and gender-based violence (SGBV). As a consequence of the inequities associated with access to educational, health, social and economic resources. Consequently, research involving adolescent girls has significantly increased in recent years; however knowledge gaps still remain regarding contextual issues and challenges as directly experienced and reported by this group. There is a dearth of literature on the relationship between self-concept (body image, self-worth and value in society) and HIV. Therefore the study explored the experiences of adolescent girls in relation to these elements and to identify the key challenges and opportunities that will inform the design and implementation of sports for development program empowering adolescent girls through asset building in three South African townships.

METHODS: Focus Group Discussions (FGD) were conducted with grade eight and nine adolescent girls from four high schools in Soweto and Khayelitsha. Field notes and transcripts of all FGD proceedings were analysed using thematic analysis.

RESULTS: Participants have described the intersecting views related to parental, social and peer pressure. Across all the groups’ participants have described social and emotional challenges associated with being an adolescent in the present day. In particular, noting the pressures to use skin whitening products and preoccupation and obsession with body images such as having a curvaceous body and big bums. They use these in order to enhance their appearance so that they can be seen as attractive to boys. Participants have also described the intersecting views related to parental, social and peer pressure.

CONCLUSIONS/NEXT STEPS: The results highlight the need for South African programs to focus on the role of self-concept in empowering adolescent girls. Moreover, there is a necessity for the involvement of adolescents as beneficiaries in the conceptualization of programs that are targeted at them.

IAAH170150

National population-based data on occurrences and psychiatric co-morbidities of eating disorder in Taiwanese youths

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BACKGROUND: Nation-wide data on the occurrence of eating disorder (ED) has been less reported among East Asian populations. This study was aimed to estimate the prevalence, incidence and psychiatric co-morbidities of ED in Taiwan.

METHODS: We identified study subjects aged 11-39 receiving diagnosis of ED in ambulatory visits or hospitalization for 2001–2012, based on the International Classification of Disease, 9th Revision, Clinical Modification (ICD-9-CM) code, from the National Health Research Institute database. We analyzed the subjects by age, breaking them into 6 groups (10-14, 15-19, 20-24, 25-29, 30-34, and 35-39), and gender. Codes for co-morbid psychiatric disorders were entered in the analysis only if they occurred from one year before to one year after the incidence date of ED diagnosis. Rates were age- and sex-adjusted to the average population within the study period. The 95% confidence intervals (CI) of incidence rate, prevalence rate and female-male ratios were estimated using the Poisson distribution.

RESULTS: The estimated mean annual incidence was approximately 10.47 (95% CI 9.93-11.00) per 100,000 residents and the one year prevalence was 20.06 (95% CI 19.32-20.79) per 100,000 residents with female predominance (female-male ratio 9.96, 95% CI 7.79-12.74). Incidence and prevalence peaked at age 20-24 for females and at age 25-29 for males. Both rates have nearly doubled within a decade. The most common co-morbid diagnoses were anxiety (55%) and major depression disorders (24%).

CONCLUSIONS/NEXT STEPS: The incidence and prevalence of ED were lower in Taiwan as compared to Western countries. However, these rates were rapidly rising, notably found in males. The majority of Taiwan patients with ED also received diagnosis for various psychiatric co-morbidities, a finding worth of clinical attention.

IAAH170151

Mental health of adolescent clients seen in a tertiary health centre in Abakaliki, South-East Nigeria

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BACKGROUND: Puberty brings on many biological, mental, and social changes. In adolescence, the prevalence of serious mental disorders has been found to be high.

METHODS: A consecutive study of adolescents seen at Federal Teaching Hospital Abakaliki for routine outpatient care. Prevalence and possible risk factors of social and mental health issues were assessed. History and physical examination were done on each client. All clients received counseling at the end of the visit. Results were presented as proportions and associations assessed using Fisher's exact test. Level of significance was accepted at $p < 0.05$. Ethical Research Declaration Ethical approval was obtained from research and ethics committee of Federal Teaching hospital before commencing the study (REC/2016/035). Consent was duly obtained from the participating adolescents as well as their accompanying relative.

RESULTS: A total of 72 adolescents were seen in the period 1st February 2016- 31st January 2017, with a male: female ratio of 1:2. Disorders of internalization such as anxiety, depression, eating disorders and sleep disorders were more common among girls. The prevalence of which ranged between 9 to 15%. On the other hand, disruptive disorders such as disorders of social behaviour were more common among boys with prevalence of 8%. Prevalence of self-injurious behaviour was found to be 13% (girls) and 4% (boys) respectively. Substance use was common among these adolescents (47%) and those who used illegal substances were more at risk of mental disorders.

CONCLUSIONS/NEXT STEPS: Adolescence is a stormy period. In routine check-ups, attention should be paid to the possibility of a mental disorder. The

presence of special outpatient clinics for adolescents can also help young people avail themselves of existing preventive and therapeutic measures since early diagnosis and treatment may prevent mental disorders in adulthood and foster age-appropriate development.

IAAH170177

A Cross-Sectional Study on Mental Stress Level in Students Practicing Yoga

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BACKGROUND: Stress can be defined as 'any challenge to homeostasis', or to the body's internal sense of balance. Yoga has been found to be effective in treating anxiety and depression, reducing stress and improving the overall quality of life. Minimal research is available on the effect of yoga on the level of stress in school going students, in particular in students going to appear in board exams. Thus it was felt to conduct a study to fill the void in this area. The objective of the study was to examine mental stress level in student practicing yoga when compared to who doesn't.

METHODS: The study design was cross-sectional and the study area was Patna, Bihar. The study period was from October 2016 to December 2016. Study tool used for this study was Perceived Stress Scale. Students studying in class X and free from mental diseases were included in this study. Students doing any other activities to reduce stress; like doing exercise, listening to music, playing games in last three months were excluded from the study. Ethical approval was taken from Nalanda Medical College. And informed written consent was taken from all the respondents for voluntary participation in local language.

RESULTS: Out of 549 students, 521 gave consent for the study. Among total students 343 were boys and 178 were girls. Among all, 293 students fulfilled study criteria. It was observed that only 74 students practiced yoga daily for last six months and at least for one hour daily, of which 41 were boys and 33 were girls. There was significant association between low-stress level and practicing yoga (Corrected S2 = 19.1780, $p < 0.05$)

CONCLUSIONS/NEXT STEPS: It was found that students who practiced yoga regularly were less stressed when compared to their counterparts who didn't. Yoga and meditation should be incorporated in daily school routine to reduce stress level.

IAAH170178

Development of a tool to screen physical, psychosocial and mental health issues in adolescents

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BACKGROUND: In India, adolescents (10-19 years) constitute 21.8% of the population. It is a period marked by rapid changes in body, psychological and social functioning which can lead to increased vulnerability and development of various problems. Most of the causes of adolescent morbidity and mortality are preventable. Hence, adolescence is an appropriate time for preventive interventions. It is not possible to clinically screen all adolescents coming in contact at health care centres. Therefore, it is required to find an easy method to identify adolescents requiring detailed medical evaluation and counseling.

METHODS: Objective of this study was to develop a questionnaire for screening adolescents requiring detailed medical evaluation for various issues. This study was done at Centre for Adolescent Health(CAH), Lady Hardinge Medical College, Kalawati Saran Children's Hospital (KSCH), New Delhi and in nearby schools. Case record forms of adolescents registered at CAH were reviewed and important problems were identified among adolescents. Henceforth questions were framed by an expert panel. Thus, a bilingual draft 1 was prepared which was then tested on adolescents visiting CAH and KSCH, and also in nearby schools. Factor analysis was done. Several questions were modified, few new questions were added after review by expert panel.

RESULTS: Two different questionnaires were developed for adolescents less than 13 years and more than 14 years i.e. Draft 2. Testing of this draft 2 was done and minor errors were rectified. Hence, the final screening tool was prepared which was comprehensive, bilingual and easy to use. Cronbach's alpha was calculated for both drafts.

CONCLUSIONS/NEXT STEPS: This screening questionnaire can be used in clinical settings as well as in schools. This tool will help to quickly identify the adolescents with various issues which can then be addressed and timely interventions would be possible.

IAAH170208

Insight into the Mental Health of Married Young Indian Women: Influence of Intimate Partner Violence

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BACKGROUND: Suicide accounts for nearly 14% of all deaths among females (15-24) in India, highlighting the fact that young women are falling victim to mental ill health. Additionally, young women are also victim of Intimate Partner Violence (IPV), one-fourth of married women aged 15 to 24 have ever experienced IPV. Though statistics from India paint a dismal picture of IPV and mental health of young women, most of the research on consequences of violence, have neglected mental health. This study addresses the research gap by looking into the effect of IPV on women's mental health.

METHODS: The sample of 13549 young married cohabiting women (15-24) in this study is part of the sub-nationally representative Youth in India: Situation and Needs, 2006-07 study. The IPV variable comprises no infliction of IPV, only Physical IPV, only Sexual IPV and both Physical and Sexual IPV in the last one year. Mental health is captured by GHQ12 and three is taken as the threshold value. Bivariate and multivariate logistic regression was done to show the association of IPV and mental ill health.

RESULTS: The results show that almost 15% of women have reported 3 or more symptoms of mental ill-health. The prevalence of mental health problem is 32 percent among women who have experienced both forms of IPV in the last 12 months in contrast to 12 percent prevalence for never violated women. Further, multivariate logistic regression reinstates the fact that the likelihood of mental health problem is more for violated women. The odds of 3 or more mental health symptoms is 3 times more for women who have experienced both physical and sexual IPV than those who have not.

CONCLUSIONS/NEXT STEPS: This study has confirmed that women experiencing violence within the marital union is more prone to mental ill health and severity of IPV that is women experiencing both physical and sexual violence, increases the risk of mental ill health manifold. This warrants attention as unlike physical ill health which is more visible and receives treatment, mental ill health often remains unnoticed and rarely gets medical attention, more so among young women.

IAAH170209

Measuring Examination Anxiety in school children:

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BACKGROUND: The Exam anxiety construct is considered as a situation-specific trait accounting for individual differences in the extent to which people find examinations threatening. The three components of test anxiety: cognitive, affective and behavioural outlined by (Zeidner) assessed to determine the degree of anxiety by key variables that is Cognitive Blocking (CB), Nervous Tension (NT), Social Derogation (SD). Examination Anxiety affects performance and shows curvilinear relationship which is facilitating at low levels, becoming debilitating at higher levels.

METHODS: Study Design: It is a School Based Cross sectional study Tool - Friedman and Benda-Jacob's Test Anxiety Scale (23 items-3 sub-factors) self-filled after explanation. No Names were asked to promote honest answers only. Age, Gender, No Siblings and Diet: vegetarian or NV Sample: 127 school children (9th, 10th STD), 77 (61%) were male and 50 (39%) were female students, divided into Group A (10-14 yrs) and Group B (15-19 yrs).

RESULTS: Age and Gender: In the total sample - Higher scores were seen in Group B (15-19 yrs) in both boys and girls but p values were not significant. Total anxiety score was higher in girls but not statistically significant. We did not get any statistically significant difference in the sub-scores-No sibling: Total Anxiety score was higher where siblings present but it is statistically non-significant Diet: Female vegetarian students have higher TEA score (13.22 vs. 12.48) but vegetarian male have lower score (11.61 vs. 12.43).

CONCLUSIONS/NEXT STEPS: Measuring Exam anxiety with a standardized tool helps to assess the area in which the children have anxiety so as to plan interventions. We did not find much difference in co-relation with number of siblings or type of diet. All scores seemed higher in older age group and girls indicating the need to focus on this age group in this school. Holding awareness programs and workshops to study better study habits and exam skills and learning to relax will improve their examination performance. Post intervention assessment can also be done using the same tool.

IAAH170232

Self-esteem in School children –correlation with Age and Gender

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BACKGROUND: Self-esteem is defined as "how we value our self". Research has shown that good self-esteem is one of the protective factors that protect young people from negative peer pressure and high-risk behaviour. AACCI does Multicentric -WHO Life skill education programs (LSE) in School children. A pre-workshop survey of the participants is done to assess which skills need more emphasis. Approval was taken from Institutional Ethical committee of AACCI. Consent was also taken from School Principal and the participants.

METHODS: Tool used –A widely used Rosenberg's self-esteem scale- self-filling questionnaire. Scale scores range from 0-30. Normal -15-25; < 15 low esteem and 26-30 -high esteem. Sample: 334 children- 10-15 yrs (Boys -214/ Girls -120) from a high SE status, English speaking, Co-Ed school from Mumbai. The group was divided into- Group 1- 10-12yrs (n =188-124 boys and 64 girls) .Group 2 13-15 years (n=146-90 boys and 56 girls). Only gender, age, and class were asked for. No names -to encourage honest answers.

RESULTS: Total Sample- mean score was in normal range: 18.64± 2.02. Boys 18.86±2.19; Girls 18.26± 1.6 Group 1 –Mean score 18.62± 2.24; Boys 18.79± 2.39; Girls 18.28±1.90. Normal range of 15-25 was seen in 96.77% boys (n=120) and 98.44% Girls (n=63). High range of 26-30 was seen in 3.23% boys (n=4) ; 1.56 % girls (n=1) .None showed low self-esteem . The difference was not statistically significant Group 2 - Mean Score 8.67±1.70; Boys 18.94± 1.90; Girls 18.23±1.22. (p<0.05). Normal range in 98.89 % boys (n=89);100% girls (n=56) p <0.05. High range in 3.23% boys (n=4) and 1.56 % girls (n=1) p>0.05. High range only in one boy (1.11%) and none in girls.

CONCLUSIONS/NEXT STEPS: The current approach to adolescence is a "strength-based approach." This strength of good self-esteem in this group can be built on further, with Life skill education. The high results in this sample are heartening. The boys showed better scores which were statistically significant in older group, which needs further surveying for causes. We are doing multi-centric studies for comparison and collection for Indian Youth Data.

IAAH170233

Role of Socio-Economic Status on the Mental Health Status of Adolescents

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BACKGROUND: Socio-economic status determined the kind of quality care and opportunities available to the adolescents. Taking into consideration the importance of socio-economic status in the life of adolescents the present investigation was undertaken to study the role of socio-economic status on the mental health status of adolescents

METHODS: The study was carried out in Jorhat district of Assam. The sample consists of 420 adolescents of the age group 14-16 years from 10 schools. Socio-economic scale by O. P. Aggarwal (1989) was used to collect information on the socio-economic status of the selected samples. The mental health status of the adolescents was assessed by using Strengths and Difficulties Questionnaire (SDQ) self report. The questionnaire consisted of five subscales namely emotional symptoms, conduct problem, hyperactivity, peer problem and prosocial behaviour. There were 25 statements, 5 statements for each of the sub components. Total difficulties score which signifies the potential mental health disorder was determined by combining the scores of four sub-components namely emotional symptoms, conduct problem, hyperactivity and peer problem. Prosocial behaviour was used to determine the strength.

RESULTS: Correlation test revealed significant negative correlation between

Total difficulties score and socio-economic status of adolescents. Similarly, statistically significant negative correlation with socio-economic status was found in emotional symptoms, conduct problem and peer problem. It was also evident from the findings that significant positive correlation exists between prosocial behaviour and socio-economic status of the adolescents.

CONCLUSIONS/NEXT STEPS: This shows that with the improvement in socio-economic status the mental health problems of adolescents decreases. A family with better socio-economic status can provide protective and nurturing environment to adolescents which can fulfill both physical and psychological needs which indirectly promote their mental health. The study will be helpful to professional working for the welfare of adolescent's health

IAAH170253

Examination anxiety in school children: Age, Gender and No. of siblings *Latika Bhalla¹, Swati Bhawe², Shailaja Mane³, Anuradha Sovani⁴*

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BACKGROUND: Adolescents can have anxiety for a number of reasons. Examinations have a great role to play in Indian children as there is intense competition and heavy academic load. This can result in nervous tension or blanking our children during the examination which severely affects the results in spite of all adequate preparation. Bad Examination results create a havoc in the minds of the adolescent and the family as that decides "worthiness of the person." AACCI holds school workshops to deal with Examination anxiety. An assessment to see degree and type of Examination anxiety is done by using standardized tool.

METHODS: Tool - Friedman and Benda-Jacob's Test Anxiety Scale (23 items-3 sub-factors) self-filled after explanation. No Names were asked for to promote honest answers -only Age, Gender, and Number of Siblings. Sample:712 schoolchildren (8th, 9thSTD)-two schools in Delhi, India-divided- Group I - 10-14 yrs and Group II 15-18 yrs.

RESULTS: Age and Gender:Gr II scores were higher in the total sample: CB Boys (p=0.031) girls (p= 0.015). Comparison of schools Gr II had higher scores in both boys and girls School 1 CB significant in Girls (p=0.029). School 2 Boys CB (p= 0.013) but girls NT(p=0.024) No sibling:School -1 -Gr II -TEA (p=0.049); CB (p=0.003) One sibling: Total sample Gr II - CB (p=0.021) and NT (p=0.045)/School 2- Gr II CB (p=0.020) >2 siblings No significant difference.

CONCLUSIONS/NEXT STEPS: In this study, all scores were higher in older age group possibly due to academic overload in higher classes and increased maturity with age. Because of this survey we have got insight as to what are the needs of each school and we can now plan customized workshops for interventions. Cognitive dysfunction was very significant, especially in boys in both schools. This shows, need to teach better study habits and exam skills to overcome CB. School 2 shows in addition, high NT in girls that need teaching relaxation techniques to overcome Nervous tension.

IAAH170263

Mental health literacy: knowledge and beliefs of prevention of the depression among engineering undergraduates of the University of Peradeniya

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BACKGROUND: Prevention of a disease is more important than cure, especially, if the disease is having a high burden and potentially affects a large population. This is particularly true in the case of depression. Knowledge and beliefs of the disease prevention plays a pivotal role in combating the stigma and misconceptions surrounding the disease as well as empower the population to achieve the theme of the WHO for 2017 "depression: let's talk". Study assessed mental health literacy: knowledge and beliefs of prevention of the depression among the engineering undergraduates at the University of Peradeniya and selected associated factors.

METHODS: The study was conducted at the Faculty of Engineering, University of Peradeniya, Sri Lanka, among 1631 undergraduate students in 2016 as a descriptive cross sectional study. The data on their knowledge and beliefs on

prevention of depression and the associated factors were collected utilising a self-administered vignette-based questionnaire. MATLAB 7 and SPSS 20 were used for the entering and the analysis of data. Median and inter-quartile range (IQR) were used to analyze the percentage scores of the knowledge and beliefs on prevention of depression. Odds Ratio (OR) with 95% confidence intervals (95%-CI) and p-value (p) were used to analyze the strength of association of the noted associated factors.

RESULTS: The median percentage score for knowledge and beliefs of prevention of depression were 8.6(IQR: 0.00-37.1) and 5.7(IQR: 0.00-31.4). Associated factors for knowledge were: females to males (OR=1.44; 95%-CI: 1.10-1.88, p=0.001), Sinhalese to non-Sinhalese (OR=2.60, 95%-CI: 1.63-4.16, p=0.001) and Buddhists to non-Buddhists (OR=2.78, 95%-CI: 1.70-4.53, p=0.001), currently having romantic relationship (OR=0.89, 95%-CI: 0.67-1.19, p=0.441), staying at home with parents (OR=1.00, 95%-CI: 0.74-1.33, p=0.976). Associated factors for beliefs were: females to males (OR=1.95, 95%-CI: 1.50-2.54, p=0.001), Sinhalese to non-Sinhalese (OR=2.31, 95%-CI: 1.46-3.67, p=0.001), Buddhists compared non-Buddhists (OR=2.73, 95%-CI: 1.65-4.51, p=0.001), currently having romantic relationship (OR=0.87, 95%-CI: 0.65-1.17, p=0.360), staying at home with parents (OR=1.12, 95%-CI: 0.84-1.50, p=0.438).

CONCLUSIONS/NEXT STEPS: According to the study, it is evident that the mental health literacy on prevention of depression among engineering undergraduates of the University of Peradeniya is unsatisfactory and inadequate.

IAAH170268

Effectiveness of Strengths Based Holistic Development Programme on Self-Esteem, Coping and Personality of Adolescents in South India: A Matched Controlled Design

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BACKGROUND: Psychologists emphasize the importance of moulding the moral development and values during the adolescent phase; a sensitive period when adolescents make intuitive leaps and exhibit eagerness to learn. A few studies have shown the effectiveness of life skills, youth development programmes and strengths based school counselling programmes on adolescents' school performance and behaviour. The current study tests the effectiveness of the strengths based holistic development programme in a sample of adolescents in South India.

METHODS: A total of 120 adolescents from two private schools in Chennai, aged 14-18 years, English speaking and committed to complete the 3 weeks of intervention were included in the study. The intervention programme titled 'Infiniti4' was developed by INFINITHISM - an institute working towards the holistic growth of adolescents and adults. The adolescents were divided into 3 groups of 40, each matched on age, gender and education level: 1) infini14 - intervention 2) were provided with a growth related magazine 'Infinitoughts', and growth videos 3) Control group. All adolescents were assessed at the start of the study; end of the 3 weeks and at the end of the 3 months on variables of self-esteem, food habits, coping and personality.

RESULTS: RMANOVA showed a significant improvement in self-esteem (F: 0.19, p<0.01), food-habits (F: 27.6, p<0.01), positive coping (F: 3.2, p: 0.01), negative coping (F: 6.02, p <0.01) and personality (F: 15.3, p<0.01) over the period of 3 months in the intervention group as compared to the other two groups. Bivariate Correlation at baseline depicted that the duration of following a spiritual/ religious path (prior to enrollment in the study) was significantly positively correlated with self-esteem scores (r: 0.24, p: 0.01). Further, the education levels of their father (r: 0.19, p: 0.04) and mother (r: 0.29, p< 0.01) were also significantly positively correlated with the food-habits.

CONCLUSIONS/NEXT STEPS: 'Infiniti4' is an effective holistic development programme for adolescents. Based on the tenets of the Strengths perspective, this programme can be incorporated as part of the Indian education curriculum in private and government schools to help adolescents develop positive self-concept to face challenges and imbibe values through the process of development.

IAAH170272

Determining the Effectiveness of Mindfulness Meditation in Reducing Aggression of Young Children

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BACKGROUND: Aggression involves effective thought processes and results from blocking of a need or desire. Studies suggest an increase in aggression among youngsters and decrease in the average age of individuals involved in aggressive acts. Mindfulness helps in the meta-cognitive processing of information for controlling effective processes and in changing the metacognitive beliefs regarding aversive cognitions. The present study attempts to determine the effectiveness of Mindfulness Meditation in reducing aggression of children.

METHODS: In this pre-post study, after obtaining informed consent, seven healthy school-going children (age 8-13) belonging to urban middle socio-economic status families were included using purposive sampling method. Normative Beliefs about Aggression (Huesmann et al., 1992) and Beliefs about Aggression and Alternatives (Multisite Violence Prevention Project, 2001) scales were administered pre- and post-intervention and at one-month follow-up. These children participated in 30 days of mindfulness meditation practice lasting from 20 to 35 minutes each day. Meditation exercises included –breathing exercises, guided body-scan meditation, 10 count breathing meditation, concentration meditation, and visualization exercises and eating meditation. After each exercise, participants were asked to share their experiences of the meditative state. Semi-structured interviews were also conducted every 10 days, in which the participants and their parents shared their reflections about the effects of meditation exercises.

RESULTS: Wilcoxon signed-rank test was used for data analysis which showed significantly lower scores on two subscales - 'Beliefs about Aggression' and 'Approval of Retaliation Aggression', at post-intervention assessment and at one-month follow-up as compared to baseline (both $P < 0.05$). Important areas of change identified from thematic analysis of qualitative data obtained included – reduction in participants' anger reactions and less involvement in fights with other children; better concentration and improved performance in studies; and behavioural changes like better eating habits and feeling of relaxation throughout the day.

CONCLUSIONS/NEXT STEPS: Mindfulness meditation could be a useful tool in curtailing retaliation aggression and beliefs about aggression in young healthy children and the effects can be generalized to non-target responses such as eating habits and feelings of relaxation.

IAAH170283

A Nationwide Study on Bullying among the Malaysian Adolescents

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BACKGROUND: This is a cross-sectional study on school bullying. It involved 4,469 adolescents from Malaysian public secondary schools. The objective was to determine the prevalence of bullying and associated individual, peer, family, school and environmental factor.

METHODS: Information on bullying involvement were gathered using a Malaysian self-rating questionnaire. Randomized multistage sampling was applied in recruiting the samples from all 16 states in Malaysia.

RESULTS: The respondents were aged 13, 14 and 16. Total response rate was 89.4%. Out of 4,469 students responded female was 52.2%. Malays were the majority (70.6%), followed by Chinese (15.6%), Indian (13.1%) and others (0.9%). It showed 79.1% of them were involved in bullying. Among them perpetrators (14.4%), victims (16.3%) and mixed involvement (48.4%). A high total of 75.7% suffered different level of mental distress. In the multivariate analysis, perpetrators were significantly associated with being a male, deliberate frequent skipping lessons and misbehaving in class, and no sense of belonging towards their school. Victims were significantly associated with being younger age and obedient in classroom. Both perpetrator and victim significantly associated with suffering from mental distress, prolonged access to social media and longer time spent with friends.

CONCLUSIONS/NEXT STEPS: Besides other significant factors, it implied

that the higher level of bullying involvement associated with higher level of mental distress. Such situation is capable of destroying them given its adverse consequences on their psycho-social health and negative behaviors in later life. As such, further interventions enhancing adolescent mental health and other relevant factors will create substantial impact in reducing bullying involvement in Malaysia.

IAAH170286

Identifying adolescent mental health problems: The use of 17-items Pediatric Symptom Checklist (PSC-17) and Child Depression Inventory (CDI) among teenagers in Jakarta

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BACKGROUND: Adolescents are expected to be physically, emotionally, mentally ready and educated to live in globalization era. Period of adolescence is a crucial time of life cycle development facing some internal or external conflicts. Adolescents often have instability of self-awareness and self-image problems. A mix of this situation can be a trigger to develop depression and problems with emotional and behavioral in adolescents. National basic health research (Riskesdas) shows that prevalence of mental health problems among Indonesian adolescents is about 10%. Objective: To identify the depression and emotional and behavioral problems in adolescent using CDI and PSC-17.

METHODS: A cross-sectional study using the CDI and PSC-17 questionnaires was conducted to 240 teenagers aged 11-18 years who were enrolled as students in several Junior and Senior High Schools in Jakarta, the capital city of Indonesia. Parental consents were collected prior the study.

RESULTS: Total of 221 teenagers completed both CDI and PSC-17 questionnaires and included in this study. Mean age of respondents was 13.4 (1.55) years old with 56% female teenagers. There were respectively 24% and 18% adolescents who were identified facing mental problems using CDI and PSC-17. Of the total results, 66% consistently showed normal and 7% showed mental health problems using combination both CDI and PSC-17. About 23% of total sample showed internalizing, 5% externalizing, and 6% attention problems based on PSC-17. Females were more likely to have mental health problem than males.

CONCLUSIONS/NEXT STEPS: CDI and PSC-17 are good screening instruments for health professional to identify mental health problems in adolescent. Adolescent mental health is still a problem in Jakarta. Early identification of mental health problems leads to early intervention for better outcome.

IAAH170317

Young Women's mental health- Narratives from rural North India

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BACKGROUND: Young people's mental health (MH) is an emerging public health concern with issues like suicide becoming leading risk factors for morbidity and mortality. MH issues start developing early and if undetected impact cognitive development of young people. The situation worsens for young women who operate within multiple vulnerabilities emanating from gender biased structures. National Crime Records Bureau statistics (2014) reveal that main causes of suicide among young women are marriage related issues, violence and abuse. The biomedical discourse on mental health, however, fails to understand these social triggers and their linkages with MH. This study departs from a medicalised approach of mental illness, to explore perceptions and experiences of MH among young women, healthcare and support available and accessible to them

METHODS: Exploratory qualitative study conducted in rural Rajasthan and Uttar Pradesh; multiple data collection methods used - focus group discussion with women, in-depth interviews with young women aged 18-24 years and key informant interviews

RESULTS: Field-based research highlights how adverse situations like poverty, discrimination, surveillance/ control, early/ forced marriage, discontinuing education, work burden, violence, childlessness, debilitating diseases, affect

MH of young women. Burden caused by gendered social norms, in absence of necessary care and support, cause distress which goes unrecognized. Over time, in situations where the functionality and household work is impacted, external help is sought. Plural healthcare options are sought; Families consult medical practitioners, alternate/ faith healers simultaneously. The public health system in these areas neither recognizes nor is equipped to address such situations of distress which could become potential precursors to MH problems

CONCLUSIONS/NEXT STEPS: Young women's expressions of MH were situated in contexts of compromised social wellbeing resulting from inequality, gendered norms that govern their lives. Understanding these determinants and establishing linkages is crucial for a responsive health system that promotes young people's MH beyond providing curative services. The current biomedical understanding of MH fails to capture how structural vulnerabilities are potential triggers to mental health problems focusing only on mental illness. However, the recent national adolescent health strategy provides spaces to build linkages which can be further fostered through continued advocacy using findings from such research studies.

IAAH170324

Incidence, timing, causes and risk factors for death in young people exposed to the youth justice system: a retrospective data linkage study

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BACKGROUND: Young people who have contact with the youth justice system are characterized by profound disadvantage and are at increased risk of poor health outcomes including mental disorder and substance dependence. In Australia, Indigenous people are over-represented in the youth justice system by a factor of 15 and in youth detention by a factor of 24. The aim of this study was to examine the incidence, timing, causes and risk factors for death in young people who have had contact with the youth justice system.

METHODS: We linked youth justice records in the state of Queensland, Australia 1993-2014 (N=51,263) with adult correctional records (1994-2015), the National Death Index (1993-2015), and the National Coroners Information System (2000-2015) using established probabilistic methods. We calculated all-cause and cause-specific crude mortality rates and indirectly standardized mortality ratios. We used Cox proportional hazards regression to identify risk factors for death, treating episodes of youth detention and adult incarceration as time-varying covariates. We plotted Kaplan-Meier survival curves stratified by sex and Indigenous status.

RESULTS: We identified 1455 deaths in the cohort over 659,337 person-years of follow-up, giving an all-cause crude mortality rate (CMR) of 2.2 (95% CI 2.1-2.3) per 1000 per year. The leading causes of preventable mortality were suicide (31.6% of all deaths), road traffic accidents (16.1%), drug overdose (12.1%), and violence (3.5%). The all-cause CMR was higher among boys than girls (CMR=2.4, 95% CI 2.3-2.5 vs. CMR=1.6, 95% CI 1.4-1.8), and higher among those who had been in detention (CMR=3.3, 95% CI 2.9-3.6) than in those who had only ever been supervised in the community (CMR=2.4, 95% CI 2.2-2.6) or only ever charged with an offence (CMR=1.8, 95% CI 1.7-2.0). The rate of mortality in the cohort was more than 3 times higher than in the age- and sex-matched general population (SMR=3.3, 95% CI 3.2-3.5).

CONCLUSIONS/NEXT STEPS: Justice-involved young people are at markedly increased risk of preventable death. The majority of deaths are related to poor mental health and/or substance use. There is a pressing need for development and rigorous evaluation of evidence-informed, culturally capable and scalable preventive interventions, to reduce unnecessary deaths in these profoundly vulnerable young people.

IAAH170347

Sleep hygiene and sleep quality among adolescents living in India: a cross sectional study

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BACKGROUND: Good quality sleep is essential for adolescents for mental and physical well-being. Along with physical, emotional and neurobiological

changes, the sleep centre undergoes important developmental changes. Sleep hygiene is defined as a set of behavioral and environmental recommendations intended to promote healthy sleep. The objective of this study was to determine self reported sleep hygiene, sleep quality, sleep hygiene factors important for adolescents, the relationship between sleep hygiene and sleep quality and daytime sleepiness among school going adolescents in Vellore, South India.

METHODS: Design: An observational questionnaire based cross sectional study. Setting: Community based school survey in a semi-urban setting in three schools in Vellore city. Data collection: Nonprobability sampling technique was used to collect data from students studying in 9th and 11th grades. Participants completed Adolescent Sleep Wake Scale (ASWS), Adolescent Sleep Hygiene Scale (ASHS) and Epworth sleepiness scale modified for children and translated into vernacular language.

RESULTS: 257 students aged 12 – 17 years were included. Population mean score for sleep hygiene was 4.29 (SD 0.79) and that for sleep quality was 4.25 (1.16), on a scale of 1- 6. Individual domain mean scores were, 3.72 for cognitive domain, for sleep stability and 5.14 for daytime sleepiness. Sleepiness was reported in 12 % of study population. Overall correlation coefficient between sleep quality and sleep hygiene was moderate -0.63 (p value < 0.05). Sleepiness and sleep quality (r= -0.30) and sleep hygiene (r= -0.23) had weak inverse relationship.

CONCLUSIONS/NEXT STEPS: Overall the participants reported good sleep hygiene and sleep quality. Sleep hygiene is an important determinant of sleep quality in our study population indicating the importance of advising sleep hygiene to adolescents. Participants reported using electronic media like television, phones closer to bedtime. They had inconsistent sleep schedule that can adversely affect sleep. Sleep hygiene and sleep quality were inversely related to daytime sleepiness.

IAAH170349

Adolescent Sleep Hygiene Scale and Adolescent Sleep Wake Scale – Factorial Analysis and Validation for Indian Population

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BACKGROUND: Sleep deprivation is a matter of public health importance among adolescents. We used adolescent sleep-wake scale and adolescent sleep-hygiene scale to determine the level of sleep quality and sleep hygiene respectively of school going adolescents in Vellore city of India. The objective of the study was to do a factorial analysis of the scales and validate it for use in local population.

METHODS: Design: Observational questionnaire based cross sectional study. Setting: Community based school survey in a semi-urban setting in three schools in Vellore city. Data collection: Nonprobability sample was collected from students studying in standard 9 and 11. Students filled Adolescent Sleep Wake scale (ASWS) and Adolescent Sleep Hygiene Scale (ASHS) translated into vernacular language. Data Analysis: Exploratory Factorial Analysis was used to see the factor loading of various components of the two scales. Confirmatory factorial analysis is subsequently planned for assessing the internal validity of the scales.

RESULTS: 257 adolescents were included in the study of 12 – 17 years old. Exploratory factorial analysis of adolescent sleep hygiene scale indicated significant factor loading for 18 items from 28 items originally devised by the authors and has been reconstructed to four domains instead of 9 domains in the original scale namely sleep stability, cognitive – emotional, Physiological - bed time routine - behavioural arousal factor (activities before bedtime and during bed time), Sleep environment (lighting and bed sharing). Factorial analysis of Adolescent sleep wake scale showed factor loading of 18 items out of 28 items in original scale reconstructed into 5 aspects of sleep quality.

CONCLUSIONS/NEXT STEPS: The factorial analysis gives reconstructed scales useful for the local population. Further, a confirmatory factorial analysis has been subsequently planned to determine the internal validity of the scales for local population.

IAAH170372

Depression among School Going Adolescents in Eluru Town (West Godavari District), Andhra Pradesh

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BACKGROUND: World Health Organization defines adolescents as individuals aged 10-19 years and 1 in 6 persons in the world is an adolescent: that is 1.2 billion people. In India, they account for 20% of the population. Most of them are healthy, but there is still significant death, illness and diseases among adolescents. Depression is a common illness worldwide, with more than 300 million people affected. Depressive symptoms often start from the young age that reduce people's functioning and are often recurring. Recognizing children who were suffering from depression in early stages is important to build life skills and providing them with psycho-social support apart from medical treatment. **OBJECTIVES:** 1. to estimate the prevalence of depression among school going adolescents. 2. To study the Socio-demographic determinants and its relationship with depression.

METHODS: A School based cross-sectional study was done in students of 6th to 10th standard of 6 schools in Eluru, Andhra Pradesh. A total of 900 students were studied based on sample size calculated taking prevalence of 25% with 95% Confidence Interval and relative precision of 12%. A predesigned, pretested and semi-structured questionnaire was used to collect data. Socio-demographic profile was taken then and depression was measured using Becks Depression Inventory II (BDI II) questionnaire by interview method.

RESULTS: Out of 900 students 471(52.3%) were males and 429(47.7%) were females. The mean age of the study population was 13.4 ± 1.5 years. 418(46.4%) students were suffering from depression with a mean BDI II score of 13.58 ± 8.58 S.D. Factors like sibling rivalry, loss of parent, abuse by parents, getting teased by friends at school, physical punishment by teachers and students who were unable to cope up with studies had a significant relationship with depression. Most of the students adopt coping methods like playing sports (71.8%), listening to music (74.3%), spending time with their friends (74.1%) when felt stressed.

CONCLUSIONS/NEXT STEPS: The findings in the present study emphasize the need for periodic screening for depressive symptomatology and identifying children who need further intervention.

ACKNOWLEDGEMENT: This research was sponsored by MAMTA Health Institute for Mother and Child, New Delhi.

IAAH170377

Mental health condition among Adolescents living in the slums of Lucknow city: A cross-sectional study

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BACKGROUND: In the recent past, there has been a rise in the prevalence of mental illness and maladaptive behaviors among adolescents. Urban adolescents from the lower class have to struggle for survival and grow in impoverished, disadvantaged environment making them vulnerable to several risks. This neglected population has become a major reservoir for a broad spectrum of adverse health conditions. India is the home of more than 253 million adolescents, who account for almost 21% of the country's population. Therefore, the objective of this study was to estimate the prevalence and determinants of mental health disorder among adolescents' living in the slums.

METHODS: Data used for this study was collected during September 2015 to February 2016 in Lucknow. Out of total 590 study subjects, 309 were from notified slums, and 281 were from non-notified slums, which were selected using multistage cluster sampling. The mental health was assessed using GHQ-12. The median score was used as a cutoff value for lower and higher levels of mental disorders. To check association among mental health and background characteristics, Chi-square test and multinomial logistic regression were used. The sampling adequacy was detected through Kaiser-Meyer-Olkin test (0.83). Additionally, the study was carried out to determine the reliability, validity and factor structure of the GHQ-12

RESULTS: Overall, one-third (33%) of the adolescents had severe mental disorders. Gender, type of slum, religion was significantly associated with mental health problem among adolescents. Results revealed that the age of adolescents had a significant effect on the mental health. Education has emerged an important predictor; the increasing education level increases chances of having mental health problems. Reliability analysis showed satisfactory results, with a Cronbach's alpha of 0.79.

CONCLUSIONS/NEXT STEPS: Using the GHQ-12, the study revealed that a considerable proportion of slum adolescents' had been identified as on the verge of facing psychological distress. Addressing demographic, socioeconomic factors will also be central to long-term improvements of adolescents' health in slums. The findings of the present study also indicated that the GHQ-12 is a useful instrument to be used for assessing the overall psychological well-being of slum adolescents.

IAAH170386

Validation of a tool to screen physical, psychosocial and mental health issues in adolescents

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BACKGROUND: Adolescence is a period of rapid growth not just physical and biological but also emotional, cognitive, social and psychosocial. Adolescents often face problems related to self: their home, school and society which can be constant stressors leading to poor quality of life and development of physical and mental disorders. It can also lead to poor academic performance and high-risk behaviour like drug addiction, alcoholism, smoking, truancy or sexual abuse. For prevention of these potential diseases and behaviour, we need to identify risk factors using an appropriate screening tool. Subsequently, they may be referred to a health care facility for detailed medical evaluation and counselling.

METHODS: 372 adolescents from OPD, inpatients and nearby schools of Kalawati Saran Children's Hospital were instructed to fill the questionnaire after providing adequate privacy and confidentiality. The filled questionnaires were then stored separately. It was followed by a semi-structured interview (Gold Standard) based on HEADS (WHO ADOLESCENT JOBAIDS 2010). Every subject was classified after interview in one of the four categories and informed about the same through a debriefing form. Responses by 298 subjects were included for analysis. Cronbach's alpha estimation was done by STATA. Sensitivity, specificity and predictive values were calculated for comparison to gold standard (HEADS based interview).

RESULTS: The internal validity of the tool (Cronbach's alpha) was 0.83. It was 0.81 for less than 13 years old and 0.86 for more than 14 years old. Various cut-offs were used to identify subjects classification similar to gold standard. The cut-offs having the best set of sensitivity, specificity, predictive values were selected for final classification. This tool had good discriminative properties to identify adolescents having suicidal tendencies and those requiring evaluation for issues affecting their daily routine. Also, adolescents having issues not affecting their daily routine can be provided with appropriate counselling.

CONCLUSIONS/NEXT STEPS: Centre for adolescent health (CAH). KSCH, screening tool can be used in adolescents 10 – 19 years of age (both boys and girls in OPD and schools) to identify subjects having various issues requiring evaluation or emergency intervention. This tool can also provide information on risk factors for the development of non-communicable diseases.

IAAH170394

Effects Physical Activity on Happiness And Anxiety

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BACKGROUND: The aim of this study was to study the effects of physical activity on happiness and anxiety. So far many researches and studies have proved that there is a decrease in anxiety and an increase in the level of happiness after physical activity is carried out on different samples like women, older adults etc. But the present study focused on a sample of 10 adolescents ranging from age 15 to 17 years (M= 16).

METHODS: The participants were assessed for above average levels of anxiety before their selection for this study. The data for levels of happiness and anxiety were collected using different questionnaires. A pre-planned physical activity program was implemented on these participants for the next 30 days with 15 to 45 minute physical activity daily. A combination of a variety of physical activities was carried out by these participants. Post-training effects were recorded by collecting their scores on the same two questionnaires and were then compared to their pre-training scores. Results were calculated using Wilcoxon Signed-Rank Test and average method.

RESULTS: Results indicated a significant difference between pre-intervention and post-intervention scores on happiness as well as anxiety. The average scores for happiness increased from pre-intervention to post-intervention. Whereas, the average of scores on anxiety decreased after intervention of physical activity was introduced. These results clearly indicated a positive effect on the participants by increasing their level of happiness and decreasing their anxiety levels.

CONCLUSIONS/NEXT STEPS: Concentration is often placed on the treatment of patients or individuals with psychological disorders. But very less focus is paid to the fact that prevention can be better than cure. An individual can avoid these symptoms or disorders by just being happy. Thus, the implication of applying physical activity was not to represent it as an intervention to treat patients but as an intervention to avoid such cases.

IAAH170402

Growing Incidence of Depression & Anxiety among Delhi Adolescents

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BACKGROUND: In India, 57 million persons have depression and 38 million suffer from anxiety disorders. The consequences of these disorders in terms of lost health are huge. Depression is ranked by WHO as the single largest contributor to global disability, therefore there is a need to investigate the maturation patterns (gender specific) & relationship with food intake & nutritional status which impact the overall health of an individual.

METHODS: 300 adolescents (selected randomly from public schools of Delhi) participated in this cross-sectional study. For the assessment of depression & anxiety Child Behaviour Checklist (CBCL; administered to the parents) and Early Adolescent Temperament Questionnaire (EATQ-R; self-report) were used. Data was also collected on socio-demographic profile, physical activity, dietary habits, food intake (24hr recall, Food Frequency Questionnaire), body image perception, locus of control, eating behavior (TFEQ; self-report), & anthropometric (Weight, Height, BMI, Body fat %) profiles.

RESULTS: 17% of the subjects are suffering from depression & anxiety. Data on other parameters are still being analyzed & an effort is being made to find association between various parameters.

CONCLUSIONS/NEXT STEPS: The ongoing study will highlight the impact of mental health disorders on nutritional status & diet quality of adolescents. It will also serve as a strategic tool for management & prevention of mental health disorders among adolescents.

IAAH170451

Prevalence and associated factors of psychological distress among trainee teachers in National Colleges of Education in Western Province, Sri Lanka

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BACKGROUND: Psychological well-being plays a key role in good health of an individual. Pragmatic evidence suggests that trainee teachers face a lot of challenges when achieving their academic goals which has the potential to impact on their psychological well-being.

METHODS: A cross-sectional descriptive study was carried out among 404 trainee teachers representing first and third study years to assess prevalence and associated factors of psychological distress among trainee teachers in all four national colleges of education in Western Province, Sri Lanka. Probability proportionate stratified random sampling method was used. The assessment of

psychological distress was done using General Health Questionnaire-30 (GHQ-30). Score equal or over six out of thirty was taken as cut-off for psychological distress. A self-administered questionnaire was used to collect information regarding socio-demographic, work and non-work related characteristics. Data was analyzed using SPSS package, associations were identified using odd ratio and Chi-Square test.

RESULTS: The mean age of trainee teachers were 23±1.07 years. Majority were Sinhalese (76.8%; n=297) and 18.6% (n=72) were Muslims. Over 90% (91.7%; n=355) were females and 8.3% (n=32) were males. Out of the study sample, 18.1% (n=70) had average family monthly income of less than 10,000 rupees and 38.2% (n=148) were the eldest in the family. The prevalence of psychological distress among trainee teachers was 37.2% (n=144) with a population confidence interval of 32.5% to 41.9%. Age, ethnicity, position in the family, presence and the employment status of parents were not significantly associated with psychological distress (p>0.05). Dissatisfaction at work, work overload, not being rewarded for good work, lack of teaching competence, lack of opportunities to use abilities, fear of failure in examinations and having financial and other problems, incompetence in English were statistically significant associations with psychological distress (p<0.05).

CONCLUSIONS/NEXT STEPS: Study reflects the importance of advocating the higher officials to improve the training environment and to incorporate life skills programs in stress management into the curriculum. Study further recommends the establishment of professional counseling services at national colleges of education.

IAAH170464

Psychosexual development and gynecological diseases in adolescents

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BACKGROUND: Psycho-sexual development of adolescent girls (PSDA) determines changes in the body that contribute to the manifestation of gynecological pathology in adolescents and require a medical consult.

METHODS: The study included 115 adolescents that came to the YFHS NEOVITA. Adolescent's development was determined based on Tanner's pubertal staging. The research was carried out with the help of HEADS tool. The Guideline of the integrated assistance of adolescent's health was used as an important reference tool.

RESULTS: Adolescent age ranged from 15 to 18 years, in 87 cases (75.7%) adolescents were going to school and in 17 cases (14.8%) – going to University. Relations with parents were assessed as positive in 92 cases (80%), although teens responded they cannot openly discuss the topic related to PSDA with parents. In 28 cases (24.3%) adolescents reported that they have good relationships with parents, and for 15 girls (13.0%) family life is associated with disagreements, being characterized by risky behavior and pathological forms PSDA. In 28 cases (41.2%) was PSDA was disharmonic: in 13 cases (19.1%) was repressed, in 5 cases (7.3%) it was registered as slowed, in 7 cases (10.3%) - suppressed, and in 15 patients (22.1%) - accelerated. In 96 cases (83.4%) teenagers reported being in love, in 61 cases (53.0%) had erotic dreams, have been embraced or kissed in 92 cases (80%) and 32 girls (27.8%) confirmed that they had at least one sexual act. This study pointed out the following gynecological nosologies: genital tract infection (21.7%), pelvic inflammatory disease (29.6%), juvenile dysfunctional bleeding (45.2%). Dysmenorrhea was diagnosed in 91 cases (79.1%) and in 31 cases (27.0%) - urogenital infection was registered. Teenage girls suffered from a headache, abdominal pain, distress, depression, difficulty sleeping, etc. The morbidity rate was determined to be 35.5%.

CONCLUSIONS/NEXT STEPS: Medical and social reality shows that adolescence is located in an informational vacuum, proper training of adolescents in sexual and reproductive health being both important and difficult. Almost every adolescent enrolled in the study was diagnosed with 1-2 gynecological and/or somatic diseases and the morbidity level at 15-18 years old is not showing to be very promising.

IAAH170509

A Cross-sectional study on body image dissatisfaction and factors influencing it among adolescent college girls in an urban area of Coimbatore

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BACKGROUND: Body image relates to how people think and feel about their own body and adolescents become more conscious of their body and appearance during this period. Due to increased globalization and consequent westernization of Indian societies, it becomes imperative to study body shape concerns in our adolescents. These areas remain unexplored areas and there is paucity of body image related studies. Hence the study aims to find out the proportion of girls dissatisfied about body image and the factors related to body image dissatisfaction

METHODS: A cross-sectional study was conducted among college girls (18 to 19 years) from a college which had both self-financing and aided college that covered students from various socio-economic background. Totally 1220 participants were enrolled in the study. A semi-structured questionnaire was used to collect the data on body image dissatisfaction and factors associated with body image dissatisfaction namely demographic factors, socio-economic & media influence, socio-cultural pressure, self esteem, perfectionism and depression. Height and weight were measured according to WHO standard procedures.

RESULTS: The study showed that of the total 1220 college girls 77.6% were found to have body image dissatisfaction. 71% of the girls in their normal BMI were also dissatisfied with their body image of which 58.3% wanted to reduce weight. Also in the underweight category, 23.3 % were satisfied and 7.4 % wanted to reduce their weight further showing the tendency of the college students to have a thin appearance. It was found that factors like higher BMI, socio-cultural pressure to be thin, depression and the internalization of media images due to effect of media were all significantly associated with body image dissatisfaction.

CONCLUSIONS/NEXT STEPS: This study establishes the fact that body image perceptions and dissatisfaction is no longer a western concept and affects our adolescent girls to a great extent. Hence, effective interventions have to be planned to help adolescent population to gain adequate knowledge on body image perceptions and the importance of a positive perception. This knowledge, in turn, will protect our young generation from pressures of negative body image and its ill effects on health.

IAAH170514

Profile, pattern and correlates of inhalant use among children in India.

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BACKGROUND: Prevalence of volatile substances (inhalants) use is higher among children compared to adult population. These substances are cheap, easily available, legal and have both short and long-term health consequences. The aim of the paper is to present the nationwide profile of inhalant-using children.

METHODS: The data presented is a part of the first multi-site nationwide survey (135 sites spanning 29 states/UTs) in India. Children between 5-18 years who had history of any substance other than tobacco in last one year (recent use) and were willing to participate in the study were included. Of the total sample of 4024 substance-using children included in the study, 34.5% (n = 1388) had recent inhalant use and is the sample of interest for the current paper. The survey tool consisted of a 95-item interviewer-administered questionnaire which included sub-sections for demographic profile, family and peer related factors, stress, physical and psychological health, substance use and legal issues.

RESULTS: Mean age was 14.96±2.6 years, 95.2% were male. Street-children constituted 32% of inhalant users, 16.6% were living alone. Nearly 24% were regular school goers, 44.2% had dropped out of school. Daily use was found in 44.4% subjects. Common sources of money for inhalant use were rag-picking (28%), borrowing money from family (36%) and stealing (10%). Drug-using family member (57.3%), family fights (50%) and physical abuse (53.5%) were

common. Although 53.1% realise the need to quit, less than half (44.1%) made any attempt towards quitting, 28.3% felt need for any help to quit. Tobacco (23%), alcohol (11.3%), Heroin (5.4%), cannabis (33.4%), pharmaceutical opioids (18.8%), and injectable drug (13%) use were also reported. There was a wide variation in state-wise distribution of inhalant users, 11.6% in Manipur and 10% in Delhi to 0.1% in Uttarakhand.

CONCLUSIONS/NEXT STEPS: The paper highlights the profile and pattern of children and adolescents using inhalants across many parts of India. Most of them were living in homes with family, had poor educational status and socio-familial dysfunction were common, dispelling the myth that inhalant use is mostly found amongst street children and homeless. The felt-need and help-seeking to quit use of drugs is also poor. Thus, there is a need to reach-out to this population group.

IAAH170525

Adolescents Health & Psycho-Sociological Drift associated with Smart Devices – A Cross-sectional study in Gwalior City

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BACKGROUND: Advent of every technology brings change either positive or negative but as always it depends the user and usage, not the tool. India is emerging as one of the largest consumers of smart devices which are becoming an integral part of the modern society with adolescent as the major user. According to WHO, 67% of premature deaths and 33% of the disease burden among adults is due to behavioral patterns that emerge during adolescence. Hence, this study was carried out to determine prevalence of smart device use and psychological and social behavior associated with it among adolescent population of Gwalior city.

METHODS: It was a cross-sectional study carried out among 280 Adolescent of Gwalior city during 6 months using a Pre-structured and Pre-Validated Questionnaire based on Mobile Phone Involvement Questionnaire (Walsh 2008), Smartphone Problematic Use Questionnaire (Rush, 2011), Face-to-face versus Computer-Mediated Communication General Preferences Statements Questionnaire (Karemaker, 2005) & Depression, Anxiety and Stress scales. Statistics used were frequency distribution and Chi-square test of significance using Epicalc, Epi info and Microsoft Excel 2016.

RESULTS: 69% participants out of 280 found to be using Smart devices, with 56% internet users. Psychological associations reported were 21% which mainly included Depression, Anxiety, and Aggression & Sexual behaviors. A change in Social Behaviors was reported in 26% participants. 22% associated Smart devices with positive influences & reinforcement, mainly for Information, Education, Communication & Relaxation. No association was found with age, gender, type of family, socioeconomic status or monthly expenditure on devices.

CONCLUSIONS/NEXT STEPS: The Psycho-Sociological drift of adolescent associated with smart devices is a major concern which has potential for either opportunities or threats. While these devices can provide the whole world in one's palm they also require good education & counselling maximizing the strengths & benefits alongside limiting the weaknesses & negative consequences. It was inferred that Nature of usage matters more than extent of use. Adolescence being formative years is a crucial & influential period. Hence further research & analysis is needed to affect behavior in beneficial direction.

IAAH170527

A Comprehensive Study Of Depression in Adolescent Girls

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BACKGROUND: Depressive disorders in adolescents are a major cause of concern as these disorders are subject to high recurrences in adulthood. The risk factors have to be identified and prompt treatment should be initiated. The suicide rates for adolescents have increased by over 200% over the last decade, and about 1/3rd attending psychiatric clinic suffer from depression.

METHODS: The present study is cross-sectional in design, conducted at government junior college in Hyderabad consisting of 496 adolescent girls between 15-18 years of age studying in 11th-12th class. The study comprised a college based survey through a self-administered questionnaire comprising 3

parts, identification of data, depressive symptom checklist, a psychosocial questionnaire.

RESULTS: Among these girls, there was a high incidence of Symptoms of Depression (6.7%) of the Screened Adolescent Girls fulfilled DSM-IV Criteria for Depression, Wise Distribution of Girls with Depressive Symptoms (83 Girls). Results have shown depression is a largely unrecognized problem among adolescents and warrants increased need & opportunity for identification & intervention. Our study showed 15% have depression and 56% have depressive symptoms. The causes ranged from financial, broken homes, or death in the family, chronic illness. Symptoms of depression were unhappiness, restlessness, agitation, anger, and disinterest in a pleasurable job. In the schools, failure in academics in 47% girls lead to depression, partiality, abuse, was also contributing factors. Around 60 girls (12%) had problems at home, 73% had a clear idea about future plans.

CONCLUSIONS/NEXT STEPS: Untreated depression is a major predictor of suicidal behaviour. There should be programmes to increase community awareness of impact on young people of their relationship & enhancement of social connectedness. They need to develop the necessary life skills. Thus, the focus of interventions with adolescents has to shift from information given, to building life skills.

IAAH170548

How common are adolescent anxiety disorders in rural north India? Findings from a community based study

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BACKGROUND: Rashtriya Kishore Swasthya Karyakarm (RKSK) has been launched recently by Government of India that has brought adolescent health in forefront. Mental health issues have been considered one of the priority concerns. Rural community based studies are lacking from north India in context to adolescent Anxiety Disorders (ADs).

METHODS: A community based cross sectional study was done amongst adolescents aged 10-19 years residing in Intensive Field Practice Area (IFPA) of Comprehensive Rural Health Services Project (CRHSP), Ballabgarh (Faridabad district, Haryana) under Centre for Community Medicine, AIIMS, New Delhi. The study adolescents were selected through simple random sampling from the list maintained within Health Management Information System (HMIS). The participants were administered SCARED (Screen for Childhood Anxiety Related Emotional Disorders), by a trained investigator. Different types of ADs were evaluated. The ethics clearance was obtained from Institutional Ethics Committee of AIIMS, New Delhi. Descriptive analysis was performed using STATA version 13.0.

RESULTS: A total of 729 adolescents were contacted to participate in the study. The mean age (+SD) of participants was 14.16 (+2.54) years. The overall prevalence of anxiety disorders was found to be 22.7% (95% CI 19.7 – 26.0). The panic disorder was the most frequent anxiety disorder detected amongst adolescents followed by social anxiety disorder using study instruments.

CONCLUSIONS/NEXT STEPS: Slightly more than one fifth of study adolescents were detected to have ADs. High magnitude of this problem requires attention in programmes catering to adolescent health in study area.

IAAH170555

Assessment of Mental Health problems in school going adolescents of Aligarh

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BACKGROUND: Adolescence is a period of physical, nutritional, and sexual transition, also remarkable for the many accompanying psychological changes. Therefore, screening for mental health problems in seemingly normal school going adolescents is much needed in India, given the absence of a national database for mental health problems. The objective of the study was to estimate the prevalence of mental health problems using the Strength and Difficulties Questionnaire (SDQ) and to find the prevalence of emotional, conduct, hyperactivity, peer and prosocial behavior problems in the school-going adolescents of Aligarh.

METHODS: This was a school-based assessment of mental health in the 13-15 years age group students, using SDQ in three different schools of Aligarh. All the students in the aforementioned age group were included in the study after permission from school authorities, consent of the parents and assent of the students. The study instrument was the SDQ, English version. The SDQ is a 5-scale behavioral screening questionnaire meant for the assessment of psychological attributes between ages 3 and 16 years. The self-report version is only applicable for 11–16 years. The SDQ is a screening instrument for evaluating social, emotional, and behavioral functioning in children and adolescents and has five subscales, four for difficulties, and one for strength. The study was approved by the multidisciplinary Institutional Board of Studies. Counseling, health education, and relevant advice were offered to all participants. Those who needed specialized care were referred to the JN Medical College, Aligarh. The results of the study were kept confidential, and parents were personally informed by the investigator for further review.

RESULTS: A total of 1456 students were studied. The prevalence of mental health problems on the basis of total difficulties score was found to be 9.75% (95% confidence interval - 8.33–11.39). The prevalence of emotional, conduct, hyperactivity, peer, and prosocial problems was 5.42%, 5.56%, 3.78%, 4.40%, and 4.26%, respectively. Apart from the abnormal, the borderlines were found to be more than double in almost all the categories.

CONCLUSIONS/NEXT STEPS: Psychological problems are fairly common in the adolescent age group. Despite the need, there is a dearth of studies conducted in this crucial age group in India.

IAAH170572

Descriptive assessment of grade of depression among selected age group and its correlates

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BACKGROUND: Psychological and sociological complexities of individual decline the social, occupational and interpersonal harmony called depression.

METHODS: This study adapted a purposive sampling in order to identify the grade among selected students. A pre-validated structured pretested questionnaire (PHQ-9) was applied for this purpose. Objectives-1- To quantify the degree of depression among college students 2- To established the strength of association with factor identified through literature review Type of study - Community based cross sectional study conducted from 6 February 2017 to 7 April 2017 among 100 students of PG college Rishikesh age 18 -26 year, under field practice area of community and Family Medicine AIIMS Rishikesh.

RESULTS: Mean age of the subjects was 22.84+1.5. Out of all studied subjects 43 (43%) were male and 57 (57%) were female. All the subjects were unmarried (100%), majority of them were urban residents (72 %), from nuclear family .17.4% of male found to be under category severe depression ,47% have moderate depression among male and 58% of male having suicidal thought was one of the components of PHQ-9 questionnaire.8.7% of female were moderate severe depression categorized by PHQ-9 .40% of the female scored positive for suicidal thought .

CONCLUSIONS/NEXT STEPS: This study identified an immense need to quantify and provide a viable solution like dedicated counselling services on continuum basis for college going student.

IAAH170599

Coping strategies and its association with psychological distress among trainee teachers in National Colleges of Education in Western province, Sri Lanka

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BACKGROUND: Coping denotes adaptive behavior of people that protect themselves from being psychologically distressed by problematic life strains. Trainee teachers are recognized as a highly stressed population throughout the world, which has created much interest in identifying their coping skills.

METHODS: A descriptive cross-sectional study was carried out among trainee teachers in all four national colleges of education in western province to identify

their coping strategies in stressful encounters and its association with psychological distress. Study included 404 first and third year trainee teachers from Siyane, Hapitigama, Pasdunrata and Dharga town national colleges of education selected by stratified random sampling probability proportionate to size. Coping strategies were assessed using the self-administered "Brief COPE" inventory comprised of 28 items describing problem focused, emotion focused and dysfunctional coping strategies. The items were on a four points Likert type scale according to frequency of practice and a median score was calculated. It was considered as the cut-off score of less frequent and more frequent usage of each type of coping strategies. Data was analyzed using SPSS package, associations were identified using odds ratio and Chi-square test.

RESULTS: Median scores of emotion-focused, problem-focused and dysfunctional coping strategies were 26 (10-43), 16 (06-31) and 26 (12-42) respectively. Most frequently practiced strategies by psychologically distressed trainee teachers were emotion-focused (n=88: 61.8%) and problem-focused coping strategies (n=75: 52.1%). A significant association of more frequent practice of dysfunctional and emotion focused coping strategies with existence of psychological distress among trainee teachers were found ($P<0.05$) with Odd ratios of 2.67 (CI: 1.74-4.096) and 1.706 (CI: 1.122-2.597) respectively.

CONCLUSIONS/NEXT STEPS: Dysfunctional, emotion focused and problem focused coping strategies were practiced by trainee teachers in stressful life events out of which, the practice of dysfunctional and emotion focused coping strategies might have exacerbated psychological distress among trainee teachers. This emphasizes the need of improving their adaptive coping skills in stressful encounters and the importance of establishing professional counseling services at national colleges of education in the western province.

IAAH170607

Depressive disorders in teenage pregnancies

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BACKGROUND: Depression represents one of the most frequent outcomes in teenage pregnancy and post-partum period, due to physiological immaturity of young developed body and physiological gestational changes. Deep depressive disorders can occur in 46% of teenage pregnancies compared to 12.7% cases of adult pregnancies.

METHODS: We have done a prospective study, including 168 (64.4%) cases of pregnancies and deliveries, managed in the 3rd Level Perinatal Centre, Institute of Mother and Child, Chisinau, Republic of Moldova, between 2013-2015. Pregnant women, aged between 13-25 years old, have been evaluated on depressive changes during 3rd trimester of pregnancy and post-partum period, according Beck Depression Inventory, SCL-90.

RESULTS: The results of the study have mentioned the high incidence of depressive states in 3rd trimester teenage pregnancies and post-partum period in comparison with adult pregnancies (women aged between 20-25 years old) (OR=2.42(1.43)).

CONCLUSIONS/NEXT STEPS: Teenage pregnancies need to be evaluated carefully because of the high risk for: depressive disorders in 3rd trimester and post-partum period, preterm delivery, congenital anomalies and intrauterine fetal growth restriction. It is obviously needed to introduce screening programs for depression evaluation during teenage pregnancy, especially in cases complicated by medical and social history.

IAAH170624

Cities for Mental Health: Mobilizing young people in service of mental health and well-being

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BACKGROUND: There are more young people today than ever before, totaling nearly 3 billion or almost half of the world's population. Most people under the age of 25 live in cities. Young people have enormous potential to drive social change and care for their community. Unlike other illnesses, mental illnesses

are "chronic diseases of the young," with over 75% manifesting by age 24.

DESCRIPTION: In recognition of the magnitude of the problem, a dramatic evolution has begun in the field of mental health, leading to the creation of a multi-stakeholder initiative to catalyze cities for mental health. This initiative marks the coming together of diverse partners, international thought leaders, key institutions from public and private sectors (Grand Challenges Canada, BasicNeeds, King's College London, Harvard University, World Psychiatric Association, World Bank, Johnson & Johnson, Verily), and leadership in cities like Seattle, Chennai, and Nairobi, has set the foundation for a broader, more significant effort to mobilize youth as change agents for mental health.

LESSONS LEARNED: Through landscape research, key-informant interviews, and literature reviews, lessons have emerged on the state of youth leadership in mental health and on opportunities to mobilize youth: (1) Although proven models exist, effective integration and replication is limited, with good practice examples invariably remaining isolated, (2) Young leaders exist, but need to be enabled with the tools, skills, and networks to have impact, (3) Our rapidly urbanizing, technology-based society presents unprecedented social, political, and economic change that increases both risks and opportunities for young people's mental health, (4) The voice of young people is not adequately represented in key decision circles, (5) The potential for meaningful adolescent and youth engagement in mental health exists.

CONCLUSIONS/NEXT STEPS: A resilient, secure, empowered and thriving youth population is critical to the future of all communities. This initiative represents a new global platform for youth mental health that will achieve major strides forward in mental health promotion, tackling stigma and fostering inclusion, promoting new ways to access services and achieving stronger pathways to scale beyond cities and into regional centres and rural locations. Importantly, the ideas presented and the foundation of this work will be generated by and for young people.

IAAH170638

Perspective of mental health professionals regarding management issues of delinquency residing in observation homes

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BACKGROUND: In India, the rate of crime committed by adolescence is rising high. There had been 10.5% increase in juvenile IPC crime from 2010 to 2011 (NCRT, 2011). Though juvenile delinquency is a burning concern, very few researches had been committed in this specific area. The present research tried to find out the specific causes which lead to delinquency from mental health professionals who are dealing with these population in observation homes, Delhi. The management techniques used in dealing with juvenile delinquency were also addressed.

METHODS: Focused Group Discussions (FGD)/In-Depth interview were carried out on mental health professionals working in this area. The numbers of participants in each group were within 4 to 8 people. The data was collected in Hindi and English, transcribed and coded. Themes were identified.

RESULTS: Cognitive behavioural and behavioural techniques were seen as a mainstay for management. Importance was given on cognitive restructuring, motivational interviewing, problem-solving, anger management and social skill training.

CONCLUSIONS/NEXT STEPS: The study highlighted the importance of behavioural and cognitive behavioural techniques in managing adolescents in conflict with the law.

IAAH170642

Child Marriage and Psychological Well-being in Niger and Ethiopia

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BACKGROUND: Child Marriage continues to be highly prevalent in Africa, with about 40% of girls marrying before 18 (Unicef, 2014). While research has extensively documented the economic, social and reproductive health consequences of child marriage, very little is known about the mental health and psychological well-being of child brides in this context (Parsons et al, 2015). Given this research gap, our study uses unique nationally representative survey data from Niger (n=2500) and Ethiopia (n=4300) to examine the impact of

child marriage on psychological well-being among a sample of ever married women aged 15-45 years. Additionally, we use qualitative data from Ethiopia to further contextualize the psychological well-being of child brides.

METHODS: Multivariate ordinary least square (OLS) and instrumental variable (IV) regressions were conducted to estimate the impact of child marriage on psychological well-being. Thematic analysis was conducted to further understand the lives of child brides.

RESULTS: Results from OLS and IV regressions from Niger and Ethiopia suggest that child marriage has a significant negative impact on psychological well-being. While in Niger, child marriage negatively impacts psychological well-being regardless of age at marriage, in Ethiopia, the very young, those married at age 12 or earlier are more likely to be negatively impacted. Ethiopian child brides reported suffering emotional distress and depression induced by the burden of marital responsibilities, most notably partner's sexual demands and childbearing.

CONCLUSIONS/NEXT STEPS: Our study contributes to understanding the psychological well-being of child brides in two countries and further provides contextualized evidence from Ethiopia.

IAAH170643

Depression and self-harm: estimates and correlates from Project UDAYA (Understanding the lives of adolescents and young adults) in Bihar and Uttar Pradesh, India

Nayana Dhavan¹, K G Santhya¹, Neelanjana Pandey¹, Ashish Gupta¹, Francis Zavier¹

¹Population Council

BACKGROUND: Depression is among the leading causes of morbidity for adolescents globally whereas self-harm and suicidal ideation are major causes of mortality. Yet, adolescent mental health is poorly understood in India, largely due to a deficit of data of population-level data. Project UDAYA collected sex-disaggregated, state-level representative data, which can be used to provide estimates for depressive symptoms, suicidal ideation and self-harm among both younger (10-14 years) and older (15-19 years) adolescents and married girls, as well as investigate correlates of these illnesses.

METHODS: Depressive symptoms were measured using the Patient Health Questionnaire- 9 (PHQ-9) which has been validated in India. Complementary log-log regression models were used to accommodate the highly skewed distribution of the dichotomous self-harm outcome variables whereas a multinomial model was used for depressive symptoms to capture sub-threshold symptoms. Socio-demographic variables and other correlates from the literature were included in the regressions.

RESULTS: Older girls experience greater depressive symptoms and suicidal ideation than boys or younger adolescents; however, married girls are disproportionately affected. Significant correlates of moderate-severe symptoms for married girls included physical violence, household drug or alcohol use, dowry harassment and pregnancy loss. For unmarried girls, harassment and non-consensual sexual experiences were significantly associated with symptoms. Genital symptoms, which are recognized as a cultural manifestation of distress in South Asia, were significant for both groups. Self-harm is higher among younger girls and boys. Getting into fights, indicative of externalizing behavior, was a significant predictor for boys and younger girls. Among older boys and girls, being beaten by parents in childhood was significantly linked with self-harm whereas witnessing parental violence and experiencing sexual harassment were significant for both younger and older boys. Moderate-severe depressive symptoms were only significant for older boys and girls.

CONCLUSIONS/NEXT STEPS: Dis-aggregated mental health data helps uncover specific relationships between social and cultural factors and mental illnesses. Gendered social pressures contribute significantly to the high risk of depressive symptoms faced by married girls. Various violence-related factors are significant correlates of depressive symptoms and self-harm across groups but in different ways indicating the need to address violence in the lives of adolescents to improve mental health.

IAAH170655

Tribal adolescents in South Gujarat, India and their mental health status: a cross sectional study

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BACKGROUND: Global Burden of Disease report states that mental disorders accounts for 13% of total DALYs lost for Years Lived with Disability (YLD) with depression being the leading cause. In most mental disorders among adults, between 50 - 75%, have their symptomatic onset during youth. The development of services is hampered by lack of government policy, inadequate funding and a lack of trained clinicians. There is also a large treatment gap. With this background, this study attempts to document the basic mental health scenario among tribal adolescents in the western region of India.

METHODS: A cross-sectional study, where data was collected from 242 adolescents attending an annual fair in a tribal district of South Gujarat. They were interviewed and their mental health status was assessed with the help of Strengths and Difficulties Questionnaire (SDQ) which had been translated in the local language and tested.

RESULTS: The mean age of the study participants was 15.14 years with 40.9% being males and 59.1% being females. Majority of the participants were currently studying (88.3%) and were staying at a hostel (72.1%). Assessment of the SDQ responses revealed that majority (76.2%) belonged to the normal category followed by borderline (13.8%) and abnormal (10%) category. In this group, the currently working adolescents had a significantly higher abnormal scores ($p = 0.007$). Adolescents who reported to not exercising showed significantly higher abnormal scores for both total SDQ score and 'Emotional symptoms scale' – a sub domain of SDQ ($p = 0.046$ and 0.048 respectively). The 'Emotional symptoms scale' was also significantly higher in girls ($p = 0.02$). Self-reporting by these adolescents showed 60.8% happy; 33 % mostly happy; 4% mostly sad and 2.2% sad. Adolescents who self-reported to be happy had a better score in the emotional symptom scale.

CONCLUSIONS/NEXT STEPS: Even though majority were in 'normal' category of SDQ, 23.8% did have some mental health issues. Significantly higher level of sadness was reported among girls as compared to boys. Exercising and studying have shown to be associated with good mental health status.

IAAH170659

Forms and determinants of Help seeking behavior of Sudanese adolescents with symptoms of depression and anxiety

Amna Khairy¹

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BACKGROUND: Depression and anxiety are the major causes of disability among adolescents responsible for 40.5% and 14.6% of disability-adjusted life years (DALYs) caused by mental and substance use disorders respectively. In Sudan, little is known about adolescent engagement with mental health services and in many cultures seeking help for mental illness is a Taboo. Hence, different patterns of informal help seeking exist and most cases may pass undetected and untreated. This study aimed to assess help seeking behavior of adolescents with anxiety and depression and its determinants.

METHODS: Cross-sectional study among adolescent students (less than 19 years) at Al-neelain University, Khartoum, Sudan from June 2016 to January 2017. A random sample of 320 students was selected. Depression and anxiety were assessed using standardized validated Arabic versions of Patient Health Questionnaire (PHQ) and Generalized Anxiety Disorder scale (GAD-7) respectively. Both past professional help seeking and Intention to seek care. Mean scores, frequencies and multiple logistic regressions were computed using Statistical package for social science (SPSS) version 24.

RESULTS: 85.3% (273/320) had depression, mean score 10.82 ± 5.5 SD 3.8% (12/320) were severely depressed. 72.8% (233/320) had anxiety mean score 8.07 ± 4.8 SD with 9.4% (30/320) had severe form of anxiety. The most common source of help was faith healers (Quran and Sheikh) OR 1.9 (1.17-3.19) p -value 0.009 which was significantly associated with severity of depression (p -value 0.008). Formal health service like GPs and Mental health professionals were the least utilized sources with mean $(1/7) \pm 1$ SD. Seeking

help at the internet and social media was significantly associated with the lack of Adolescent friendly health service (p-value 0.026). The only predictor for seeking professional Mental Help was Female sex OR 3.5 (1.2-9.7) p-value 0.009.

CONCLUSIONS/NEXT STEPS: Adolescents with depression and anxiety were reluctant to contact any formal source of help. Gender sensitive approach to increase their utilization of Mental health services is urgently needed and integration of Faith healers might be considered.

IAAH170662

Forms and determinants of help seeking behavior of Sudanese adolescents with symptoms of depression and anxiety

Amna Khairy¹

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BACKGROUND: Depression and anxiety are the major causes of disability among adolescents responsible for 40.5% and 14.6% of disability-adjusted life years (DALYs) caused by mental and substance use disorders respectively. In Sudan, little is known about adolescent engagement with Mental health services and in many cultures seeking help for Mental illness is a Taboo. Hence, different patterns of informal help seeking exist and most cases may pass undetected and untreated. This study aimed to assess help seeking behavior of adolescents with anxiety and depression and its determinants.

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CONCLUSIONS/NEXT STEPS: Adolescents with depression and anxiety were reluctant to contact any formal source of help. Gender sensitive approach to increase their utilizations of mental health services is urgently needed and integration of faith healers might be considered.

IAAH170672

A Study of Psychosocial Distress and Coping Mechanisms of Orphan and Vulnerable Children Living in Institutional Care in New Delhi

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BACKGROUND: India is home for the largest population of orphan children (31 million) in the South Asia. Orphan and vulnerable children (OVC) are at increased risk of psychological distress and poor social cognition. Losing loved ones take a toll on enriched growth and development of children. Although various governmental, non-governmental and faith-based institutions take over the role of guardian to the OVC, efficiently catering to the materialistic needs sometimes leads to the compromised psycho-social well-being of children. Therefore, this study aimed at understanding their psycho-social well-being of OVC and coping mechanisms adopted by them at a microscopic level.

METHODS: We conducted a survey on orphan children aged 10-17 years living in institutional care in New Delhi, during August to December 2016. Study involved 15 randomly selected children from three orphanages. Informed consent was taken from Department of Women and Child Development, Delhi, orphanage administration and as well as from children before conducting the

interview to maintain ethics. Comparative thematic analysis and memo writing was done to extract conceptual themes.

RESULTS: Results revealed that almost all the children suffered from psychological distress in form of depression, low self-esteem, parental bereavement, mistrust and loneliness. Children living in orphanage faced various social issues like behavioral disorders, lack of guidance and advocacy, insecurity, isolation, and stigmatization. Overall these children lacked purpose in life and seemed to be psychologically fragile and socially isolated. For overcoming these psycho-social issues children used various coping mechanisms like suppressing the feelings and shifting focus to other activities. While some children adopted self harming ways like substance abuse and self-discrimination to overcome the problems. On the contrary, there were also children who misbehaved with inmates to cope with their problems.

CONCLUSIONS/NEXT STEPS: The present study documented that OVC suffered from a lot of psycho-social turmoil. These problems remained inefficiently and insufficiently addressed in the orphanage. It was evident that ongoing programs for the well-being of OVC should not only focus on materialistic requirements but also on the psycho-social needs of children living. New interventions should be implemented specifically targeting the psychological issues, enhancing social skills, improving coping strategies and developing resilience among OVC.

IAAH170689

The Relationship Between the Self-Efficacy and Psychological Resilience Levels of the Teenagers

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BACKGROUND: Puberty is a process between the childhood period and adulthood which a person tries to find where he fits. In this process, the teenager exposed to diversified varieties and changes in physical, cognitive and emotional world and also he tries to cope with these situations. In order to adapt these changes, teenager is supposed to present a psychologically solid and balanced attitude. In order to be a psychologically balanced teenager must have not only environmental support but also his own self-efficacy. Self-efficacy which is one of the concepts evaluated in this study is neither a stable process nor a specialty but it is a concept including the individual supportive elements.

METHODS: The aim of the study is to investigate the relationship between self-efficacy and psychological resilience levels of the teenagers. The research has been designed in general survey method. The sample of the study has been selected using the basic random sampling method and the total participants were 469 students at the high schools in Sinop city center. The data was gathered via 'General Self-efficacy Scale' and 'Psychological Resilience Scale' and while analyzing the data MANOVA, Pearson correlation and Post-Hoc tests were applied.

RESULTS: According to the findings of the study the relation between the self-efficacy and psychological resilience levels of the teenagers have been found statistically meaningful in the positive direction. There is no meaningful difference between the parent education levels and self-efficacy/psychological resilience levels however the education level of the father has a meaningful difference between self-efficacy and psychological resilience levels of the teenagers.

CONCLUSIONS/NEXT STEPS: In conclusion, puberty is the most critical term for the person when the self-efficacy belief is tested. It is possible for the teenagers to come across with some psychological problems and the events affecting them deeply.

IAAH170697

Screening for Mental Health Disorders among Adolescents Studying In Schools of Mangaluru, India

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BACKGROUND: Adolescence commonly express with psychological problems during their development but most of them are transient in nature and not usually noticed. The health status during this period has a lot of implications on their

adulthood. Our study aimed at screening for disorders such as Attention Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), Separation Anxiety Disorder (SAD), Generalized Anxiety Disorder (GAD) and Mood Disorders (MD).

METHODS: A school based cross sectional study was conducted among 255 students to screen for the above mentioned disorders in the month of January, 2016. Child and Youth Mental Health General Screening Questionnaire was used as a study tool. Prior the study started, the protocol was submitted approval of the Institutional Ethics Committee of Kasturba Medical College, Mangaluru. A written informed assent and consent were obtained. Data was entered and analyzed using SPSS version 20.0.

RESULTS: According to our study, prevalence of conduct disorder was found to be maximum (59.2%) followed by generalized anxiety (34.9%) and separation anxiety (24.3%). Oppositional defiant disorder was found to be the least (7.8%). The prevalence of other disorders were as follows ADHD (9.6%) and MD (17.3%). There was a statistically significant association of anxiety disorders with the occupational status of mother; found to be higher in adolescents with mothers as home makers. Analysis separation anxiety has a p-value of 0.012 and generalized anxiety is 0.046. Among the study subjects 36.9% showed prevalence of a single mental health disorder whereas 2.4% showed presence of five out of six disorders.

CONCLUSIONS/NEXT STEPS: The burden of illness resulting from behavioral disorders is enormous among adolescents. In order to create awareness it is crucial to assess the social, public and mental health response and regular counselling can be adopted to combat with increasing levels of stress.

IAAH170698

Mental health problems among early adolescents in an urban resettlement colony, New Delhi – India

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BACKGROUND: Mental health problems affect 10–20% children and adolescents worldwide. As high as half of lifetime mental health problems tend to occur in early adolescence with adverse consequences. The early adolescents (10-14 years), especially in the urban slum are uniquely vulnerable due to prevailing social adversities. We assessed the nature and extent of mental health problems among early adolescent in an urban resettlement colony for planning appropriate adolescent mental health services in the urban slum population.

METHODS: The present data were obtained from a cross-sectional study among children 4-14 years of age in an urban resettlement colony - Dakshinpuri Extension, Dr Ambedkar Nagar in South Delhi. The data were collected from mothers of eligible children through systematic random sampling using Childhood Psychopathology Measurement Schedule (CPMS). Socio-demographic data were collected using a semi structured interview schedule. For the present study, analysis was limited mainly to 10-14 year age-group using descriptive statistics and chi-square tests.

RESULTS: The prevalence of mental health morbidity among early adolescents was 18.3% (22 out of 120) and it was significantly higher in boys as compared to girls (28.1% Vs 7.1%). There were no significant differences among prevalence rates for other socio-demographic variables. Engaging in argument was the most frequently reported symptoms (39.2%) followed by communication problems (35%). Nearly one-fourth of the children were reported to be engaged in bullying and one-third was reported to be teased by others.

CONCLUSIONS/NEXT STEPS: This is one of the few studies that examined the epidemiology of adolescent mental health problems in an urban slum in India. Contrary to the earlier findings, the study reported prevalence rates that were comparable with prevalence rates from urban non-slum area. The study findings highlight the need to deliver a comprehensive adolescent mental health services with specific focus on life skills, violence prevention and parenting to the vulnerable urban slum population.

IAAH170700

Prevalence of Depression among adolescents and its association with the School Environment: A cross-sectional Study

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BACKGROUND: Depression is a common mental health problem in adolescents worldwide, and as per World Health Organization estimates, up to 20% adolescents have one or more mental or behavioral problems. The aim of this study was to screen the adolescents attending government schools in a rural area of Delhi for the presence of depression and to study its associated determinants in the school environment.

METHODS: The study was a school based, cross sectional study. A total of 543 adolescents studying in class 11th of 3 government schools in a rural area of South Delhi were chosen. A preformed, pre-tested, self-administered questionnaire containing questions on socio-demographic data and school environment was used. Presence of depression was assessed by using the PHQ-9 (Patient Health Questionnaire-9). Data entry was done on Micro Soft Excel spread sheet, and analyzed using SPSS version 20. Chi square was used to check for association, and a p-value of <0.05 was considered significant.

RESULTS: The age of the study participants ranged from 15-19 years with a mean age of 16.7 years. There were 286 males (52.7%) and 257 females (47.3%). The prevalence of depression (by taking PHQ score above 10) among study participants was found to be 28.2%. It was observed that 206 (37.9%) of the study participants had none to minimal depression (93, 32.5% of the boys; 113, 44% of the girls), 184 (33.9%) had mild depression (112, 39.2% of the boys; 72, 28% of the girls); while 15 (2.8%) were found to have severe depression (4, 1.4% of the boys; 11, 4.3% of the girls) and this was found to be significantly associated with age e" 18 years, those who ever failed in exams, lower grades in Class 10th, those who are easily affected by peer pressure and those who have ever been involved in bullying in school.

CONCLUSIONS/NEXT STEPS: Recognizing teenagers with depression should be the first step to improved depression management. Reformative steps to be taken at the family, school and the community level. School based mental health services can handle the problem in most effective way by providing help to the sufferers at earliest in the form of counseling and timely referral whenever required.

IAAH170708

Mental Health and Wellbeing among Adolescent in India: A Social Determinants/Development Framework

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¹Central University of Tamil Nadu

BACKGROUND: Mental health is an integral component of wellbeing for every individual which endorse in maintaining a productive life and contribute to the social development. The environmental and biological predisposition are the important cause of poor mental health which have direct effect on the developmental indicators of adolescent specifically thought, feeling, behaviour, and health etc. The condition of poor mental health agitate in different ways to the adolescent like higher alcohol, tobacco, illicit substance uses, adolescent pregnancy, school dropout, suicidal ideation and other delinquent behaviour.

DESCRIPTION: Adolescent population constitute 18% of the world's population and 20% of them are suffering from some kind of mental health problems are mostly residing in Low and Middle Income Countries (LMIC) country like India. Country's one fourth population is vulnerable group towards stressful life. Hence, it is a grey area of research for the development of adolescent along with country development. In this paper, the author has divided into two parts: first part explored the different domains of social development (health, education, life style) among the adolescents; and second part has focused the strategies and the evidence based interventions to overcome these problems and enhancing the mental health status among the adolescents.

LESSONS LEARNED: Disability-adjusted life years(DALYs) reveals that, self-harm, road-traffic injuries and heat-related injuries and mental health problems are leading cause of the death and disability among the adolescents of India. Among the five leading causes of burden among adolescent, three are formal psychiatric diagnoses and other two are closely related to mental health problems: unipolar depressive disorders; road traffic accidents, schizophrenia, bipolar disorder, and violence.

CONCLUSIONS/NEXT STEPS: A multi-level and collaborative approach is required for intervention in the sphere of adolescent mental health. A synergetic evidence based intervention can deal with the multi-level intervention of adolescent mental health i.e.: (i) individual level, (ii) community level, (iii) national level. Enhancing different social skills, problem solving abilities, and develop self-confidence can overcome the different mental health problems and other risk factors associate with adolescent.

IAAH170720

Life Events Stress in Adolescents and Its Effect on Depression: A Cross Sectional Study in an Urban Private High School, Bengaluru

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BACKGROUND: Adolescents being in the delicate age between childhood and adulthood are an important demographic, susceptible to the influence of daily life events and stress associated with them. This stress may in turn lead to Depression. In a society where Depression is emerging as a major public health concern it is important to study the stress associated with life events and its influence on Depression. This study aimed to investigate the prevalence of depression in adolescents, the effect of life events stress on it and demographic effects on life events stress.

METHODS: A cross sectional study was undertaken in an urban private high school. A total of 414 students, of 8th through 12th standard, participated in the questionnaire based study. The self-administered questionnaire included Adolescent's Life Events Stress Scale (ALESS) and Patient Health Questionnaire 9 (PHQ9). Demographic details of age, class, gender were also collected. Height and weight were measured.

RESULTS: Out of the 399 completed questionnaires 47% of the children had a PHQ9 score PHQ9 score ≥ 10 , indicative of depression. Adolescent life events stress score positively correlated with PHQ9 scores, Spearman $\rho=0.446$, $p=0.01$. Age and class positively correlated with ALESS score. Median stress score was significantly higher among females while BMI was not associated with ALESS.

CONCLUSIONS/NEXT STEPS: Stressful life events can influence the development of depression in an early age. Children must be taught to deal with the stress associated with these life events for effective management and to prevent depression.

IAAH170729

Social-Ecological Model to explore maternal health care-seeking behaviour of married adolescent girls in Nepal

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BACKGROUND: Nepal has the second highest rate of adolescent pregnancy in South Asia. Underutilization of maternal health services contribute to the high number of maternal deaths in Nepal. Most recently, a nationwide survey showed that about 6 in 10 pregnant women received antenatal care from skilled providers, while only 35% of childbirths occurred in health institutions. Furthermore, about 59% of the adolescent birth deliveries occur at home, with about 58% of these deliveries overseen by non-skilled birth attendants. This study explores the healthcare-seeking behavior of married Nepali adolescent girls throughout their pregnancies, during their delivery and postpartum.

METHODS: A prospective qualitative study was conducted in Banke district, Nepal during which we collected qualitative data from 27 married adolescent girls into two phases (before and after pregnancy). In addition to interviewing adolescent girls, we collected qualitative data through interviewing of the community health workers, the family members of adolescent girls, representatives from the government, and health care providers. We applied a Social-Ecological Model (SEM) to analyze and present our qualitative data.

RESULTS: Our qualitative data show that the existence of Safe Motherhood Programmes and knowledge sharing platforms such as "women's group," in addition to the active role of Female Community Health Volunteers (FCHVs),

positively influenced the utilization of skilled maternal health services among adolescent girls in Banke district, Nepal. On the other hand, adolescent girls' lack of knowledge and their perceptions about pregnancy and delivery care, certain traditional practices, their sole dependency on their husbands and mothers-in-laws, their decreased decision-making autonomy towards their own health care, the lack of adolescent-friendly maternal health services, difficulties in accessing quality maternal health services, and the fixed operating hours of public health facilities restricted their ability to receive skilled maternal health services.

CONCLUSIONS/NEXT STEPS: Although the government of Nepal has been subsidizing the cost of health facility-based deliveries, it is important to ensure easy access and availability of adolescent-friendly maternal health services in order to increase the use of skilled maternal health services by adolescent girls. Moreover, other important areas of intervention include empowering women, involving family members (mainly mothers-in-law) in health interventions, as well as overcoming certain traditional beliefs by particular community members.

IAAH170745

Effect of Parenting Styles on The Self-Esteem Of Adolescents

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BACKGROUND: Psychologist Diana Baumrind identified four patterns of parenting styles, which includes authoritative parents, authoritarian parents, permissive parents and undifferentiated parents. Self-esteem refers to the degree of regard or respect that individuals have for them and is a measure of worth that they place on their abilities and judgments. Aim: To assess the effect of parenting styles on the self-esteem of the adolescents.

METHODS: The study setting included four government and two private schools of Ludhiana, Punjab. The study sample comprised of 500 adolescent students – 250 adolescents from government schools and 250 adolescents from private schools between 14-18 years of age selected by systematic random sampling technique. Standardized Modified Parental Authority questionnaire (Leman, 2005) was used to assess to parenting styles of fathers and mothers separately and Rosenberg's self-esteem scale (Rosenberg, 1989) were used.

RESULTS: The study findings revealed that 53.4% of mothers and 51.8% of fathers had undifferentiated style of parenting, 22.8% of mothers and 21.6% of fathers were authoritative. While 16.0% mothers and 16.6% of fathers had authoritarian parenting style. As per the level of self-esteem of adolescents, 77.0% had high level of self-esteem whereas 23.0% had low level of self-esteem. Authoritative parenting style of mothers had significant positive correlation ($r=0.177$); ($p < 0.05$) with self-esteem of adolescents. There was statistically significant association ($p < 0.05$) of authoritative parenting styles of mothers with occupation and education of mothers as well as academic performance of adolescents. Illiterate mothers were found to be using authoritative parenting style and working mothers were found to be more authoritative as compared to non-working mothers. There was statistically significant association ($p < 0.05$) of authoritative parenting styles of fathers with academic performance of adolescents.

CONCLUSIONS/NEXT STEPS: The study findings revealed that adolescents with mothers having authoritative parenting style had higher self-esteem as compared to others. Authoritative parenting style had positive impact on self-esteem and academic performance of adolescents.

IAAH170747

'What makes me saddest is feeling lonely': A multi-level approach to understanding adolescent mental health and psychosocial wellbeing in Vietnam

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BACKGROUND: Over the past 40 years Vietnam has transitioned rapidly from a socialist to a market economy, experiencing rapid economic growth and a large decline in poverty. This rapid economic transformation has, however, resulted in increasing pressure on individuals and families also giving rise to

mental health problems and psychosocial ill-being in a country largely unprepared to deal with such burdens. Using an adapted ecological model, this paper synthesizes findings from a qualitative study which explored key drivers of and responses to mental health and psychosocial wellbeing in rural, peri-urban and urban settings in northern and southern Vietnam.

METHODS: The study combined primary qualitative data methods with a literature review. A total of 190 adult, adolescent, community and service provider respondents across 6 sites were interviewed using in-depth and key informant interviews and focus group discussions. With appropriate consent, interviews were recorded, translated and transcribed and coded using Maxdqa.

RESULTS: Our findings highlighted that individual-level mental health risk factors include: self-isolation, resulting also from early marriage and school drop-out for girls; addictive online behaviours, cyber-bullying and stalking; and negative perceptions about physical appearance. Household level risk factors include: overly restrictive household rules; poor household socio-economic status; and intra-household tensions. School-level risk factors included: academic stress, inadequate support and/or shortcomings of the school environment, and challenges in romantic relationships. Community level risk factors included: harmful social norms (e.g. early marriage); lack of economic opportunities; and easy access to harmful substances.

CONCLUSIONS/NEXT STEPS: The paper concludes by emphasising that although protective factors for adolescents' mental health and psychosocial distress exist at different levels (leisure activities, role models, social networks, supportive family members and teachers), the response environment remains limited. Examples of effective responses across different sectors exist, e.g. psychosocial counselling units schools, telephone hotlines, a community mental health programme (now ended). However, these have not been scaled-up and the response that exists is focused on severe mental health disorders, is under-resourced, concentrated in urban centres and does not take into account the multi-level nature of mental health and psychosocial distress. Remaining evidence gaps and possible policy implications of these shortcomings are also discussed.

IAAH170777

The role of the home in depression among adolescents: Evidence from a cross-sectional study

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BACKGROUND: One fifth of our country's population is comprised of adolescents, and World Health Organization (WHO) estimates that one among five adolescents suffers from some mental disorder. The WHO theme for 2017 highlights the burden of depression in the world today. This study was therefore carried out with the objective of identifying adolescents with depression, and possible disease determinants in their home environment.

METHODS: The study was a cross-sectional study, conducted among 3 government schools in a rural area of South Delhi. A pre-tested, self-administered questionnaire in Hindi was administered to students of class 11th and contained questions on socio-demography and home environment. Patient Health Questionnaire-9 (with score above 10) was used to identify students with depression. Data was entered in Microsoft Excel, analysis was done using SPSS version 20, and Chi-square was used to check for association. A p-value less than 0.05 was considered significant.

RESULTS: A total of 543 participants in the age group of 15-19 years participated of whom 286 were males (52.7%) and 257 females (47.3%). PHQ-9 revealed that 153 (28.2%) were depressed. Depression was found to be significantly higher among those whose father was illiterate, whose parents fought often, whose parents were dissatisfied with the students' academic performance, and among those who had ever experienced domestic violence in the form of slap, kicks and threats. Depression however was not found to be associated with type of family, family size, mother's literacy, staying away from the family or with their poverty status.

CONCLUSIONS/NEXT STEPS: Almost 3 of 10 school-going adolescents from a rural area of South Delhi have been found to be depressed. The parents need to be counselled, and made aware of the potential impact of their actions and the home environment on the mental health of their offspring.

IAAH170782

Methodological Issues in Assessment of Mental Health of Adolescents in a Conflict Zone: A Case Study of Jammu and Kashmir

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BACKGROUND: World Health Organization considers violent social conflicts as a major public health problem (WHO, 2002). The whole population of J&K especially adolescents in Kashmir region in recent years, have, had to suffer on account of the traumatic incidents due to the continued spate of violence nearly for last three decades. The health costs of violence in conflict zones have been studied largely through the clinical diagnostic based approach of biomedicine. In a recent methodological review of the refugee mental health literature, Hollifield et al. (2002) found that, of 183 studies examining refugee mental health, 141 (78%) relied exclusively on measures of psychopathology developed in research with Western populations.

METHODS: This paper reviews studies conducted on children and adolescents in Jammu and Kashmir for assessing the mental health impact of violence. The purpose is to critically look at the range of studies, especially, conducted on adolescents in Jammu and Kashmir, map the methodological issues and challenges of assessing mental health in a conflict zone; for a better understanding of impact of violence on mental health of adolescents.

RESULTS: There are only few studies that have been conducted to assess impact of violence on the mental health of adolescents in Jammu and Kashmir. It was found that adolescents meaning of wellbeing, their perception of aspects of resilience, coping, and the ways and forms of mourning have not been explored. The details of the psychometric properties of the measures used in the studies were not comprehensively given, and importantly, the measures generally used in western contexts were used for assessing mental health of adolescents. The idioms of local cultural distress, bereavement, of showing signs and symptoms of traumatic impact find least or no mention in the findings.

CONCLUSIONS/NEXT STEPS: The understanding of trauma as an individualized experience in isolation of the shared community and collective experience in the background of social and historical meanings associated with such traumatic events- unravels less and hides more about the suffering.

IAAH170795

Insights into Adolescent Psychosocial Well-being in selected urban communities in Bangladesh

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BACKGROUND: In rapidly expanding urban settings such as Dhaka adolescents face challenges to physical and psycho-social well being. These are exacerbated by poverty and correlates such as insecure housing tenure. Using an ecological conceptual framework, the paper identifies protective and risk factors embedded in the environments of urban adolescents and shows how the interaction of these factors results in psycho-social ill-being and behavioral risk factors. The paper addresses an important evidence gap as little is known in Bangladesh about how the contexts of adolescents affect their psycho-social well being and effectiveness of change strategies.

METHODS: The paper draws on in-depth qualitative research with adolescents (11-19 yrs), parents, and other community members in two communities in Dhaka in 2016 as part of the Gender and Adolescence: Global Evidence program.

RESULTS: The paper describes different factors that affect psycho-social well-being among adolescents living in poor metropolitan settings and explores differences between genders and age groups. Among younger adolescents, contributors to psycho-social well-being related to social networks and recognition. For example, having trusted friends and peers; recognition of achievements and buying new things for boys and girls and good relationships with parents and advice from older neighbors or family members particularly for girls. For older girls romantic relationships and 'fitting in' were equally important. Common concerns were that they might not continue in education, either because of early marriage (girls) or paid work (boys). They also expressed concerns about poverty, powerlessness, and the risks posed by parental illness. A change strategy explored was that by the BRAC Adolescent Development Program where Kishori Clubs provided alternative spaces for networks and positive role models.

CONCLUSIONS/NEXT STEPS: The results show the importance of prefacing any intervention to improve adolescents' psycho-social well being with deep understanding of contexts in which they live, and differentiated effects of this context. Our analysis shows the importance of a strengths-based approach where the positive factors that can protect them from "risks" are found in adolescents' lives as they try to adapt to adversity. Nonetheless, there are limitations to a wholly agentive approach in response to risk factors that require changes in legislative and political structures.

IAAH170796

What stops young people with mental health needs asking for help?

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BACKGROUND: The cost of accessing primary care, transport and confidentiality are well known barriers for young people (13-18 yrs) in accessing health care in a timely manner. Whanake Youth coordinated and provided free health care in six High Schools in order to increase access and health literacy, and provide health promotion, diagnosis and intervention. Despite this cohort of young people being offered a free youth health service, results identify that students with mental health needs are less likely to choose to access health care and therefore regular youth health screening is needed to identify and support young people.

METHODS: A random sample of 101 students 14-15 years of age participated in a universal health screen (HEeADSS) to identify health and well-being needs. A second independent sample group of 108 students age 13-18 years presented with a variety of health and well being needs and were treated on the presented condition. Statistical analysis was performed to identify any significant difference between the two groups.

RESULTS: A total of 213 students from six High Schools were seen during a 6 day period for a free youth health program in the top of the South Island. Of that population a total of 101 students were randomly selected to complete a universal health assessment (HEeADSS) and 108 different students chose to access the free health clinic. Of those students who were randomly selected to complete the universal youth health assessment (n=101), 26% were identified with emotional health needs. In contrast the students who volunteered to attend the free health clinic (n=108), only 6% indicated they had emotional health needs.

CONCLUSIONS/NEXT STEPS: These findings clearly show that 1 in 4 young people have mental health needs and are not active in seeking health professional care. More concerning is that untreated mental health needs increase the risk of suicide, AOD misuse and difficulties in participating in daily life. Despite reducing barriers of transport, confidentiality and cost, young people still do not access health professionals. Health literacy, stigma associated with mental health concerns and negative peer influences may be significant barriers for young people in coming forward to access health professionals.

IAAH170809

Prognostic markers for the recovery from adolescent depression: a retrospective analysis

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BACKGROUND: Adolescence is a time of major changes in all areas of functioning. Depression is the most prevalent health issue among this age group all over the world. According to WHO, suicide is the second leading cause of death among adolescents. Adolescent depression affects teen's socialization, family relation, performance in school and often with potentially serious long term consequences with high rate of relapse. The impacts on society are lost work productivity, compromised parenting, and increased expenditures for medical and psychiatric care. So it is important to understand the prognostic markers which are critical to decide the target for preventive measures on the road to recovery. These prognostic factors attenuate the negative effects of risk factors leading to resilient outcome. This study reflects these factors determining the recovery from adolescent depression.

METHODS: A retrospective analysis was done from total 70 adolescents attending child and adolescent mental health services from January 2015 to December 2016, who fulfilled the DSM 5 criteria for major depressive disorder. This paper examines the prognostic factors among the group of adolescents

who recovered after the first episode of major depression compared to those who had relapse or recurrence. A self made questionnaire was administered to assess the hypothesized factors.

RESULTS: Presence of good communication among parent-child, good achievement in academic, involvement in extracurricular activity or sports, presence of high intelligence, compliance with treatment, absence of co-morbidity, achievement in emotional and behavioral self regulatory skills and resilience building during treatment are the most important predictors of recovery from adolescent depression. Death wishes, Suicide attempt and non suicidal self harm were unlikely to be predictive factors in the recovery. Presence of family aggression, presence of family history of psychiatric illness and joint family are not significantly impacting the prognosis from the adolescent depression.

CONCLUSIONS/NEXT STEPS: Depression in adolescents is a severe and chronically disabling condition. This is a special population considering poor psychosocial and academic outcome and increased risk for co-morbidities and suicide. This study has revealed several major areas to intervene after the diagnosis of depression among youth for positive outcome.

IAAH170812

A study on Internet addiction and its psycho-social correlates among school going adolescents in Kolkata

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BACKGROUND: Internet is a great medium for students to communicate and get information. Internet use for academic and non-academic activities is an integral part of students' daily life now. There has been an explosive growth of internet use which is a growing concern and leads to addiction. Internet Addiction (IA) is associated with adverse psychosocial development and mental and physical disorders. Therefore, this study was conducted to determine the prevalence of internet addiction and associated existing psychopathology in school going adolescent.

METHODS: It was a population-based cross-sectional study. 292 adolescents, ages 13 to 18 years, were recruited from four high schools registered on the secondary school registry in Kolkata city using a simple random sampling technique. Internet addiction was assessed using the Internet Addiction Test (IAT). Participants were also asked to complete the Symptom Check List-90-Revision Questionnaire. Information was also collected on demographics, health behaviors, and perception of personal condition. Data analysis was carried out using appropriate statistical measures.

RESULTS: 292 participants were interviewed, of which 158 individuals (54.1%) were female, 119 individuals (40.75%) were mostly using internet for social network. Most of them were using internet less than two hours daily though 34 participants used for more than 7 hours per day. Considering the Internet usage, 159 individuals (54.45%) were placed in the group of Internet addict. Results indicated that the Internet addicted students, compared with ordinary Internet users had more psychological disorders. Hypochondria, obsession, interpersonal sensitivity, depression, anxiety and aggression were found to be higher in Internet addicted students compared to that of ordinary users of the Internet. Multivariate logistic regression analysis indicated that dysfunctional family relations, unexcused school absence and lack of extracurricular activities were significantly associated with Internet addiction (p<0.005).

CONCLUSIONS/NEXT STEPS: Considering the high prevalence of psychological disorders in the Internet addicted students, teaching appropriate use of the Internet to students is an important factor in controlling the Internet addiction. Clinicians and researchers need to be aware of potential social factors influencing internet addiction among adolescents.

IAAH170815

Assessing the needs of caregivers of adolescents suffering from Neurodevelopmental Disorders

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BACKGROUND: Neurodevelopmental disorders are a group of conditions with onset in the developmental period which typically manifest early in development and are characterized by developmental deficits that produce

impairments of personal, social, academic, or occupational functioning (APA, 2013) Neurodevelopmental disorders in the adolescent age group are associated with significant burden and socio-occupational dysfunction in multiple domains. Understanding the circumstances of families caring for a adolescent with neurodevelopmental disorders enable service providers in identifying areas for improvement in the delivery of services. We conducted a pilot study to determine the extent of caregiver needs amongst parents of adolescent patients with neurodevelopmental disorders in an Indian setting.

METHODS: This is cross-sectional study conducted in a out-patient psychiatric clinic of a tertiary hospital in North India. Fifty –three parents of adolescent patients aged 10-18 years suffering from neurodevelopmental disorders were included. After obtaining informed consent Caregiver Needs Scale were applied. The scale was translated to Hindi using WHO translation-back translation method. A semi-structured performa was used to gather patient and caregiver details. Analysis was done using SPSS v17.

RESULTS: The respondents were chiefly fathers (77.4 %). Mean age of parents are 37.92 + 4.92 years. On Caregiver Needs Scale, the mean scores on the four domains were as follows- Community services (22.44 + 5.43), Information needs (25.38+ 5.502), Support Needs (16.73 + 3.62), and Financial needs (18.35 + 4.87). The mean scores on all the 4 domains were above the median value.

CONCLUSIONS/NEXT STEPS: There is a significant burden of care-giving for adolescents with neurodevelopmental disorders with unmet needs in multiple domains. Caregiver needs in various domains especially regarding awareness and information need to be addressed through effective service delivery and policy measures.

IAAH170825

A STUDY OF SUICIDAL TENDENCIES IN TWO TERTIARY CARE TEACHING HOSPITAL

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BACKGROUND: The teen years are an anxious and unsettling period as boys and girls face the difficulties of transition into adulthood. It is a period in life that is often confusing, leaving teens feeling isolated from family or peers. Unfortunately, some may at one point or another perceive suicide as a permanent answer to problems that are more often than not just temporary. The self-doubts, confusion, and pressures to succeed or conform can come at a high price for troubled adolescents. Suicide is the second leading cause of death - following motor vehicle accidents - among teenagers and young adults. Poisoning is a significant global public health problem. In India, there are higher incidences of poisoning and is also one of the major causes of death. In developing countries, pesticides are frequently used for suicidal poisoning. On average, adolescents aged 15 to 19 years have an annual suicide rate of about 1 in 10,000 people.

METHODS: This study was a retrospective study carried out in two tertiary care teaching hospital. We got permission from the medical record room and case files from 2010 to 2016 was collected and documented. A total of 245 case records were found.

RESULTS: In our study we found 19% of the suicidal age group was from 15 to 19 this was the second large group in the study. Family stress 19% and Love failure 14% was the top leading cause for committing suicide. In this Organophosphate insecticide 43% was more used as suicidal agents.

CONCLUSIONS/NEXT STEPS: A suicidal teen needs to know there are people who care, and who are available to talk to. A person should be reassured that there are always solutions to problems or ways other than suicide for coping with them. Giving an adolescent the chance to open up and talk about his or her feelings will help relieve some of the distress of those intense emotions, and make that person feel less alone. This can be achieved by incorporating physiological counseling desk in all the schools

IAAH170829

Mental Health Status of Young People: An intervention Study

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BACKGROUND : Young people are one of the precious resources in every country. India has the world's largest population of young people (70% of India's population is in the age group of 13 to 35 years) and they play a significant role in shaping the future of the nation. Youth is a period characterized by a time of indecision, despair, and doubt, especially in instances where they are not mentally conditioned and physically prepared to cope with the changes taking place in and around. A recent report to the nation from the Commission on Children at Risk, has warned that rising rates of mental health problems among Indian teenagers and youth signal a crisis for the country.

METHODS: The aim of the study is to assess the mental health status of young people, who are staying away from their home town for higher studies and employment purpose in Holy Cross Parish, Chennai. 100 young people both male and female in the age group of 20 years to 30 years. Descriptive & Diagnostic research design and purposive sampling method were used. The standardized tool used for the study was GHQ-28 (1997). A detailed interview schedule was also developed by the researcher based on the objectives of the study. A detailed Socio-demographic and Family function assessment was done using this interview schedule. The Statistical Analysis System (9.2 – version) was used to analyze the data and correlations were obtained. Tables, Pie-chart and graphical representations were made.

RESULTS: Among the total respondents, most of them were suffering from anxiety symptoms (7.01%). The mean level of somatic symptoms (6.19%) and social dysfunction (6.91%) were in equal proportion. It can be concluded that a good number of youth (24.94%) were having mental health problems at different levels.

CONCLUSIONS/NEXT STEPS: It is very evident from this study that, 24.94% young people in the field of study had some kind of mental health problems especially in the area of anxiety and depression that needed immediate attention. Hence, the researcher has adapted Albert Ellis's (1950-2007) "Rational Emotive Behaviour Therapy" as a "model of intervention" to enhance mental health status of young people.

IAAH170830

Pattern of Skin Diseases in South India and Their Effect on Patients Quality of Life in Adolescents

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BACKGROUND: Skin disorders are considered to be one of the most leading reasons for patients attending primary health care facility in the world. These occur frequently and most of the people develop some kind of skin condition at some time in their life. Chronic skin conditions are usually the ones impairing patient's quality of life to that of acute conditions.

METHODS: A prospective cross-sectional study was carried among 186 adult patients presenting to Bhava skin clinic, Rajahmundry, Andhra Pradesh, India for a period of 5 months. Patients were interviewed directly for the demographic details and in addition a validated questionnaire about Dermatology Quality of Life Index was used in both English and Telugu language to measure the effect of skin disorder on quality of life since the past week.

RESULTS: In this study males constituted the majority of population accounting 59% and the predominant age group of the presenting population was 20-30 years accounting 41% followed by 10 to 19 years accounting 26%. Non-infective skin conditions were the most commonly occurring constituting 46% and among all the diseases fungal infections were most predominant and Acne vulgaris was the leading to all the other skin diseases. 47% of conditions had small effect on patient's quality of life.

CONCLUSIONS/NEXT STEPS: Fungal infections were the most commonly occurring than other categories of skin conditions. The effect on patient's quality of life was not predominant they had mild to moderate impact on patient's life. In accordance with all the previously conducted studies, it is evident that any kind of skin condition has at least a minimum effect of patient's quality of life on the contrary high effect to patient's quality of life is confined only to a few skin conditions.

Miscellaneous

IAAH170006

Engagement and Understanding: Pregnant adolescents and health information in Freedom Park

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BACKGROUND: Teenage pregnancy is a major sexual health issue for vulnerable young women in South Africa. This study examines how adolescent women in the South African township of Mitchells Plain understand and engage with information about sexual and reproductive health. Using qualitative research techniques, the article examines the factors that influence how vulnerable young women internalize, believe, and ultimately use this health information. By exploring this under-studied area of reproductive health, this research provides important insights into the causes of adolescent pregnancy and risky sexual behaviour among vulnerable adolescents.

METHODS: Participants were adolescent women (ages 18-20), who were residents of Freedom Park, (a neighbourhood in Mitchells Plain, Cape Town) and were either pregnant or had a child. Demographic screening tools (n=31) were used to select eligible participants for semi-structured interviews (n=30). Interviews were later transcribed verbatim, and analyzed using NVIVO.

RESULTS: In this Freedom Park sample, the ability of young women to internalize and act upon information about sexuality and health varied depending on who proffered that information and how the source of information was perceived by the recipient. In the research, three key factors emerged as impacting the internalization and later use of reproductive health information. First, shared life experiences played a critical role in making information more relatable and therefore easier to internalize, believe and use. Second, the perceived trustworthiness of the source of information made the knowledge more believable and relevant to the recipient. Finally, high levels of comfort in discussing sexual health with the source of information made information more easily internalized, while fear of negative judgment from sources reduced comfort and discussions of sexual health.

CONCLUSIONS/NEXT STEPS: The research suggests that efforts to reduce instances of adolescent pregnancy in South Africa should pay close attention to who delivers information about health and sexuality. To be effective, young women should feel they share experiences with, trust in, and are comfortable engaging with sources of information. Future research should pursue how improving adolescent's engagement with health information through feelings of belonging, self-efficacy, and empowerment can improve understanding, trust, and utilization of health information.

IAAH170019

Perspectives of adolescents on their rights in two Sudanese pediatric hospitals

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BACKGROUND: Adolescents' rights in healthcare services which include: the right to privacy, autonomy, information, consent, quality care, as well as some gender issues (like the clinical examination by the different sex doctors) seems to be of poor quality in the pediatric hospitals in Sudan. The aim of this study was to investigate the quality of adolescents care in pediatric hospitals according to their perspectives.

METHODS: A cross-sectional hospital-based study was carried out in two pediatric hospitals in Omdurman during September-January 2015. Interviews through structured questionnaires were used to gather data from adolescents who had been admitted to these hospitals during this period.

RESULTS: Out of 70 adolescent interviewed only 5.7% have autonomy to give the medical history to their treating doctors, while 57% of them never share to choose the medications types or routes. 80% of the adolescents thought there is no privacy in the hospital, with 65.7% experienced breaching of their privacy. However less than third of the participant adolescents feel discomfort from the doctor's number who perform physical examination and 80% did not care whether the examined doctor was a male or female. More than two third of the adolescent never care if admitted with younger children or infants. No consent for physical examination is experienced by more than third, and about

half of the participant not consented for blood samples or procedures. 94.3% of the adolescents were never informed by their doctors about their illness or the prognosis or even the treatment options.

CONCLUSIONS/NEXT STEPS: This study further evidences the importance of adolescents' perspectives on their rights in health care services. More efforts should be done to improve the adolescent's rights in health care services.

IAAH170028

Utilization of Maternal Health Services by Married Teenage Women: A study in Rural Uttar Pradesh, India

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BACKGROUND: Improving maternal health is one of the eight Millennium Development Goals. The utilization of maternal health services is a complex phenomenon and it is influenced by several factors. Antenatal care may play an indirect role in reducing maternal mortality by encouraging women to deliver with assistance of a skilled birth attendant or in a health facility. In most rural settings of Badaun district of Uttar Pradesh, there are challenges in increasing such health care service utilization mainly due to the fact that the decisions that lead women to use the services seem to occur within the context of their marriage, household and family setting.

METHODS: This was a cross-sectional population based study undertaken in 25 rural villages of the Badaun district, Uttar Pradesh, India. Total 440 teenage mothers aged 15-19 year interviewed using pretested questionnaire with using a combination of simple random and multistage sampling techniques from March 2014 to August 2014 in rural Uttar Pradesh, India. Three dependent variables were used in the analysis: The ANC, measured by whether a woman got the service (partial) from a health professional or not during her last pregnancy, natal care (Institutional delivery) and PNC. Household and women's characteristics were used as explanatory variables for both dependent variables.

RESULTS: The study revealed that the level of ANC and PNC service utilization is 38.4% and 43.2% respectively, whereas only 23.5% women received PNC within two weeks of delivery. The predicted probabilities, using logistic regression, showed that among teenage women, who are educated, have exposure to media, and women with high autonomy in household and high standard of living index are more likely to use both ANC and PNC services.

CONCLUSIONS/NEXT STEPS: For increasing the utilization of these services among teenage women, in addition to individual-level, there is a strong need focus on community and district-level interventions for promoting women's education and behavioural change communication at grass root level, provision of the services. Sustainable maternal and child healthcare (MCH) programs and awareness will support to achieve furthermore better results.

IAAH170038

Increasing the uptake of services and contraceptives among young people in Uganda: What works

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BACKGROUND: Improving young people's access to contraception and services is of critical importance in Uganda where 77% of the population is below 30 years and where youth face multiple sexual and reproductive health and rights (SRHR) issues. These include unwanted and high teenage pregnancies, unsafe abortions, maternal death and disability, sexually transmitted infections, HIV and AIDS, and gender-based violence. We present findings from a successful youth-driven, community outreach model that integrates education and SRH service provision.

METHODS: Operational research (OR) is integral part of this project. The research team consisting of 8 local young people, a professional research officer (team lead) and a research coordinator from Makerere University. Over a period of 2 years, the team collected and analysed qualitative and quantitative data on the SRH needs of adolescents and young people (10-24 yrs); key issues related to their sexual wellbeing; quality of services; and effectiveness of project strategies. M&E data was collected (e.g. on service statistics, training and activity reports) and triangulated with OR data.

RESULTS: Uptake of and satisfaction with outreach services was high (22,000 services provided over 1.5 yrs; 93% satisfied). We estimate that the outreach

model reaches 60% of the rural youth in the intervention areas. These young people previously did not access SRH services and had no reliable sources on SRHR. Moreover, service uptake at the collaborating government clinics doubled in one year time. These results illustrate the increased youth friendliness and responsiveness of the services as well as increased awareness and improved perceptions among young people; a strengthened supportive environment for youth SRHR and opportunities for sustainability.

CONCLUSIONS/NEXT STEPS: Key success factors of this project are: • Youth driven and youth focused: Peer educators were vital in increasing the acceptability and awareness of the services. Outreach was made relevant and attractive to young people through the combination with education, music, games and sports. • Collaboration and mentorships: Health workers and peer educators were not only trained once, but coached throughout the project. Strong collaboration between peer educators and health facilities ensured referral to static clinics, as well as successful mobilisation during outreaches.

IAAH170041

Prospective association between early adiposity rebound with breast development in girls

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BACKGROUND: The adiposity rebound is the second rise in body mass index that occurs between 3 and 7 years. An early age at adiposity rebound is known to be a risk factor for later obesity. Studies investigating AR among Chinese children and its association with pubertal development remain scarce. This study aims to determine possible relations between early AR with obesity and breast development.

METHODS: Prospective children cohort (n=1759) from 2 kindergartens in Anhui Province was established. Only data of girls (n=802) was reported in this analysis. During kindergarten period, physical examination was carried out every 3 months, 8 times in total. Children from three kindergarten cohorts according to different recruitment year (2010, 2011 and 2012, respectively) were followed up to elementary school, with physical and breast development assessed each year (Figure). Age specific body mass index (BMI) curve was established and AR was determined according to Rolland-Cachera's method. Multivariate regression analyses were recruited to examine association between early AR with breast development. Data was analyzed in Sept. 2016.

RESULTS: Average age at AR was 6.16 years old, early AR was defined using the 25th percentile age (5.67 years old). Early breast development was found significantly higher in girls with AR (27.8%), compared with non-AR girls. After adjusted current obesity, age, household economic status, childhood physical activity, early AR increased 2.406 times the risk of early breast development in girls.

CONCLUSIONS/NEXT STEPS: Results from this longitudinal population-based study suggest that early adiposity rebound increases the risk of early puberty among girls. Age at adiposity rebound through age specific BMI curve might be effective indicator for early puberty prediction among Chinese children.

IAAH170042

Prevalence and correlates of achieving recommended physical activity levels among children living in rural South Asia-A multi-centre study

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BACKGROUND: We report the prevalence of recommended physical activity levels (RPALs) and examine the correlates of achieving RPALs in rural South Asian children and analyse its association with anthropometric outcomes.

METHODS: This analysis on rural South Asian children aged 5-14 years (n= 564) is a part of the Chronic Disease Risk Factor study conducted at three sites in India (Chennai n= 146; Goa n= 218) and Bangladesh (Matlab; n= 200). Data on socio-demographic and lifestyle factors (physical activity

(PA); diet) were collected using an interviewer-administered questionnaires, along with objective anthropometric measurements. Multivariate logistic regression models were used to examine whether RPALs (active travel to school (yes/no); leisure-time PA \geq 1 h/day; sedentary-activity \leq 2 h/day) were associated with socio-demographic factors, diet and other forms of PA. Multivariate linear regression models were used to investigate associations between RPALs and anthropometrics (BMI- and waist z-scores).

RESULTS: The majority of children (71.8%) belonged to households where a parent had at least a secondary education. Two-thirds (66.7%) actively travelled to school; 74.6% reported \geq 1 h/day of leisure-time PA and 55.7% had \leq 2 h/day of sedentary-activity; 25.2% of children reported RPALs in all three dimensions. Older (10-14 years, OR = 2.0; 95%CI: 1.3, 3.0) and female (OR = 1.7; 95% CI: 1.1, 2.5) children were more likely to travel actively to school. Leisure-time PA \geq 1 h/day was more common among boys (OR = 2.5; 95% CI: 1.5, 4.0), children in Matlab, Bangladesh (OR = 3.0; 95%CI: 1.6, 5.5), and those with higher processed-food consumption (OR = 2.3; 95%CI: 1.2, 4.1). Sedentary activity \leq 2 h/day was associated with younger children (5-9 years, OR = 1.6; 95%CI: 1.1, 2.4), children of Goa (OR = 3.5; 95%CI: 2.1, 6.1) and Chennai (OR = 2.5; 95%CI: 1.5, 4.3) and low household education (OR = 2.1; 95%CI: 1.1, 4.1). In multivariate analyses, sedentary activity \leq 2h/day was associated with lower BMI-z-scores (β = -0.3; 95%CI: -0.5, -0.08) and lower waist-z-scores (β = -1.1; 95%CI: -2.2, -0.07).

CONCLUSIONS/NEXT STEPS: Only one quarter of children in these rural areas achieved RPAL in active travel, leisure and sedentary activity. Age, gender, household education and geographical location were associated with RPALs. Improved understanding of RPAL in rural South Asian children is important due to rapid socio-economic transition.

IAAH170045

Overcoming barriers to effective adolescent risk screening through technology!

Jennifer Salerno¹

¹Possibilities for Change

Nearly 75% of adolescent morbidity and mortality is a result of risky behaviors, particularly motor vehicle accidents, homicide, suicide, and unintentional injuries; additionally adolescents carry significant disease burden from sexually transmitted infections (STIs). Despite recommendations from leading health organizations, screening for risk behaviors in adolescents remains far below recommended levels due to reported barriers of time, clinician skills and confidence, and adolescent engagement. Multiple studies conclude that to facilitate a comprehensive approach to adolescent care, work needs to be done to identify and incorporate efficient and effective technology based screening tools and interventions into practice.

Screening adolescents for risky behaviors is important to their health, but facilitating a screening that is both time efficient and effective can feel unattainable. This session will equip attendees with the information and resources needed to provide higher quality clinical preventive services to adolescents. Use of technology based tools to overcome the most common barriers to risk screening will be discussed and demonstrated. An overview of the Rapid Assessment for Adolescent Preventive Services (RAAPS) cloud based assessment and counseling system will be presented. RAAPS was developed at the University of Michigan out of research and practical need by clinicians, researchers and youth. The RAAPS web system was built by software professionals and uses a structured, secured database meeting regulatory compliance requirements. RAAPS is the only adolescent risk screening tool available that allows for electronic medical record documentation, electronic data collection by youth, individualized health messages, electronic referral, and multi-function reporting on individual and aggregated risk. Use of the RAAPS increases the accuracy of risk identification and documentation of counseling provided in a single visit; allows risk data on adolescent patient populations to be accessed quickly and easily through the comprehensive reports section of the system; allows tailoring of clinic services and targeted health messages to address the greatest needs of adolescent patient populations; and provides quick and easy review of individual and aggregate risk behavior changes over time. The RAAPS is currently being used by thousands of professionals worldwide with overwhelmingly positive results.

IAAH170046

Characterization and Correlates of Exercise among Adolescents with Eating Disorders

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BACKGROUND: High levels of physical activity are often associated with eating disorders. However, the type of exercise adolescents with eating disorders engage in and its association with medical instability is not well characterized. The objective of this study was to characterize exercise behaviors among adolescents with eating disorders and analyze associations between exercise and vital signs as a marker of medical instability.

METHODS: Electronic medical records of all patients evaluated by the Eating Disorder Program at Stanford University between January 1997 and February 2011, were retrospectively reviewed and included if they met DSM-5 criteria for an eating disorder. Subjects without exercise data were excluded. Exercise type, team involvement, frequency, and vital signs at first evaluation were recorded.

RESULTS: 1446 subjects (1270 females, 176 males; mean age 15.7 ± 2.5 years) met eligibility criteria. Most patients (89.5%) reported exercise (mean 8.5 hours per week over mean 6.1 days per week) prior to presentation. Running (49.5%), calisthenics (39.8%), walking (21.9%), soccer (20.7%), and swimming (19.3%) were the most common exercises; a majority (60.1%) reported team sport participation. Males were nearly twice as likely to exercise over 15 hours per week as females ($p=0.01$) and were less likely to report team exercise ($p=0.008$). Bradycardia (heart rate <50) at presentation was associated with team sport participation (AOR 1.43, 95% CI 1.02-2.02), exercising over 15 hours per week (AOR 3.44, 95% CI 1.64-7.24), lower percent median body mass index (%mBMI) (AOR 0.97, 95% CI 0.95-0.99), shorter duration of illness (AOR 0.98, 95% CI 0.97-1.00), and greater rate of weight loss (AOR 1.18, 95% CI 1.06-1.31). Longer QTc intervals at presentation were associated with fewer approximate hours of exercise per week ($B = -2.91, p=0.001$) and greater %mBMI ($B=0.20, p=0.04$).

CONCLUSIONS/NEXT STEPS: Adolescents with eating disorders reported high levels of exercise. Females reported more team sport participation, while males exercised more hours per week. Greater exercise frequency and team sports participation were associated with bradycardia. Further studies assessing the relationship between exercise and bradycardia may help inform the medical management of adolescents with eating disorders who are more physically active.

IAAH170067

Are gender attitudes associated with romantic and sexual experiences in early adolescence? Findings from Nairobi, Kenya

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BACKGROUND: While early adolescence is a period of intensification in gender norms, and a time when some young people initiate sexual activities, little is known about very young adolescents' (VYA) gender attitudes as related to sexual and romantic relationships. In this study, we explored the degree to which urban poor VYA endorse dominant gender norms, their permissiveness towards early heterosexual relationships, and the association between such attitudes with romantic and sexual experiences.

METHODS: A cross-sectional survey was conducted in an informal (slum) settlement in Nairobi (Kenya). The final analytical sample comprised 365 never-married 11-14-year-olds (84% response rate) of whom half were boys. Four scales measured agreement with gender norms related to sexual double standards (female sexual risk, male sexual prowess) and permissiveness towards early heterosexual relationships. Latent class analysis was used to assign respondents into three romantic and sexual experience sub-groups: 1) Involved (12%, high awareness of sex and some experience of romantic and sexual activities); 2) Observant (48%, high awareness but little own experience); and 3) Naïve (40%, little awareness or personal experience). Multivariate latent class regression models were conducted to examine the associations among gender attitudes with romantic and sexual experience.

RESULTS: Gender attitudes were fairly stereotypical, but varied across factors

such as physical violence (boys and girls), adverse childhood experiences, peer norms, family structure and being born in the slum (boys), and household size and wealth (girls). Girls had higher endorsement of sexual double standard norms than boys, while permissiveness towards early relations was low overall. The Involved group had higher endorsement of male sexual prowess and greater permissiveness towards early relations relative to the Naïve group. In the adjusted models, permissive relationship attitudes were the strongest predictor of greater romantic and sexual experiences.

CONCLUSIONS/NEXT STEPS: While urban poor VYA in this context support stereotypic gender norms related to sexuality, such attitudes have not (yet) translated into behaviours as few girls and boys reported romantic and sexual relationships, and expressed low permissiveness towards doing so. Structures need to be in place that allows the most marginalized girls and boys to challenge gender stereotypes and cultivate equitable attitudes that promote healthy sexuality and sexual health.

IAAH170072

Beliefs and perceptions of family planning and fertility among adolescents in Nepal

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BACKGROUND: Adolescents in Nepal are a key public health target group in need of reproductive health services. Interestingly, their need is primarily driven by adolescent marriage (28.8% of girls) with a mean age of 16.4 years for marriage and sexual debut. Boys marry slightly later (17.6 years) and less frequently (6.9% married). Despite low desire for pregnancy among adolescent wives (53.4%), only 82.4% are using no method at all and 14.4% are using a modern methods. This assessment describes married adolescents' beliefs and perceptions of fertility and family planning (FP) services in Nepal.

METHODS: A qualitative study analyzed data from 36 focus group discussions, 18 participatory group discussions, and 144 in-depth-interviews among young married women, men (age 19-21 years) and FP service providers across five districts. Questions were written that pertain to fertility awareness, family planning beliefs and behaviors. Interviews were digitally recorded, transcribed verbatim in Nepali, translated into English, and coded using thematic analysis.

RESULTS: Most participants lacked specific knowledge about the menstrual cycle and women's fertile days. Participants stated several cultural practices related to menstruation for women, reflecting the challenges associated with underlying gender norms and roles. FP knowledge was limited to those methods most used in the data collection communities (pills, injectable and IUCD), but participants lacked general knowledge of how FP methods work and stated significant fears of both known side-effects and those fueled through community-level gossip. Other challenges to FP service uptake include: perceived stigma for women with migrating husbands, social pressure to have more children – specifically boys, and limited access to desired methods.

CONCLUSIONS/NEXT STEPS: Among adolescents in Nepal, simply promoting FP use is not enough. Basic fertility education can provide a foundation for informed decisions related to FP use. Our data revealed that some mis-information is already being shared across different aspects of community about fertility and FP and fueling misconceptions about modern FP Methods. Social normative interventions should focus on supporting accurate information through audio/visual and health service providers or other dynamic diffusion tactics.

IAAH170080

Sexual & Reproductive health issues in Adolescence

Rashmi Rathee¹

¹Self

BACKGROUND: Adolescence is the transitional phase between childhood and adulthood. It is marked by both physical and emotional changes. At the same time, it is also a delicate phase of life which must be nurtured carefully so as to prevent problems in future for the child. This can be said especially regarding sexual and reproductive health of this group.

DESCRIPTION: Adolescents are especially vulnerable to a number of sexual and reproductive health issues, most common of which include teen pregnancy,

unprotected sex, STDs and mental issues which result due to these causes and much more. Here, we discuss the worrisome current scenario prevailing in India and the world as a whole in respect to sexual issues affecting this group which are largely ignored.

LESSONS LEARNED: Sexual education at this plastic age is of utmost importance. Studies show that sexual education at this time leads to higher levels of abstinence, increased use of contraception, fewer sexual partners and other innumerable benefits.

CONCLUSIONS/NEXT STEPS: Knowledge is power and this power can be given to the youth of today only by spreading awareness and educating them on a large scale. Therefore, steps must be taken to empower our youth and stymie issues related to reproductive health.

IAAH170081

Association between the sex of household head and pregnancy among unmarried teenagers in Malawi

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BACKGROUND: Teenage pregnancy (TP) continues to threaten sexual and reproductive health rights of young women in Malawi despite several national interventions to reduce it. This study investigates the association between sex of the household head and TP in Malawi using the Malawi Demographic and Health Survey (MDHS) of 2004 and 2010.

METHODS: The study used nationally representative survey of the Malawian population that captured 34718 females aged 15-45 between 2004 and 2010. The study sample constituted 1297 sexually active women aged 15-19 that were never married between 2004 and 2010 in Malawi. Analysis entailed univariate, bivariate (chi-square and t-tests) and multivariate analysis through binary logistic regression.

RESULTS: Results showed that 24.8% of unmarried teenagers were ever pregnant between 2004 and 2010. The multivariate results showed that TP occurred more among girls living in female headed households and the risk of TP was higher among this same group (OR 1.5; CI: 1.03-2.23). Other factors found to be associated with teenage pregnancy include region, education, household size, and condom use at last sexual intercourse.

CONCLUSIONS/NEXT STEPS: The findings from this study showed that teenage pregnancy among the unmarried teenagers is high in Malawi. The study found that the sex of the household head significantly influences the risk of teenage pregnancy. Teenagers living in households headed by females were more at risk of teenage pregnancy compared to those living in households headed by males. These results provide information useful for policy makers in Malawi to target intervention programmes appropriately in assisting the national reduction of TP. Also findings of these results serve as frontiers for further studies on TP.

IAAH170089

"... today I have to think of myself and my Daughter": the role of paternity in adolescence and youth in the transition to adulthood in Belo Horizonte and Metropolitan Region, Brazil

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BACKGROUND: The objective of this paper is to understand the impacts of fertility occurred in adolescence and youth on the lives of men living in Belo Horizonte and in Metropolitan Region.

METHODS: Semi-structured interviews were conducted with twenty-two men between the ages of 21 and 30, who were parents for the first time in adolescence (between 15 and 19 years) or in the youth (between 20 and 24 years). The conversations made possible a retrospective approximation of the trajectories of these parents, from the moment of the beginning of the relationship with the mother of the child, through the news of the pregnancy and the reaction of the families, and arriving at the paternity itself, in view of the care, involvement and current relationship with the child (ren).

RESULTS: The results suggest that there was no difference between the parents who had their teenage children and those who had as young as the reaction to the news of pregnancy - most speak of "shock" and "fright". When asked how

they would receive the same news these days, some parents said that having a planned child, the reaction would be "calmer" and less shocking than in the past. More young parents than adolescent parents remain with the mothers of their children. When asked about their desire to have more children, only three respondents said they did not want more children. When they speak of the future fertility of their sons and daughters, they emphasize the "right time" and the phases that must be fulfilled before having a child - study, work, and marriage.

CONCLUSIONS/NEXT STEPS: The meaning of being a father is strongly associated with the term "responsibility," which also appears in speech as a feature of adult life. Besides being responsible, being a father is linked to being present, educating, giving affection and affection, indicating changes in the perception of the father figure in relation to the past, but without leaving aside the traditional role of the father provider, who "sustains the house and the son".

IAAH170090

Neonatal mortality and risk factors in Nouakchott, Mauritania.

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BACKGROUND: This was a first study providing important information about neonatal mortality among neonates hospitalized in Mauritania. We studied causes of admission and risks' factors for neonatal mortality in the referral hospital in Nouakchott, Mauritania. In order to prevent neonatal deaths, it is important to identify areas of preventive intervention.

METHODS: We conducted this study in National Referral Hospital in Mauritania from 01-January to 31-December 2013. Clinical diagnosis, socio-economic status, gestational age, birth weight, infant gender, hospitalization motive, marital status, level of maternal education and date of admission and discharge were registered. Cause-specific of neonatal deaths were classified by modified ICD-10-WHO-2015 classification. Statistical analysis was performed in SPSS 22.0.

RESULTS: Among 669 neonates hospitalized in a neonatal unit care during period of surveillance 34.68% were died. Of these 53.12% were born from mothers that never had prenatal check up (OR: 1.7; P= 0.009; IC (1.143-2.515). There was a high burden of earlier neonatal mortality with 68.5% of death on the first days (0-6 days) of life (or: 2.805; P=0.000). The odds of neonatal death were higher for infant born to father who were analphabetic (OR: 2.121; p=0.013). The mean birth weights were 2058.4 g + or - 59.947 g, with 68% were of low birth weights. Infants delivered at less than 37 weeks of gestation recorded a higher rate of mortality than those of 37 weeks and above (p=0.000).

CONCLUSIONS/NEXT STEPS: Results of this study shows that, low birth weight and prenatal care utilization factors, should be taken into account when planning the intervention to reduce neonatal mortality in Mauritania.

IAAH170095

Knowledge and self-care practices among adolescent females during their menstrual period: A case study from Nablus District, Palestine

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BACKGROUND: The menstruation is a natural phenomenon that occurs throughout the reproductive life of every female. This study aims to explore knowledge and self-care practices among Palestinian adolescent females during their menstrual period which is a neglected area in research in Palestine.

METHODS: Cross sectional study has been conducted among 100 girls from seventh, eighth and ninth grades from Nablus district schools. The researchers explain the questionnaires for the participants, in addition to taking into consideration: Anonymity, confidentiality and privacy. Data were analyzed using SPSS version 17. The questionnaire included questions about knowledge and practices during menstrual period including: diet habits, daily activity, medication usage in addition to the social norms related to this period.

RESULTS: The participants were equally presented different place of residences: camp, city and village. 68% of the participants referred to their mothers as the main source of information about dealing with this period, 52 %

of them believed that salty food make bad effects on their health during the menstrual period, 85% answered that showering important during menstruation. 85% no harm of touching things during menstruation, 38% of girls makes neither change of food quality nor quantity during menstruation, 36% often take herbal hot drinks to relieve menstrual pain while 63% of them using analgesics.94% of participant reported proper way of disposing dirty pads. According to the preparedness of schools latrines: 70% mentioned the availability of the privacy doors, 60% reported the availability of soap water and 16% paper toilet interrupted in the schools and this could explain the reason that only 45% of the participants used the schools toilets. This study showed no statistical relationship between the place of the school and the girls cultural norms related to menstrual period and their self-care practices. Furthermore the mother education showed no effect on the knowledge of the girls or their self-care practices during menstrual period.

CONCLUSIONS/NEXT STEPS: This study highlighted the need to have accurate and adequate information of adolescent girls health needs to develop a comprehensive education programs with strong puberty education components in Palestine.

IAAH170108

The factors effecting on satisfaction of new child's mothers of municipal utilities and its effect on attitudes toward childbearing

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BACKGROUND: Women attitudes toward how and what to be an ideal city is often influenced by the values, believes and general attitudes in personal and social living. Thus this study aims to recognize the factors affecting on satisfaction of new child's mothers of municipal utilities and its effect on attitudes toward childbearing.

METHODS: This is a survey research and the population include all new child's mothers in region 12. This study has performed the multi stage cluster sampling. At first, 13 districts were investigated based on population, and then they were divided to three regions including north, centre and south. Two divisions in north, two in south and three in centre were selected.

RESULTS: Based on the results of F Test (5.957) in error level lower than 0.01, it can be said the regression model includes six independent variables and one dependant variable as reliable model and a set of independent variables are able to anticipate the women's attitudes toward childbearing . The comparison of variables shown the significant effect of five variables including age , social- economic structures , size of family, social capital and satisfaction of municipal utilities on toward childbearing , but duration of residence with the error level higher than 0.05 , indicated this variable has no significant effect on the dependant variable . Also the satisfaction of municipal utilities in regression coefficient 0.363 , social capital coefficient 0.343, economic- social status 0.287 , size of family 0.255 have the highest regression effect on attitudes toward childbearing variable .

CONCLUSIONS/NEXT STEPS: Finally, the adjusted determination coefficient is equal to 0.445 , which indicated % 44.5 of whole attitudes toward childbearing are related to six above mentioned variables. In other hand, the set of above variables can anticipate about half of attitudes toward childbearing attitude variance.

IAAH170114

Effectiveness of Medico-Legal Partnerships in Providing Reproductive Health Care to Adolescents

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BACKGROUND: Roe v. Wade, the U.S. Supreme Court case legalizing abortion in the United States, originated in Texas. But in recent years, Texas has enacted multiple and increasing restrictions on access to reproductive health care, particularly for adolescents. Providing reproductive health care to even the most marginalized patients, such as impoverished sex assault victims, can be difficult without strategic partnership with legal professionals.

DESCRIPTION: Presentation of a case study of a 12-year old sexual assault victim who was in her 2nd trimester of pregnancy and expressed a choice to terminate. The on-going criminal and child protective services investigations

complicated her access to care on top of the legal obstacles imposed by Texas law. Those legal obstacles will be described along with the political-cultural barriers a pregnant 12-year old faces in Texas. The presentation will describe what tools and tactics a partnership between the physician and an attorney utilized to obtain the care the child desired. Furthermore, we will discuss additional advocacy efforts at the state and federal level that resulted from work on this case, including an amicus curiae brief filed in the Whole Woman's Health v. Hellerstedt case which struck down portions of Texas' restrictive abortion laws.

LESSONS LEARNED: Importance of inter-professional collaboration benefits of being present in grass-roots advocacy and networking to encounter likeminded individuals in integrative professions maintaining the importance of health and well-being of the individual patient at the centre for our efforts

CONCLUSIONS/NEXT STEPS: Improving opportunities for such collaborations through IAAH and other professional organizations.

IAAH170158

Impact of air pollution on adolescent health: review of available evidence

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BACKGROUND: In India, as in the rest of the world, young people face a several challenges to their health, one of the important challenges is air pollution; however, the impact of air pollution on adolescents' health is not fully explored. The aim of this review is to explore impact of air pollution on adolescents' health.

METHODS: The following databases were utilized to identify relevant articles using key words: PubMed, MEDLINE, Cochrane databases, country specific websites of Ministry/Department of Health, Ministry of Environment, Forest and Climate Change, Ministry of Road Transport and Highways, and World Health Organization. The combination of the following words was used: air pollution, air pollutant, adolescent, health, ambient air pollution, Asia, India. The inclusion criteria was: age category 6-12 and 13-18; conducted in India between 1991 and 2016; published in English

RESULTS: This review includes 11 papers that met our criteria. Majority of these studies explored effect of air pollution on respiratory system of adolescents', studies reported that there is positive association between the exposure to air pollution and behavioural problems particularly attention-deficit hyperactivity disorder in Indian school children. It has been found that air pollution has an impact on cardiovascular system, development of hyperactivity disorder, cancer, and many other conditions. On the other hand it can cause non revertible changes in lungs of adolescents and consequently chances of acute and severe chronic diseases increases. Moreover, exposure to air pollution increases susceptibility to chronic diseases later in life.

CONCLUSIONS/NEXT STEPS: The review highlights the importance of including and examining the effect of air pollution specifically on adolescent health; hence evidence shows that decreased lung function during adolescent period has long term impact such as respiratory complications later in life. We conclude that this paper can play a vital role in raising the awareness of the health issues related to air pollution and its impact on adolescent health, initiate drawing room discussions and actions on preventing future harm to the growing period of life. We recommend that the aspect of air pollution should be incorporated into existing National Adolescent Health Program.

IAAH170160

What adolescents do when they are faced with reproductive health problems: A qualitative study in the Shai Osudoku and Ningo Prampram districts of the Greater Accra, Ghana.

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BACKGROUND: Adolescents and young adults need complete and skillful sexual and reproductive health care. Unfortunately, this group have less access to reproductive health care as compared to the other age groups. The aim of the paper is to explore the health seeking behavior of adolescents towards reproductive health care.

METHODS: This study was conducted in two districts in the Greater Accra region of Ghana. Focus group discussions (8) and in-depth interviews (8) were

held with stakeholders. Study participants included youth between the ages of 17 and 24. Thematic analysis was used.

RESULTS: Parents do not have time to educate adolescents on sex, anytime they have issues on reproductive health, they consult their friends for advice. They turn to their teachers both males and females for advice. Adolescents do not always go to the hospital but stay at home for treatment as more questions will be raised when they visit any health facility. Shyness to disclose their illness to the health workers prevents them from accessing the health facilities. The ladies discuss and help each other when they have candidiasis. They sometimes consult their boyfriends or female friends for advice when they get pregnant or take concoction to abort pregnancy. In fear of stigma for contracting HIV/AIDS some of the adolescents end up committing suicide. They sometimes take herbs to cure themselves or go to the drug store to buy drugs.

CONCLUSIONS/NEXT STEPS: The study has emphasized that an intervention that will only provide an adolescent friendly health service alone will not reduce the health problems of adolescents and young people in the districts. It is however important to have a well invested and sustained intervention, specific approaches that aim to generate an atmosphere that is very supportive and friendly for adolescents and young people.

IAAH170181

Premarital sexual behaviour among adolescents and youth in Nepal

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BACKGROUND: Today younger generation are reaching adulthood in very different ways than their parents. Around the world, new spaces and opportunities are emerging for younger generation to have more education, training, employment, recreation and entertainment, exposure to mass media and social media, information, communication, transportation and mobility from local to global level from different channels within and across the country. In order to get or compete to get these opportunities, younger generation are postponing their marriage and parenthood. While waiting for marriage, they are having more opportunities of mobility, interaction, connection, communication, attraction and affection with friends of same and different gender, and so likely to experience different types of intimate activities including dating, love affairs, living together and sexual activities. Although premarital sex is not yet socially acceptable in many developing countries, many studies have shown that premarital sexual attitude and behaviour are nevertheless transforming from traditional restrictive values to western liberal or permissive values. Premarital sex is not as rare as it is widely perceived in South Asia and Sub-Saharan African countries; this is also the case in Nepal. The main purpose of this study is to understanding the nature and process of changes in premarital sexual behaviour among adolescents and youth (AYs) of 15-24 years of age in the changing context of Nepalese society that will help to understand Nepal as a society in transition through the lens of premarital adolescent sexual behaviour.

METHODS: The study will use a mixed method employing both quantitative and qualitative methods, which will be conducted in two phases. The first phase, a quantitative study, will attempt to explore the extent, and influence of some selected individual, family level, peer level variables and social determinants associated with individual and gender differences in premarital sexual behaviour of based on an analysis of secondary data of the National Adolescents and Youth Survey 2010/2011. The survey had collected information from 8,155 AYs. The second phase, which is ongoing, will focus on understanding the perceptions of adolescents and key social agents; and the process underlying in negotiations of decisions making around premarital sex, through a qualitative study, which comprises in-depth interviews with adolescents and focus group discussions with adolescents and influencers.

RESULTS: The preliminary analysis shows that about 5% of male and 18% of female aged 15-19 years, and 33% of male and 68% of female of 20-24 years were ever married. Among the late adolescents of age 15-19 years, 18% of boys and 3% of girls have had experienced premarital sex. The prevalence of premarital sex is reported to be increased with age for both male and female. It is about 33% among male and 5% among female youth of 20-24 years.

CONCLUSIONS: The study suggests that premarital sex in Nepal is not yet pervasive in national level; however, it is likely to increase in the current context of conducive laws and programs related to SRH to ensure their SHR rights. Similar to other studies, it also revealed a big difference in prevalence of premarital sex among young people by age, gender, place of residence and other socioeconomic characteristics. Men have consistently reported higher rates

of prevalence of premarital sex. It raises several questions that why there is double standard or so big gender differences in premarital sexual behaviour; who the boys are having premarital sexual relationship with; whether girls and others who have not involved in premarital sex feel themselves being oppressed or disconnected or injustice in premarital sexual behaviour. Even those who involve in premarital sexual activities might have faced several problems and challenges. To answer these, the second phase of the study will focus on understanding the perceptions of adolescents and key social agents; and the process underlying in negotiations of decisions making around premarital sex, through a qualitative study. This will help to explore the voices and perception of AYs on premarital sex, and the process and challenges underlying in negotiations of decisions making around premarital sex, and to further understanding impact of social structure like social stratification, inequality in power and other opportunities on resulting in individual and gender differences in premarital sexual behaviour among AYs.

IAAH170198

Preventing Transmission of HCV among young adolescents who inject drugs: A study in two high prevalent states of India

Varada Madge¹

¹Manta Himc

BACKGROUND: Injecting drugs is a growing problem among adolescents. Due to lack of awareness on harm reduction practices, it is likely that adolescents may get engaged into unsafe sexual and injecting practices that could make them susceptible to Hepatitis C Virus (HCV) that could be detrimental to their health.

DESCRIPTION: The data on adolescents has been analyzed from the ongoing study, "Prevention and Early management of Hepatitis B and C among People Who Inject Drugs (PWIDs)" in Amritsar and Imphal. Promoting the harm reduction practices through education sessions, the present study aimed at mitigating the risk of HCV among adolescents. Out of the 1700 PWIDs registered and enrolled in the study through the Targeted Intervention NGOs (TI-NGOs), 29 of them were adolescents that were randomly selected. The intervention model included education sessions, screening and Hepatitis B vaccination and follow-up by the out-reach workers. Five risk assessments were done to assess the impact of education sessions on harm reduction practices. This was done using a prescribed tool and their health conditions and adherence to harm reduction practices was monitored over a period of time.

LESSONS LEARNED: At the time of registration, majority of them were injecting drugs in last three months and one third of them performed in groups. About half of the adolescent PWIDs were sexually active and 17% (5) had history of same sex partner. Overall risk of HCV in adolescents was reduced from 24% to 17%.

CONCLUSIONS/NEXT STEPS: The study concludes that by targeting the young population for intervention by providing education sessions on harm reduction practices demonstrated promising results in terms of mitigation of risk. The study recommends that it is crucial to involve parents, family and schools for further care and support that can promote an enabling environment that improves the quality of life of adolescents.

IAAH170201

Girlhood in Rural Rajasthan: Using Baseline Data from 7000 Adolescent Girls to Inform a Comprehensive Theory of Change for Integrated Interventions

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BACKGROUND: This study uses baseline survey data from 7000 adolescent girls to inform a comprehensive theory of change for how an (ongoing) intervention, Weekly sessions for adolescent girls and engagement with the wider community, could affect girls' marriage, educational and sexual and reproductive health outcomes. Serious consideration of the channels through which this intervention could affect outcomes is highly pertinent in this context given the low status of girls and women in household decision making.

METHODS: We run descriptive and correlational analysis on baseline data from over 7,000 adolescent girls in Dhaulpur district, Rajasthan. We analyse how practices around education, marriage and sexual and reproductive health relate to beliefs, attitudes and expectations of girls and their families and communities is carried. In doing so we test, modify and expand the initial conceptual framework for understanding the various pathways through which integrated interventions which target adolescent girls and their communities can affect girls' outcomes.

RESULTS: Against a backdrop of a secular downward trend in rates of early marriage, we find adolescent girls' involvement in key decisions around own marriage remains low: less than 10% of girls married before 19 had been consulted on either when or who they would want to marry. We find high aspirations for education amongst adolescent girls but that attaining these is limited by high levels of dropout from age 13 onwards due to lack of interest in school, domestic responsibilities, financial concerns, early marriage and the school being considered too far away. We find practices are strongly correlated with girls' knowledge, attitudes, mental health and socio-emotional skills as well as with attitudes and knowledge of girls' mothers.

CONCLUSIONS/NEXT STEPS: Our comprehensive theory of change includes five key mechanisms through which the intervention could affect girls' outcomes: (i) improved knowledge amongst girls changing subjective expected returns to various decisions, (ii) changed preferences over such decisions through shifting norms and aspirations, (iii) increased ability of girls to negotiate, take decisions and act upon their preferences, (iv) improved effectiveness of mothers and other community members to act as advocates for girls, and (v) reduced costs of deviating from norms and expectations of the family and wider community.

IAAH170202

From poverty to a dreamland for young people? Independent Finland 100 years

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BACKGROUND: One hundred years ago, on December 6th 1917, Finland declared independence from Russia. At that time, there were around 3 million Finns and Finland was among the poorest nations in Europe. The life expectancy of a newborn baby was barely over 40 years. The independence started poorly: a civil war broke out, and the Spanish flu killed thousands. Later, we experienced two more wars against the Soviet Union. Today, Finland ranks as the 5th country in the UN Global Happiness Report. Young people can live safe without notable risk of premature death. Vaccination coverage is over 93% for all vaccinations included in the national program. The literacy rate is 100%. The dropout rates from the 9-year comprehensive school, high school and vocational education are 0.29%, 3.1% and 7.6%, respectively. University education is practically free of charge. Traffic safety has improved consistently. Abortion is legal but the teenage abortion rate is down to 8.4 per 1000 and HIV has remained rare. Smoking and binge drinking are still common but diminishing. How did we do it?

DESCRIPTION: The young nation emphasized education. In 1921, education was made compulsory to everyone for at least 6 years. Physicians were present in schools from the very beginning. While Finland worked toward higher standards of living the next generation was not forgotten: since WWII, free school lunch has been a legal right for all pupils. Already during the war, a specialization program was launched to train preventive care nurses that work in maternal care, well-baby clinics and school health care. In 1972, the Public Health Act made school health care mandatory and strictly governed. Today, the school health and wellbeing services include nurses, physicians, psychologists and social workers. Since 2001, health education has been a compulsory part of the national school curriculum.

LESSONS LEARNED: Democracy and investments in young people are advantageous. The risk factors and burden of diseases for young people can be altered through consistent policies.

CONCLUSIONS/NEXT STEPS: Issues Finland still needs to deal with include mental health, substance use and suicides. Every new generation needs to be educated and safeguarded.

IAAH170226

Association between Demographic Characteristic and Self-esteem with Smartphone Addiction among High School Students in Tabanan, Bali.

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BACKGROUND: Smartphone are becoming increasingly indispensable in daily life of world population nowadays. But, the abuse and overuse of smartphone could lead to addiction particularly in adolescents. This kind of addiction inspires new pathology called as "Nomophobia" (No Mobile Phobia). Low self-esteem has been predicted to contribute to smartphone addiction and problematic direct-indirect communication. Therefore, this study was aimed to examine the association between demographic and self-esteem with smartphone addiction among high school students in Bali.

METHODS: A Cross-sectional study was conducted in a High School of Tabanan, Bali that involved 164 eleventh grade students obtained by cluster random sampling. Samples were requested to complete a questionnaire which consisted of demographic characteristics questions characteristics (gender, age, Body Mass Index (BMI), parent's income per month, and parent's education), 10 items related to Rosenberg Self-esteem Scale, and 33 items related to Smartphone Addiction Scale were collected. Data analysis was done by univariate and bivariate analysis (Spearman, independent-sample t-test, and one way ANOVA).

RESULTS: From a total of 164 respondents, 46.6% were males and 53.4% were females. The range of age was 15-18 years old. The Rosenberg Self-esteem Scale mean \pm SD was 18.09 ± 2.978 . Respondents with BMI underweight, normal, and overweight respectively 22.6%, 71.3%, and 6.1%. Respondents with parents of low, middle, and high income per month respectively 34.7%, 51.3%, and 14.0%. Respondents with parents of higher education were 55.5% and lower education was 44.4%. The Smartphone Addiction Scale mean \pm SD was 114.13 ± 23.525 . Rosenberg Self-esteem Scale and Smartphone Addiction Scale showed significant negative correlation ($r = 0.234$, $p = 0.003$). There were no significant correlation between gender, age, BMI, parent's income per month, and parent's education with Smartphone Addiction Scale ($p > 0.05$).

CONCLUSIONS/NEXT STEPS: Self-esteem had significant correlation with smartphone addiction, where the lower self-esteem showed higher smartphone addiction. No other variables showed significant correlation with smartphone addiction. The finding of this study can be used as a reference to conduct education program to reduce smartphone addiction and increase self-esteem among adolescents.

IAAH170245

"She has been with a boy..." – Unpacking adolescent Pregnancy in Lao PDR, a qualitative study.

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BACKGROUND: The adolescent birth rate in Lao PDR is the highest in the region (76/1000 girls) with great disparities between residence and educational attainment. The aim of this study is to explore adolescents' perspective on reproductive health in Lao PDR with the specific objective to understand drivers and protective factors of adolescent pregnancy. This abstract presents the results from the pilot aiming to test, validate and fine-tune the innovative methodology as a means to discuss sensitive topics with young adolescents.

METHODS: Given the young participants different means of communication and expression is imperative. Methods such as drawing, story-telling and using movement to express opinions were employed to ensure participatory and interactive communication. Twenty focus group discussions (FGD) and ten in-depth interviews with adolescents stratified by age, gender, educational attainment and residence, are ongoing and will finalize during 2017. Four FGDs have been completed with young adolescents (10-14 years) to pilot and adapt methodology and explore feasibility of discussing adolescent pregnancy with this age group.

RESULTS: The pilot reveals appropriateness of the methodology and relevance of the topic among very young adolescents. Preliminary findings suggest that participants found marriage appropriate at age 18, however that in reality girls

get married earlier. Early pregnancy was mentioned in relation to girls' lack of education, school drop-out and blame. Participants explained why and how early pregnancy occurred in their village and examples from their own village of peers who had become pregnant before marriage were discussed. In-school participants knew of contraception and how to prevent unintended pregnancies while out-of-school girls referred to abortion as the primary means of avoiding unintended pregnancies and out-of-school boys did not know how to prevent pregnancies.

CONCLUSIONS/NEXT STEPS: The pilot suggests appropriateness of the methodology among 10-14 year old adolescents in Lao PDR. The findings suggest that early pregnancy is the reality of young adolescents, and emphasizes that young adolescents have a need for access to sexual and reproductive health information and services to circumvent early pregnancy. This pilot calls for continued efforts to generate evidence on adolescent pregnancy in Lao PDR to inform policy and programmes targeting adolescents' sexual and reproductive health needs.

IAAH170273

Impact of Global Philanthropy on Youth - Insights From Donors and Youth Leaders

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BACKGROUND: This interactive panel will bring together Rise Up foundation partners and youth leaders to discuss how philanthropy can drive new resources to young people globally. Rise Up invests in young leaders in Africa, South Asia, and Latin America, enabling them to become powerful change makers who transform the health of their communities, countries, and the world. A recent impact assessment shows that Rise Up's global network of 500+ leaders has directly impacted 7 million girls, youth, and women and successfully advocated for over 100 laws and policies impacting 115 million people.

DESCRIPTION: This interactive discussion will include panelists representing private philanthropy (the Bill and Melinda Gates Foundation), corporate philanthropy (AstraZeneca), multilateral institutions (UNICEF), and youth leaders from India and Africa working to improve health outcomes in their own communities and countries. Funders and youth leaders participating in the panel will advocate with donors, policymakers, and decision-makers to prioritize youth health in their government and philanthropic investment strategies.

LESSONS LEARNED: Although research demonstrates the importance of investing in youth, health investments continue to ignore the needs and priorities of young people. Rise Up youth leaders will raise their voices to highlight the importance investing in youth-led and youth-centered health programming and advocacy. Rise Up funders will make the case for increased investments – from foundations, corporations, governments, and multilateral institutions – in priority areas for youth health, including non-communicable diseases, sexual and reproductive health and rights justice, and gender-based violence prevention.

CONCLUSIONS/NEXT STEPS: Increased philanthropic, corporate, and multilateral investment is needed to enable youth leaders to achieve their potential and advance health outcomes in their communities and countries. Specifically, governments must invest in adolescent health through service provision, education programming, and comprehensive youth development. Further, foundations and corporations must amplify the voices, realities, and priorities of youth leaders working to advance health outcomes at local and national levels.

IAAH170275

The first 4 years of adolescent medicine in Finland

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BACKGROUND: Finland, a small country with 5.5 million people, was among the first countries to establish school health services and to train health nurses for children. Currently school and student healthcare services include school physicians and specially trained nurses as well as psychologists, social workers, and special education teachers, who have also been trained to work with

adolescents. Adolescent psychiatry is a specialty of its own. There is a training program for physicians working at well-baby clinics and in elementary schools. Despite the many efforts, one aspect was forgotten: the physicians working at schools or in hospitals had no education or training to work with young people.

DESCRIPTION: The Finnish Association for Adolescent Medicine was founded in 2013. It is open to any physician willing to gain expertise in treating adolescents, irrespective of their medical specialty. In 2014, a program for special competence in adolescent medicine was established. It grants the right to use the title Specialist in Adolescent Medicine. Besides proof of work experience with young people and formal training, the applicant composes a portfolio of ten case reports that cover different aspects of adolescent medicine (e.g. chronic diseases, mental and sexual health issues, complex family situations). Special attention is paid to a holistic approach and understanding of the development of adolescents. The Finnish Association for Adolescent Medicine now has 146 members, 10 of whom are medical students. By April 2017, 51 physicians have completed the special competence program. These include 14 specialist GPs, 10 adolescent psychiatrists, three pediatricians, a gynecologist, a dermatologist, a rheumatologist, a child neurologist and 20 physicians without a specialist degree.

LESSONS LEARNED: Through the special competence program, adolescent medicine has gained significant attention. It is becoming an established, appreciated branch among physicians.

CONCLUSIONS/NEXT STEPS: An annual, 6-day course for adolescent medicine is being planned. Our long-term goal is to educate every physician who plans a career in school and student healthcare or treats significant numbers of adolescents within tertiary care. We also wish to provide effective consultant services to those physicians who meet adolescents less frequently.

IAAH170304

Sequential Hospitalizations in Adolescent Medicine

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BACKGROUND: Within the paediatric ward of our hospital, the Adolescent Unit welcomes young people aged 11 to 18 and provides comprehensive care which combines medical, psychological and social.

DESCRIPTION: After an average of 7 days of hospitalisation, adolescents leave with an outpatient follow up. If this discharge seems difficult or premature, their medical care is extended to another form by organizing 48 hours sequential hospitalizations according to a scheduled rhythm. Among 376 hospitalized patients from January 2012 to August 2015, 19 young people have benefited from this plan. The number of sequential hospitalisations varied from 1 to 17 with an average of 5 hospitalizations by patient.

LESSONS LEARNED: The aim of these hospitalizations is to prevent the recurrences of acting out and the overmedicalization of somatic complaints, to relieve anxiety within a perspective of transition towards an alternative care. This allows avoiding the psychiatrization of behavioural disorders linked to an adolescence in crisis, while recognizing their psychic dimension. Thanks to a strong networking (paediatrician, psychiatrist, and school), education and social ties are thus reinvested.

CONCLUSIONS/NEXT STEPS: This individualized and personalized project is built with and by the adolescent at his own pace. It enables him to become an actor of his own health care.

IAAH170314

Adolescence & plastic surgery: process requiring patience

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BACKGROUND: In France, such as a lot of other countries with a high income, good-looking is really important, with reference to "standard of beauty" created by media, artistic culture and network. Beauty is a success mark and a way of acceptance by our peers. This perfection dream ("photoshop beauties" witch are naturally impossible) could come into play with mental diseases (such as dismorphophobia, depression, anxiety...), risk behaviors (eating disorders, scarifications, sport excess...) and plastic surgery use (with its risk and cost).

This hammering is permanent and ubiquitous. Adolescents are really sensitive to this manipulation.

DESCRIPTION: Adolescence is a crucial step for the development of the self-image. The body changes with puberty. There is a new image in the mirror. But there is a new image as well in the eyes of their peers. These 2 images confront. A lack of adequacy between these 2 images will disturb the self-image development. Also, the adolescent can ask to cure this distorted self-image by plastic surgery. Most principal risk factors of underage plastic surgeries are the lack of knowledge on global risk, the lack of parental support and the lack of reflection time. In France, legal framework is poor. No psychological evaluation before surgery is compulsory. Consent of the young and only of one parent is necessary. Moreover, the time limit between surgeon's advice and surgery is only 15 days.

LESSONS LEARNED: Beyond social considerations, we could improve underage plastic surgeries management by: -Encouragement of positive feedback on young people's appearance by their family and peers. -Notification of mention « retouched photographs to change bodily appearance of a person » -Introduction of legislative requirement to psychological evaluation before plastic surgery for underage - Establishment of legislative requirement to 2 parents' consent - Introduction of legislative requirement to minimal 2 surgical advices before an underage plastic surgery and several months between surgical advice and surgery.

CONCLUSIONS/NEXT STEPS: Confronting to an adolescent's plastic surgery request and care, take home message is PATIENCE.

IAAH170315

Therapeutic workshops during hospitalization: gateway to ambulatory care

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BACKGROUND: Within the paediatric ward of our hospital, the Adolescent Unit welcomes young people aged 11 to 18 and provides comprehensive care which combines medical, psychological and social. Paediatric Units in public hospitals are non-sectorised; young people are admitted regardless of where they live. Psychiatric public care is sectorised in France; after discharge most of the young people are addressed to ambulatory psychiatric centers for children attached to the area of their residence.

DESCRIPTION: Therapeutic workshops are held during the hospitalization, facilitated by a pair of caregivers: one from the Unit and one working in a public ambulatory psychiatric centre for children covering the area of the hospital. The latter is also facilitating a workshop for outpatients in his center. Ten out of 54 adolescents living in the hospital's area and admitted at the Adolescent Unit in 2016 were addressed for a therapeutic workshop in the ambulatory psychiatric centre on discharge.

LESSONS LEARNED: The therapeutic workshop is a group care using mediation (theater, writing, music, etc.). It targets particularly young people in difficulty to verbalize in individual interview. Mediation is a "non-verbal" support for creativity, enabling the adolescent to find a common language with caregivers and peers, to regain self-confidence. The workshop is a confidential space with no learning or evaluation issues.

CONCLUSIONS/NEXT STEPS: The experience of therapeutic workshops during hospitalization, the link created with the caregivers working in a public ambulatory psychiatric centre reassures the adolescent and creates a gateway to ambulatory psychiatric care.

IAAH170323

Why do one out of four young people in New Zealand miss out on FREE oral health care?

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BACKGROUND: In New Zealand, adolescents are entitled to State-funded dental care until their eighteenth birthday. Dental practitioners are funded to provide this service, however, 27% of the young people surveyed in the Nelson Tasman region have not accessed oral health care in 2015.

METHODS: In 2015, 13-18 years from the Nelson Tasman region were invited to respond to a survey about access, satisfaction and barriers about healthcare. A quantitative survey was distributed to 13-18 years in the Nelson Tasman region, and qualitative data was gathered from focus groups. Six high schools with a population of 5812 participated. Statistical significance was analysed using the Chi Square test.

RESULTS: The response rate was 46.3% (n=2692), of these, 61% identified as female (n= 1642); 40 respondents identified as gender diverse representing 1.3%. The highest proportion of respondents (67.5%) was in the 12-13 year age group, (n=981). The lowest proportion of respondents (35%) in the 16-18 year group (n=2330). Ethnic identity included NZ European (n=2374), Maori (n=320), Other European (n=192), Asian (n=149), Pacific (n=39) and Other (n=14). Using school rolls to identify total ethnicity breakdown for the 12-18 year group, the highest proportion of respondents (52%) identified as Asian, with NZ European (51%), Maori (32%), Pacific (36%), Other European (37%) and Other (17%). The results showed poor utilisation of free oral health services in the Nelson Tasman region. Utilisation rates varied due to location, gender, ethnicity and age. 73% (n=1965) of young people accessed oral health care in 2015. However, of the young people surveyed in Murchison (n= 43), 60.5% (n=26) accessed oral care (p<.001). According to gender, the gender diverse group 51% (n=21); and males 66.8% (n=788) (p<.000) are less likely to access oral health services as with New Zealand Maori adolescents, 63.6% (n=206) (p<.000). The age group that had the least utilisation of free oral health services was the 16-18 age group 70.8% (n=993) (p<.000).

CONCLUSIONS/NEXT STEPS: New Zealand Maori young people, gender diverse, males and young people who live in Murchison are less likely to access oral health care. Efforts need to be redirected to increase access to oral health care and innovative ideas of youth specific transport, app development and advocacy is being trialled.

IAAH170331

Preterm Deliveries among Filipino Adolescents with Repeated Pregnancies

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BACKGROUND: Preterm complications was regarded as the second leading cause of disability-adjusted life-years among 0-19 years old globally. A number of evidence suggests that incidence of preterm deliveries have been increasingly observed among second and higher birth orders. Despite the high mortality among its young people due to preterm birth complications, the Philippines is still unable to investigate the extent of this cause especially during second conception. This study aimed to determine the association of preterm deliveries and repeated pregnancies among adolescents in the Philippines.

METHODS: Birth recodes of women aged 15-24 years who experienced at least one pregnancy were analyzed from the 1993-2013 Philippines National Demographic Health Surveys. A total of 1,589 births which may be preceded or succeeded by a previous pregnancy loss (i.e. stillbirth, miscarriage or abortion) or a live birth were obtained. We applied multivariate logistic regression using svy Stata14 package with age modification of teenage and non-teenage adolescents.

RESULTS: Nearly a tenth of the respondents experienced a preterm birth (defined as birth below nine months of gestation), with a prevalence of 18.03% among births preceded by a pregnancy loss or live birth and 27.15% among births by a pregnancy loss. Overall, neonates as a result of a repeat pregnancy had 17-fold risk of preterm birth [Adjusted Odds Ratio (AOR) =17.29; 95% Confidence Interval (CI) =8.62-34.65]. Consistent findings were shown after separate analyses among teenagers (AOR=60.43; p=0.001) and adolescents above 20 years old (AOR=13.30; p<0.001). We also found that having at least 4 antenatal visits and coming a richer wealth quintiles as confounders during the analysis of both age groups and teenagers respectively.

CONCLUSIONS/NEXT STEPS: One in every five of adolescent mothers in the Philippines with a previous pregnancy experienced a subsequent preterm birth. Aside from prevention programs for repeated childbearing, pregnancy monitoring and promoting delivery attended by a skilled provider and if feasible, in a health facility, are therefore necessary to mitigate the possible impact of preterm birth complications both to the young mother and her neonate. Analysis of other maternal and child health complication may also be beneficial to fully understand the burden caused by repeated pregnancies.

IAAH170336

A Study on awareness of Cervical Cancer and Human Papilloma Virus Vaccine among the college students in Patna, Bihar

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BACKGROUND: Cervical cancer is among few cancers that can be prevented through proper immunization. But lack of knowledge and awareness has made it nearly impossible to control the growing epidemic of Cervical Cancer. The study was carried out with the objective to assess the awareness level of Cervical Cancer and Human Papilloma Virus (HPV) Vaccine among the college students in Patna, Bihar.

METHODS: A cross sectional study was conducted in randomly selected four colleges with a sample of 1000 students using self-administered questionnaire. Adolescent girls and boys of age 15 to 19 years fulfilling inclusion and exclusion criteria were included in study. The data was analysed through SPSS. Permission from ethical committee and colleges were taken prior to study.

RESULTS: Out of total 1000 students, 634 were boys 366 were girls. 92.2% of students were enrolled in undergraduate course and remaining 7.8% were pursuing post graduate course. Nearly half of the participants (53.5%) have heard about the cervical cancer. Only quarter of the students (27.3%) knew about the risk factors of cervical cancers. Very few off the study participants (18.9%) knew the cervical cancer can be prevented. And even fewer 12.3% knew that HPV vaccine prevent cervical cancer.

CONCLUSIONS/NEXT STEPS: The study revealed very low awareness level of students about cervical cancer and HPV vaccine. There is strong need for a countrywide strong knowledge base about cervical cancer so that the general public can easily identify the early symptoms of the disease and take preventive measures.

IAAH170340

Factors associated with low personal preference for contraceptive methods among adolescents

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BACKGROUND: Adolescents often present for contraceptive counseling with pre-existing preferences against certain methods. Little is known about determinants of method preferences and whether these vary by method type. Our purpose was to examine determinants of low personal preference for certain contraceptive methods among adolescents seeking contraception.

METHODS: This was a cross-sectional study of women ages 13-24 seeking contraception from an urban family planning clinic in Colorado, USA from August 2011 - January 2013. Women completed a survey prior to their visit. The survey assessed awareness of and experience with contraceptive methods, including oral contraceptive pills (OCPs), depot medroxyprogesterone (DMPA), intrauterine devices (IUD), and contraceptive implant. Our primary outcome of low personal method preference was determined by response of 0 to 4 on a 10-point scale for the question "How much do you like the idea of this method for yourself?" We used block logistic regression to determine correlates of low personal preference for each method. Covariates included family and friends' experiences with and dislike of each method, pregnancy history, and age.

RESULTS: Of 1178 patients approached, 1067 completed the survey (response rate 91%). Mean age was 20 ± 2.6 years; half were White, 26% Hispanic, and 8.5% Black. More were aware of or had used OCPs (97.2% and 66.1%, respectively) compared to DMPA (82.1% aware, 17.8% used), IUD (77.3% aware, 4.1% used), or implant (78.6% aware, 3.1% used). Predictors of low personal preference varied by method. Low OCP preference was associated with prior pregnancy (adjusted odds ratio (aOR) 2.6, 95%CI 1.9-3.6). Low DMPA preference was associated with having a friend who dislikes DMPA (aOR 1.8, 1.2-2.6). Low IUD preference was associated with being younger (aOR 0.9, 0.8-0.9), non-White (aOR 0.6, 0.4-0.8), or having a friend who dislikes IUDs (aOR 2.0, 1.3-3.1). Low implant preference was associated with being older (aOR 1.2, 1.1-1.2) and having a friend (aOR 2.2, 1.3-3.6) or family (aOR 3.0, 1.4-6.7) who dislike implants.

CONCLUSIONS/NEXT STEPS: Friends' and family members' contraceptive

attitudes can influence adolescents' personal contraceptive preferences, with variations by method. Understanding determinants of low personal preference informs adolescent contraceptive counseling and health messages.

IAAH170346

Sleep among adolescents living in India: a cross sectional study on sleep patterns among Indian adolescents

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BACKGROUND: Adolescent sleep deprivation is of public health importance. This research was aimed at studying the sleep pattern, sleep quality, sleep hygiene and daytime sleepiness levels among school going adolescents.

METHODS: Observational cross sectional study Setting; Community based school survey in semi-urban setting in three schools of Vellore city. Non probability convenient sample was used to collect data among adolescents studying in grades 9 and 11. Standardized questionnaires addressing their sleep patterns and Epworth sleepiness scale modified for children were used after translation into vernacular language. Primary outcomes of the study: • Sleep patterns in terms of weekday and weekend bed time and wake time, total sleep time • Daytime sleepiness

RESULTS: 257 adolescents 12-17 years of age were included in the study. Mean bedtime was 9.40pm ± 44 min on weekdays and 9.55pm ± 49 pm during weekends. Mean wake time was 6:20 am ± 56 min during weekdays and 7:03 am ± 88 min during weekends. Total duration of night time sleep was 8 hours and 40 min ± 64 min during weekdays and 9 hours and 10 min ± 81 min during weekends. 12 % of study population reported daytime sleepiness.

CONCLUSIONS/NEXT STEPS: Our study is one of the first attempts to assess sleep parameters in the south India. Adolescents in our study population reported a mean total sleep time of 8 hours and 40 min. This compared well with the recommended sleep duration of 9 hours for adolescents. Adolescents in the study population were sleeping adequate amounts.

IAAH170350

The Determinants of Chronic Bronchitis Among Canadian Aboriginal Children and Adolescents

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BACKGROUND: There is limited knowledge about determinants of chronic bronchitis (CB) among Canadian Aboriginal children and adolescents. The objective of the study was to determine the crude and adjusted prevalences and associated risk factors of chronic bronchitis in Canadian Aboriginal children (6-11 yrs.) and adolescents (11-19 yrs.).

METHODS: Canadian Aboriginal Peoples Survey (APS)-2012 data were analyzed. Logistic regression analysis with appropriate weight variable (to account for unequal probability of selection) to estimate regression coefficient and the balanced repeated replication method (to account for stratification and clustering) to compute robust standard errors were used. The outcome of interest for children was self-reported response by a parent/guardian to the question: "Has your child ever had bronchitis?" and for adolescents self-reported response to the question "Do you have chronic bronchitis?". Individual, environmental, and contextual factors were tested for an association with CB.

RESULTS: The prevalence of CB was 4.49% for boys (0.74% for adolescent boys) and 4.16% for girls (2.38% for adolescent girls). For Children: The significant risk factors of CB were: age [odds ratio(OR)(95% confidence interval(CI)= 0.75 (0.66-0.86) for age group 9-11 years compared to age group 6-8 years]; income [1.82 (1.56-2.13) for 25,000-44,999 income category compared to income group e"85,000], body mass index [1.54(1.28-1.85) for overweight compared to normal], allergies [2.24 (1.96-2.56) for allergies compared to no allergies], asthma [5.69 (5.00-6.49) for asthma compared to no asthma], and location of residence (rural vs. urban). For adolescents: The significant risk factors of CB were: age [4.25 (3.58-5.04) for 15-19 years compared to 12-15 years], income [3.22 (2.42-4.29) for income category <25,000 compared to income category e"85,000], parent's education [1.60 (1.20-2.17) for 'less than or some high school' category compared to 'university

education' category], smoking in house [1.80 (1.53-2.13) for 'smoking house' compared to 'non-smoking house'], and the location of residence. For children, the relationship between the prevalence of CB and BMI was modified by sex. For children and adolescents, the relationship between CB and location of residence was modified by sex.

CONCLUSIONS/NEXT STEPS: The prevalence of CB was related to age, household income, parental education, environmental smoking, location of residence.

IAAH170352

Trajectories to early marriage and adolescent fertility in Andhra Pradesh and Telangana: findings from a mixed-method longitudinal study

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BACKGROUND: Childbearing in adolescence substantially increases health risks for young mothers and their babies, and puts pressure on impoverished households. The 2011 Census in India reported that nearly 17 million children between the ages of 10 and 19 are married, with girls constituting the majority (76 per cent). Incidence of early child-bearing is also high – by 2012, one in six adolescents between 15 and 19 years old had already given birth. This presentation highlights findings from Young Lives study of childhood poverty on the factors that put adolescent girls at risk of marriage and pregnancy.

METHODS: In India, Young Lives' unique longitudinal dataset, collected over a fifteen year period in united Andhra Pradesh, shows how individual, caregiver, household, community and school factors affect children's growth, health, cognition, learning and psycho-social well-being throughout childhood. Unusually, the survey has been able to follow children from their natal home and track outcomes in their marital home. In addition, longitudinal qualitative research captures the experiences of a sub-sample of the study children. A qualitative study currently underway is focusing on how married adolescents negotiate decisions about fertility and access to sexual and reproductive health services.

RESULTS: Incidence of marriage before 19 is disproportionately concentrated in disadvantaged groups: girls from poorer households, with less-educated parents, and residing in rural areas are significantly more likely to be married by the age of 19 years. Sibling sex composition and birth order, and earlier experience of menarche also affect the probability of an earlier marriage. There is little difference between the predictors of teenage marriage and of teenage fertility. Qualitative research underscores how patriarchy and gendered social norms remain one of the drivers of early marriage, with dowry paid by all families.

CONCLUSIONS/NEXT STEPS: Whilst child marriage and early child-bearing are driven by entrenched patriarchal norms regarding the role and value of girls (and women) in society, structural factors are critical. Poverty and social disadvantage constrain girls' opportunities and exacerbate the risks they face, forcing individuals and families to maintain 'normal' practices. An ecological life-course framework highlights the need for a layered strategy to tackle the gendered disadvantages which drive child marriage and early child-bearing.

IAAH170365

"I learned that we matter" - Reflections on strategies to engage formerly homeless young adults in youth participatory action research

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BACKGROUND: Growing evidence highlights the benefits of Youth Participatory Action Research (YPAR), a youth-centered form of Community-Based Participatory Research that aims to empower youth in schools and community-based settings. Less has been written about strategies to engage marginally-housed young adults in YPAR, especially those who face challenges that can impede participation, such as financial instability, trauma, and poor health. Photovoice is a research methodology that combines photography and group discussion in order to amplify the voices of marginalized communities. The Young Adult Photovoice Project (YAPP) was a YPAR study designed to document and disseminate the experience of formerly homeless young adults

living in permanent supportive housing in San Francisco, California (USA) regarding their barriers to adequate nutrition.

METHODS: Nine young adult residents between the ages of 18-25 participated in YAPP. The project consisted of eleven 2.5-hour long sessions over four months. Participants were given digital cameras, received training (photography, safety, ethics), chose weekly prompts to guide photo-taking, participated in critical reflection and dialogue, and wrote photo captions. The project culminated in a photography exhibit downtown, with media coverage. Following project completion, we conducted a qualitative evaluation, including participant interviews, field notes and team debrief minutes. Data were coded and analyzed thematically.

RESULTS: YAPP participation improved ability/comfort with group work, self-confidence in public speaking, photography skills, ability to give/receive constructive criticism, perceived self-efficacy in completing a project from start to finish, and reported sense of self-worth. Strategies that facilitated participant engagement included accommodating participant schedules, framing the project as an "internship" with an hourly wage, providing skill-building components in photography and constructive criticism, providing an opportunity for participants to present their work publicly, and deferring to participants' use of language. Challenges to participant engagement included participants' interpersonal conflict, competing priorities (jobs, childcare), and mental/physical health; aversions to group work due to social anxiety and trauma, the tension of balancing project rules with participants' needs; and insufficient participant training concerning how to interact with the media.

CONCLUSIONS/NEXT STEPS: Despite challenges, YAPP participants experienced multiple benefits. Photovoice can be an effective tool to facilitate meaningful engagement with marginally housed young adults in collaborative advocacy.

IAAH170398

Clinico-epidemiological profile of adolescents having tuberculosis - a hospital based cohort study

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BACKGROUND: Tuberculosis (TB) in adolescents differs substantially from that in younger children. We studied clinico-epidemiological profile of adolescents having tuberculosis, and also assessed the compliance to treatment and the perception of tuberculosis disease among patients.

METHODS: Fifty adolescents (10-19 years old) recently diagnosed with TB were included. Clinico-epidemiological profile was recorded and they were followed till intensive phase of therapy. Their perception about TB and adherence to treatment were assessed by in-depth interview. Disease features, perceptions, and compliance are summarized as percentages.

RESULTS: Only 34% subjects had contact with a case with TB. Common symptoms are loss of appetite (86%), weight loss (78%), fever (78%) and cough (50%). Extra-pulmonary TB (most common: abdomen and lymph node) was found in 52%, pulmonary in 32% and disseminated in 16% subjects. All patients received directly observed treatment and were compliant to treatment. All adolescents were aware of availability and duration of treatment, 44% cause and only 36% knew route of transmission. Many (76%) adolescents felt TB is a social stigma.

CONCLUSIONS/NEXT STEPS: Clinico-epidemiological profile of adolescents has features of both adults and children having TB. Knowledge and perception about TB needs improvement to remove the stigma surrounding the disease.

IAAH170410

Innovative data collection tools in large-scale adolescence health education programs: Experience from India

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BACKGROUND: Centre for Catalyzing Change (C3) seeks to improve sexual and reproductive health (SRH) outcomes at scale for adolescents aged 11-19. It implements the tailor-made programs for in-school and out-of-school adolescents and reached over 9,00,000 adolescents across programs up till year 2015-16. The paper argues that robust monitoring tools may be developed in order to

allay the intrinsic challenges in effectively implementing programs specially the large scale school based projects via two such tools: Census and Survey Processing System (CSPPro), and an Interactive Voice Response System (IVRS).

DESCRIPTION: In order to ensure data quality, paper-based checklists were replaced through the use of the android based CSPPro software. Although, freely available, C3 introduced advanced features to support real-time data collection, such as global positioning system, geo-mapping and photo features with unique identifications assigned to each school. Additionally, field note feature was also inserted into the final tool to avoid qualitative information loss during field visits. Further, in an effort to ensure accuracy of data, triangulation was promoted through an IVRS. As part of the monitoring schematic "Dial outs" at a pre-decided frequency on a monthly basis and retry feature in case of no answer from the intended respondent, were also included.

LESSONS LEARNED: The tools were piloted in all the implementing districts covering schools in 2016. CSPPro tool has been used during school monitoring visits for data collection. Follow-up visits also made to the same schools to enable a comparative analysis. The CSPPro pilot data analysis finds that improvement was observed on all aspects of implementation. This experience has indicated that the system enhances authenticity of the data source as it enables uploading of the data on the server on real time basis.

CONCLUSIONS/NEXT STEPS: Although, the use of the tools posed several challenges, yet, this paper argues that digitized tools create an opportunity for course correction through feedback at periodic intervals to the implementing teams. It is this valuable feedback that this paper argues, led to the meteoric progress in program implementation.

IAAH170414

Qualitative study of drug use and sexual behavior among drug using street based adolescents in Mumbai

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BACKGROUND: Mumbai has over 3, 00,000 adolescents (aged between 10 to 19) on the streets. These are sometimes children of drug users themselves and it is also known that children on the streets experiment with substance use 1–1.5 years earlier than their peers. Anecdotal information and histories of clients attending Sankalp's drop-in centers indicate that a large number of street based adolescents use drugs. There is little information on these adolescents and their lives. Few seem to have access to information and services related to sexual health. Most drug use interventions focus on Injecting behaviours which may not necessarily be common among adolescent drug users. They are considered to be at heightened risk, related to their health and well-being and sexual health interventions.

METHODS: A qualitative study using in-depth interviews, key-informants interviews with key stakeholders (NGOs, drug sellers, experts) and focus groups. Mapping was done to identify locations. All available and willing were interviewed. Survey questions were adapted from the Adolescent Drug Abuse Diagnosis questionnaire and were pre-tested after translation in local language.

RESULTS: Key Findings The most common substance that was used was inhalants, with 73% of those interviewed using it. Drug use also began early - before the age of 10, with the majority starting before the age of 13. Only 47% reported having had sex previously, and of those 71% reported using condoms "all the time".

CONCLUSIONS/NEXT STEPS: Conducting similar research only half of the adolescent population has reported engaging in sexual activity. Therefore, sex education methods would be most beneficial for this age group as both a prevention and education method as they continue to explore their sexuality. The availability of condom for those who are below 18 years of age needs to be examined. There is also a need to sensitize state governments and important stakeholders about substance abuse among children in the country. Juvenile homes and Children homes should have linkage with NGOs that provide treatment services for children who are abusing substances.

IAAH170423

Menstrual hygiene management: A review of literature in context of menstrual hygiene scheme of national health mission of Government of India

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BACKGROUND: Menstruation is a natural process yet stigmatized. Adolescent girls constitute a vulnerable group as their menstrual hygienic practices are severely compromised especially in rural India. Adverse effects of lack of menstrual hygiene include Reproductive Tract Infections; adolescent girls missing school during menstruation.

METHODS: Literature review was conducted to determine the influence of Menstrual Hygiene Scheme (MHS) on improving menstrual hygiene management among adolescent girls. Literature was searched on Pubmed, Google scholar and NRHM websites. Search terms included 'Menstrual Hygiene Scheme (MHM)', 'assessment of MHS', awareness among adolescent girls about MHM, MHM training manuals.

RESULTS: Several studies have been conducted regarding awareness among adolescent girls and their menstrual hygienic practices. The studies highlighted lack of awareness about menstrual hygiene and poor related practices. Resultantly, for enhancing MHM among adolescent girls in resource constrained settings, National Health Mission, Government of India (GOI) developed and is implementing Menstrual Hygiene Scheme since 2010. The scheme advocates universal use of sanitary pads by adolescent girls and women by making it available at affordable prices. Objectives of the scheme include increasing awareness on menstrual hygiene; access to and use of high quality sanitary napkins by adolescent girls in rural areas; ensuring safe disposal of sanitary napkins in environment friendly manner. Under the scheme GOI launched 'Freedays' brand of sanitary napkins which are distributed among community by ASHA at the price of Rs.6 per pack (6 napkins per pack). The scheme addresses the issues and challenges of awareness, availability, quality of napkins, regular supply, privacy, water supply, disposal of napkins, reproductive health education and family support. Studies have found MHM is strongly linked to sanitation facilities and availability of low cost sanitary napkins. There are limited published reports on evaluation of Menstrual Hygiene Scheme and its influence on MHM among adolescent girls.

CONCLUSIONS/NEXT STEPS: To know the gaps and thus strengthen the MHS programme, more research needs to be conducted and published highlighting strengths and weakness of MHS programme and recommending ways of strengthening it.

IAAH170426

Identifying the barriers to hygienic menstrual absorbent use among unmarried girls in the impoverished states of India

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BACKGROUND: Although menstruation among the girls is a biological and natural physiological function upon attainment of menarche yet, it is historically contingent and socially patterned. Menstrual hygiene management (MHM) is a serious public health concern in low and middle income countries received little attention from the researchers and programme planners until recently.

METHODS: We examined the decomposed contributions of the socio-economic determinants of hygienic menstrual absorbents use among young girls in some of the impoverished states in India using data from the third round of District Level Household and Facility Survey, 2008. Concentration indices were computed to assess the inequality in the use of hygienic menstrual absorbent as measures of socio-economic inequalities. The concentration indices were then decomposed into their determining factors.

RESULTS: Unavailability of toilets at the households (42%), living in the rural area (20%) and the number of years of schooling (27%) explained about 90% of the usage of hygienic menstrual absorbent at all India level. A similar pattern was observed in the impoverished states with an exception to Assam, where low economic status and residing in rural area were the major determinants.

CONCLUSIONS/NEXT STEPS: Menstrual hygiene management needs to be looked in a broader public health framework. Integration of the provision

for water supply and toilet facilities at the household levels particularly in the resource scarce settings are critical. Free or subsidized supply of sanitary napkins is an important concern to ensure easy availability and access to hygienic menstrual absorbents.

IAAH170436

Hearts to hearts: a multi-professional advocacy for rheumatic heart disease prevention and management in Uasin Gishu County

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BACKGROUND: Rheumatic Heart disease (RHD), is a significant cause of cardiovascular disease in the world. Each year, it is estimated that Kenya has approximately 200,000 new cases of rheumatic heart disease, making it among the world's hardest-hit countries (World Heart Federation, 2007). RHD develops as a result of poorly managed Streptococcal infections that progresses to rheumatic fever and eventually RHD. It affects mainly, 5-25 year olds, majority of who reside in poverty stricken areas. Quality health care and definitive management of the condition as is as such too costly or barely accessible to the affected. The inclusion of the RHD in World Health Agenda for May 2017 comes as an amplifier to the voices of advocacy in RHD. This project is therefore aimed at creating awareness on the preventive measures and guidance on access to quality health care of the affected.

DESCRIPTION: Phase one of the project ran between January 2017 and April 2017, and targeted about 5200 students. It was a step-wise process that included training of twenty members (students undertaking medicine, public health, medical psychology and law) of the Young Professional Chronic Disease Network (YPCDN) by professionals in the field on the basics of the disease including prevention, diagnosis treatment and long term management. Schools were then randomly selected with regards to the social standards, proximity and administration cooperation and the knowledge disseminated to the pupils and their teachers. A pre and post evaluation will be conducted and feedback used during monitoring and evaluation at the end of the project.

LESSONS LEARNED: A great percentage of the children were able to answer questions asked in the M&E sessions correctly and cast off the various misconceptions on management of basic sore throats. They are the future generation and we learned that addressing this in the affected group would be a stepping stone to a future free of RHD

CONCLUSIONS/NEXT STEPS: Phase two is expected to kick off in May 2017 with more trainers and a broader population of students reached. We hope to diversify the project developing student friendly manuals and talking walls that will be constant reminders to the children.

IAAH170438

Improving contraception uptake, method mix, and client feedback among adolescents in urban Tanzania

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BACKGROUND: Tanzania faces high rates of adolescent pregnancy and early childbearing (27% of adolescents 15-19 have begun childbearing). Limited use of contraceptive methods among adolescents (13.3% of adolescents use a modern method of contraception) combined with early sexual debut contribute to this.

DESCRIPTION: The Chaguo la Maisha program (2015-2018) aims to improve access to and quality of contraception and postabortion services in public health facilities in urban Tanzania targeting all women, especially adolescents. The program implements clinical training and mentorship to improve quality with a focus on adolescent-specific standards and expanding the range of methods to include long-acting reversible contraception (LARC). At the community level, community mobilizers counsel and refer young women for contraceptive services using a mobile application (with referral completion confirmed via barcodes). Community mobilizers conduct follow-up visits and collect client feedback on services, and the program works with the districts and health facilities to address client concerns. A variety of data collection mechanisms are used to track key indicators of contraceptive uptake. Data on contraceptive services at facilities is collected and analyzed by age group (10-14, 15-19, 20-24, 25+), and trend

analyses of contraceptive uptake and method mix in facilities are conducted. To improve data quality and performance, data review meetings are conducted at the facility each month.

LESSONS LEARNED: From Jan-March 2015, at the start of the project, 279 new clients (10-19) used contraceptive services (4% IUD, 20% implant, 55% injectable, 21% pills), and from Jan-March 2016, 1448 new clients (10-19) used services (13% IUD, 57% implant, 24% injectable, 5% pills). This represents an increase in clients and a shift towards a more complete choice of methods for adolescents. Client feedback data indicates that 78% of adolescents completed referrals for contraception services, and 90% of adolescents were satisfied with services received. Routine data review meetings helped facilities understand method uptake and client feedback, and improve quality accordingly

CONCLUSIONS/NEXT STEPS: While it is important to monitor service uptake at the service delivery point, regular data review is important to see who the service is reaching and its coverage on the population. Adolescent client feedback is key to improve service.

IAAH170442

Lessons learned from contraception programming with married youth in Asia and sub-Saharan Africa

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BACKGROUND: By age 19 years, girl faces a 1 in 3 chance of being married. Approximately 90% of adolescent pregnancies in developing countries occur within marriage, and nearly 33 million women aged 15-24 have unmet need for contraception. Many stakeholders recognize the need for contraception among married youth, but there have been few programs targeting this population.

DESCRIPTION: Since 2001, Pathfinder has implemented programs to increase contraceptive use among married youth in seven countries (Burkina Faso, Guinea, India, Niger, Nigeria, Tanzania, Uganda), reaching more than 692,000 beneficiaries. The programs intervene at all levels of the socio-ecological model (individual, community, structural) to foster behavior change and favorable social norms around contraception and healthy timing and spacing of pregnancy among young married adolescents, their partners, communities, and service providers. In 2016-17, Pathfinder conducted a synthesis of evidence and learning from the projects with married youth to generate lessons learned and program recommendations.

LESSONS LEARNED: Results from quasi-experimental studies in India and Uganda demonstrate increased contraceptive use among married youth. In India, young married women in project intervention area were nearly four times as likely to use contraception as women in control areas. These increases have been sustained 4-8 years after project interventions ended, suggesting shifts in social norms and generational effects. Qualitative and quantitative data from projects in India, Uganda, and Burkina Faso suggest several program elements were critical to effectiveness, including using the socio-ecological intervention model and gender-synchronized approach with interventions calibrated to different contexts and life cycle moments, and using multiple interpersonal communication approaches (i.e. home visits and peer group discussions). The comparison between NGO-led and hybrid government-NGO models in India suggests tradeoffs in effectiveness, scale, and sustainability of interventions and social norm change.

CONCLUSIONS/NEXT STEPS: Learnings from these programs can inform evidence-based contraception programming and context-specific adaptations with married youth in these countries and globally. Recommendations include intervening at all levels of the socio-ecological model; fostering dialogue and reflection among couples and gatekeepers; and reflecting on tradeoffs for scalability and sustainability of program approaches and impacts.

IAAH170444

Resilience in transfusion dependent thalassemic adolescents, their siblings and healthy children_ cross sectional study

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BACKGROUND: Resilience represents the ability to cope up in stressful conditions. There is paucity of resilience literature on adolescents, related to thalassemia. Cross-sectional assessment of adolescents, in such a situation,

therefore, might reflect the comprehensive picture of the resilience of adolescents.

METHODS: A Cross-sectional study between November 2014-April 2016 in which all adolescents with TDT registered with Thalassemia Day Care Centre (TDCC) in Kalawati Saran Children Hospital, New Delhi were screened for inclusion in this study. Study Group (Group A) consisted of 60 adolescents (10-18 years of age) with TDT. Control Group: Subgroup B1- 60 age matched adolescents; Subgroup B2 -age matched adolescent siblings of study group adolescents. Adolescent Resilient Questionnaire was provided to the adolescents, and they were asked to score the questions contained in them according to Likert scale.

RESULTS: The baseline characteristics such were comparable among all three groups. Resilience was found to be highest in adolescents with TDT and almost equal in both the healthy controls and their normal siblings. Resilience was significantly higher in younger adolescents; males with TDT were more resilient than females. Resilience increased with increase in the educational status, socioeconomic status and family income of adolescents with TDT. Resilience among TDT adolescents was higher in patients receiving ≤ 15 blood transfusions per year and with higher mean pre transfusion hemoglobin ($>9\text{gm/dl}$); and in TDT adolescents with mean ferritin $\leq 1500\text{ng/ml}$.

CONCLUSIONS/NEXT STEPS: We conclude that adolescents with transfusion dependent thalassemia have better resilience than their healthy counterparts and their healthy adolescent siblings. Also, healthy adolescent siblings of transfusion dependent thalassemic adolescents are equally resilient as healthy adolescent controls. Resilience among transfusion dependent thalassemic adolescents was influenced by various demographic variables and various disease related factors such as number of blood transfusions per year; mean pre-transfusion hemoglobin; and mean ferritin levels.

IAAH170448

Hands-on workshop on clinical approach for adolescent patient in Indonesia

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BACKGROUND: Adolescent patients need a specific clinical approach which is different with other age of pediatric patient group. In Indonesian, pediatricians are not yet standardized for their capability to perform clinical approach to adolescent patient. Thus, the adolescence task force of Indonesian Pediatric Society holds serial of workshops to improve pediatrician's skill to cope with adolescent. For this particular workshop, we try to be more hands on for clinical practice.

DESCRIPTION: The workshop was started by the global overview on adolescent health followed by how to approach adolescent using the HEEADSSS assessment scheme. To enrich the workshop, some specific issues such as mental health, nutrition problem and immunization were presented. Prior to hands on practice, trick and tips and a role play were also demonstrated. Participants were then divided into small groups with 1 facilitator for each group. Case illustrations were developed and used by standardized acting adolescents, where each participant had the opportunity to act as a doctor and as an observer for different cases.

LESSONS LEARNED: Adolescence health is an emerging interesting area for Indonesian pediatricians. This was the workshop with the most number of participants in the event. Commonly, pediatricians in Indonesia only talk to the parents during consultation for many reasons (parental consent law, poor self-confidence of the adolescent and daily practice custom). We tried to discuss how important it is to give more opportunity for the adolescence to talk and how to do it in a confidential manner. The most challenging part is talking to adolescence about sexuality. However, in this workshop every participant had able to perform that sensitive issue. They gave a very positive feedback especially for the HEEADSSS approach and the counseling skill. Counseling knowledge was improved almost 20% from the baseline data although in general the post test result was only 15% increase from the pretest which mainly due to time limitation of the workshop.

CONCLUSIONS/NEXT STEPS : We plan to develop a clinical training module on adolescent health and will conduct it to other provinces. Following this, we plan to merge this module to the existing Indonesia pediatric training curriculum.

IAAH170452

Implementation of a harm reduction pilot to reduce unsafe abortion among young women in DRC

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BACKGROUND: In 2013, 30% of pregnancies among young married women in the Democratic Republic of the Congo (DRC) were unintended. 1) DRC has ratified the Maputo Protocol, allowing for abortion in cases of rape, incest, and to preserve the woman's physical and mental health. 2) However, the protocol's stipulations have not been shared widely and women are not aware of abortion's legality. 3) In Central Africa, an estimated 36 out of 1,000 women ages 15-44 obtain an unsafe abortion each year. 4) Unsafe abortion is a leading cause of maternal mortality that disproportionately affects young women. 5) The harm reduction (HR) model is intended to reduce maternal mortality and morbidity resulting from unsafe abortion. To do so, the model supports the presentation of information on misoprostol as a less harmful method of terminating pregnancy. 6) Women are provided with comprehensive information, including instructions on assessing drug quality, dosage, follow-up (including ANC for women who continue their pregnancy), and contraception; however, women are not provided with the medication.

METHODS: This study was conducted in four facilities (three in Kinshasa and one in South Kivu) to assess the feasibility of providing HR services to women ages 15-24 with unintended pregnancies. Service statistics were collected from women who received HR counseling and who voluntarily participated in in-depth interviews at least two weeks after counseling.

RESULTS: Between August and November 2016, 79 young women received HR counseling (35.4% participated in in-depth interviews). Clients were, on average, 21.8 years old and 89.7% reported having terminated their pregnancy. Among them, 70.5% reported using misoprostol. Nearly all women (98.5%) began using a modern contraceptive method after their pregnancy. The majority (82.1%) of clients reported being satisfied with the counseling services they received. In-depth interview data showed that many pharmacists were unwilling to provide misoprostol without a prescription, in part due to the clients' young age.

CONCLUSIONS/NEXT STEPS: This study demonstrated the feasibility of implementing HR services for young women in an environment where abortion is highly restricted. As advocacy efforts to liberalize abortion laws may take time to materialize, the HR model serves as a stopgap solution that may contribute to the reduction of maternal mortality and morbidity in lower-income countries.

IAAH170456

A comparison of bone mineral density in adolescent swimmers, pentathletes and figure skaters

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BACKGROUND: Physical activity accounts for up to 17% of the variance in bone mineral density (BMD). Different forms of exercise can cause various mechanical loadings. Specifically, weight bearing exercises are of critical importance in increasing BMD. The purpose of this study was to evaluate the influence of three different sports with different mechanical loading properties on bone mineral density among young athletes.

METHODS: This was an observational retrospective cohort study. All available medical records of adolescent athletes who have been followed at the Division of Adolescent Medicine were reviewed. Results of bone mineral content (BMC) and BMD of lumbar spine and left femoral region for evaluating bone health were recorded. Data regarding physical and sexual maturation of adolescent athletes were obtained from examination charts. The study sample included three groups of subjects participating in different sports: swimming (S, n=50), pentathlon (P, n=18), and figure skating (FS, n=7).

RESULTS: Despite figure skaters were older than the swimmers ($p < 0.05$), bone age was similar among groups. Pentathlon group had significantly lower BMI values than swimmers. Figure skaters had been involved in specialized training significantly longer than pentathletes and swimmers. No differences between groups were found for daily calorie and calcium intake. Although BMC

values of figure skaters were found to be higher than other two groups, there were no significant differences between any of the groups in lumbar spine and left proximal femur measurements. Regarding BMD, there were no significant differences between any of the groups in lumbar spine. On the other hand, figure skaters had significantly higher BMD values than pentathletes and swimmers for femur total, femoral neck and trochanter regions (Table 1, $p < 0.05$). The relatively small sample size of figure skaters in our study is a limitation that could have an impact on the statistical power.

CONCLUSIONS/NEXT STEPS: The findings of this study show that the type of sport can have an impact on BMD. Weight bearing sports seem to be associated with improvements in bone health in terms of BMD in a region specific manner. Recommendation of sports with high-impact loading properties may be considered to improve bone health in adolescents.

IAAH170465

What drives provider bias: characterizing provider bias toward youth and adolescents while identifying provider archetypes to develop and target successful behavioral change interventions

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BACKGROUND: Approximately, 38 million sexually-active adolescents (ages 15-19) in lower-income regions do not want a child within two years—and 60% have an unmet need for contraception. This persistent unmet need is partially driven by biased attitudes and disrespectful, judgmental behaviors by providers. Literature suggests lack of knowledge, professional factors, personal attitudes, and religious beliefs also play a role. Specific provider biases need to be understood to develop novel, targeted, and human-centered solutions to counter them. This research was undertaken by Pathfinder and partner Camber Collective for a project aimed at developing solutions to address provider bias towards youth in Tanzania, Burkina Faso and Pakistan.

METHODS: A literature review and in-depth interviews with AYSRH experts were conducted to identify types, drivers, and behavioral manifestations of provider bias. The project will use Market Segmentation approach to segment provider bias and develop targeted solutions in near future which will supplement the findings.

RESULTS: Confluence of literature review and expert interview results offered a comprehensive view of the underlying drivers and manifestations of provider bias. A repetitive underlying theme is sexual abstinence before marriage under the broad base of social and professional norms. Situational drivers of bias, including working conditions and incentives, drivers unique to individual provider, namely experience, knowledge, ability to improvise, and willingness to adapt/change also affects form and severity of an individual provider's biased behavior towards youth. Variance in types and prevalence of provider segments across different countries will also be demonstrated.

CONCLUSIONS/NEXT STEPS: Findings help interventionists understand and propose innovative solutions tailored to specific drivers and manifestations of biases unpacking influence of provider experiences, knowledge, innate emotional skills, workplace factors, community influences, and social and religion norms.

IAAH170466

Linked Lives: Adolescent marriage, motherhood and the gendered life course in Ethiopia

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BACKGROUND: This paper uses longitudinal survey (n=1000) and first-person qualitative accounts from married girls, couples and parents (n=99) to explore factors affecting the wellbeing, aspirations and perceived quality of married life for girls married in adolescence in Ethiopia. It draws links between experiences in adolescence and later gendered outcomes. In Ethiopia, nearly 1 in 5 adolescents aged 15 to 19 were married; the country ranks among the top 10 for the greatest numbers of women aged 20-24 who gave birth by age 18 (2011 DHS). There is a dearth of evidence on what happens after adolescent marriage and on how to support the needs of girls, couples and those who escape marriage, divorce or face abandonment.

METHODS: The data come from Young Lives study of childhood poverty that surveyed a cohort of children born in 1994 and their households over fifteen years (2002-17). An integrated qualitative longitudinal study produced detailed biographical narratives with a sub-set of children from age 12 to 20. This paper reports thematic and case-based analysis of qualitative data from three rural communities, and descriptive statistics that contextualize qualitative findings.

RESULTS: Girls from the most disadvantaged households marry earlier and enter marital life on the basis of limited options, with few assets. Hopes that marriage will relieve poverty are frequently met with disappointment. However, there is diversity and complexity in experiences across locality, age and socio-economic characteristics. Many girls have children soon after marriage due to pressures though some develop clandestine strategies to resist pregnancy. Childbirth dramatically increases economic dependence on husbands. Marriage affects girls' social networks; failure to fulfil marriage payments and geographical distance weaken ties with family and contribute to girls' social isolation. Yet marital status affords access to informal associations and support networks only open to married women.

CONCLUSIONS/NEXT STEPS: There is need for further evidence on what happens after girls marry and on how to support them in their relationships to reduce vulnerability. Supporting the development of equitable relationships in adolescence and within families is essential. Building on the links of married girls to community networks and resources may be an important yet underused strategy.

IAAH170467

Perception and acceptability of family planning by married adolescents and their partners in rural Niger

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¹Pathfinder International

BACKGROUND: Niger's fertility rate among adolescent girls aged 15-19 is 204 births per 1,000, and 75% of married adolescent girls aged 15-18 have experienced maternity. This long period of a high fertility rate averaging 7.6 children per woman combined with a young population, where 51.7% are younger than 15, has resulted in high population growth. Till date, there is little relevant data in Niger on married adolescents' perception, behaviors, and practices regarding family planning. To understand these aspects, Pathfinder International conducted a cross-sectional study in the Zinder region in July 2016, where the median age of marriage is 14.3 years for girls and 21.3 years for boys.

DESCRIPTION: For a baseline study of an intervention with first-time parents, a random sample of 1,120 couples (560 husbands and 560 married adolescent girls) was drawn from a complete list of 1,406 households within 48 villages meeting the criteria: "being an adolescent girl or young woman under 25 years, married, with no children". Preliminary analysis using SPSSv18 provided information on the perception and acceptability of family planning and gender relations among young couples.

LESSONS LEARNED: The majority of married adolescent girls support the concept of birth spacing (83.30%) and the limitation on the number of children (62.22%). However, barely one in four adolescent girls (24.21%) said they had a conversation with their husband about the use of contraceptive methods. Less than half (48.20%) of adolescent girls interviewed said they are confident in discussing the use of contraception. The vast majority of husbands (93.90%) said they are ready to support their wives in practicing birth spacing.

CONCLUSIONS/NEXT STEPS: Although husbands and wives were generally well informed, one of the biggest barriers to the adoption of contraceptive methods was the lack of communication between couples. Increasing open communication between adolescent girls and their husbands on health issues will help strengthen access to quality family planning services. Creating this dialogue will improve health outcomes and empower adolescent girls to make decisions on birth spacing and limitation.

IAAH170476

Adolescent pregnancy in Peru: Associated factors and state response

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BACKGROUND: Adolescent pregnancy is not only a public health problem, but also a social problem because it involves a number of aspects that limit the

opportunity for development, reproducing the circle of poverty in families. The percentage of adolescent pregnancy in Latin America is one of the highest in comparison with other regions of the world, and its fertility rate is 51 per 100,000 adolescent women. In Peru, 13.6% of adolescent women aged 15 to 19 are pregnant for the first time or already have children.

DESCRIPTION: The percentage of adolescent pregnancy in Peru has remained almost static for many years. The highest percentages of Peruvian adolescents ever pregnant are found in the rural area (22.0%) and in the residents of the Jungle (24.9%); and the lowest percentages in the urban area (10.8%) and Metropolitan Lima (8.3%).

LESSONS LEARNED: Adolescent pregnancy is the cause and consequence of many risks, and of social, economic and gender inequities that is why, in response to this problem, the Peruvian state approved the Multi-sectorial Plan for the Prevention of Adolescent Pregnancy, with reference to the Andean Plan of Prevention of Pregnancy. The objectives of this Plan are to postpone the onset of sexual intercourse in adolescence, increase the percentage of adolescents who complete secondary education, ensure inclusion of Comprehensive Sexual Education, increase the prevalence of current use of modern contraceptive methods in adolescents sexually active, and reduce the different types of violence in adolescents with an emphasis on sexual violence. The Multi-sectorial Plan has been recognized by the Global Leaders Council for Reproductive Health of the Aspen Global Health and Development at the Aspen Institute for its inter-sectorial approach, giving such recognition to the World Health Assembly in 2014.

CONCLUSIONS/NEXT STEPS: The Peruvian state considers the prevention of teenage pregnancy as a priority issue, so to date it has an adolescent pregnancy prevention plan, which involves not only the health sector, also other sectors involved, considering its multi-factoriality.

IAAH170487

What's adolescent girls know about their adolescent health in an underprivileged community of Bangladesh? – A cross-sectional study

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BACKGROUND: Adolescent pregnancy can lead to serious health consequences include death in girls. Majority of the married adolescent are not physically ready for pregnancy which causes high risk of complications. Globally complications during pregnancy and childbirth are the second leading causes of death of girls aged between 15-19 years. Every year around 5500 mothers are dying due to maternal complications in Bangladesh. A large number of deaths are still occurring in the marginalized community. The study explored knowledge of adolescent girls on adolescent health including early marriage and childbirth in the marginalized tea garden community of Moulvibazar district, Bangladesh.

METHODS: A cross sectional study was performed. 25 gardens were selected purposively in Moulvibazar districts out of 92 gardens. 512 adolescent aged between 10-19 years (both married and unmarried) between 1 March 2015 and 29 February 2016 were enrolled. Structured pretested questionnaire was used for face to face interview. Descriptive analysis of findings was performed.

RESULTS: The study revealed that among the 512 adolescents 57 (11%) were found married and 455 (89%) were unmarried. Around 56% adolescent had knowledge on early marriage and 29.7% had knowledge on family Planning. Though 69.9% had idea on menstruation but only 15.3% used sanitary pad and 11.3% intake more food during their menstruation. 30% of them had knowledge on sexual transmissible diseases. Above 69% depended on their fathers' decision to received treatment during sickness & only 39.6 had knowledge on violence.

CONCLUSIONS/NEXT STEPS: Adolescent living in the tea gardens is still behind of knowledge on early marriage, menstrual hygiene sexual transmissible diseases and family planning issues. As a result, adolescents are at high risks of early marriage and early pregnancy which may lead to maternal complications in adolescent girls. Specific intervention focusing improvement of knowledge and practices on adolescent health issues can help to improve overall adolescent health status of this marginalized group. Thus, this will reflect on overall reduction of maternal mortality in Bangladesh to reach sustainable developmental goal by 2030.

IAAH170499

Young people can expand contraception access when given the financial resources

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¹Women Deliver

BACKGROUND: There are 3.5 billion people under age 30 in the world today. Many face barriers to accessing sexual and reproductive health services (SRHR) and are often not engaged in the design, implementation, and evaluation of policies and programs. Women Deliver knows that young people can make a lasting impact in their communities if given the financial and technical resource they need. Women Deliver provides seed grants of \$5,000 USD to select Young Leaders to implement advocacy and communications projects.

DESCRIPTION: In 2016, Women Deliver funded three projects related to young people's access to contraception. In Trinidad and Tobago, Kizanne developed a website and mobile app that contains information about different types of contraception and exact locations of where to find them. In Cairo, Egypt, Nana collected data on how pharmacists' attitudes dissuade young people from using emergency contraception and made recommendations to policymakers on how to make pharmacy services more youth-friendly. In Poland, Kinga provided teenagers with a safe space to access factual information on contraception- without judgment or religious interpretation. She created a website that provided answers to teenagers' most common questions on sexual and reproductive health issues.

LESSONS LEARNED: To date, those three projects alone have directly reached 5,695 people, 91% (5,190) of which are young people themselves. These numbers show that young people are uniquely equipped to reach their peers in their communities.

CONCLUSIONS/NEXT STEPS: The immediate and ongoing results from these seed grant projects demonstrate that young people themselves are strong, effective experts in and advocates for their own SRHR. By directly funding and supporting young people with the tools they need, young people can effectively advocate for the needs of young people in their communities and countries. Women Deliver's model of providing a combination of technical and financial support enables young people to meaningfully engage and influence the programs and policies that directly affect their lives, contributing to making these programs and policies more effective and responsive to young people. This year, Women Deliver will award three Young Leaders with a continuation grant of \$5,000 to continue a project that has already shown to be successful.

IAAH170500

How do you promote the health and well-being of young adolescent girls? Empower their grandmothers. Using realist evaluation to build theory, evidence, and plan scale-up in Senegal

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BACKGROUND: In Senegal, the health and well-being of young adolescent girls is threatened by early marriage, adolescent pregnancy and lost educational opportunities (UNFPA/PRB 2012). The realities are often worse in poor, rural areas. Adolescent girls who enter puberty are a vulnerable population, and many of the decisions that affect them are made by their families or communities. The Grandmother Project's Girls' Holistic Development Program is simple-to-implement, community-based intervention that promotes intergenerational dialogue and strengthens positive cultural traditions including grandmothers as advisors in child marriage, adolescent pregnancy, female genital cutting, and girls' school retention.

DESCRIPTION: Qualitative evidence indicates the Girls' Holistic Development intervention is effective in achieving positive outcomes for adolescent girls. A realist evaluation approach (Pawson and Tilly, 2004) is being applied to prepare the intervention for scale-up in Némataba. Realist evaluations use program theory to identify gaps in evidence of effectiveness and include regular reviews of data to address these gaps. Program theory posited that the Girls' Holistic Development program has led to social change. A review of qualitative studies (Newman 2016) concluded strong empirical support for the theory of change, including an increase in respect for grandmothers and intergenerational communication, which has contributed to a decrease in adolescent pregnancy, female genital cutting, early marriage, and an increase in school attendance. The review also identified evidence gaps in social change

mechanisms, including how girls negotiate with their grandmothers and how grandmothers negotiate with families on behalf of girls.

LESSONS LEARNED: Applying a realist evaluation approach helps to ascertain if change theory is operating as expected. Community-based health programs often focus on outcomes, missing the normative changes that are driving them. As scale-up occurs, realist evaluation guides data analysis and planning for new studies to validate program theory in new contexts. This approach allows programmers to concretely link theory and practice with evidence to foster data-driven decision-making.

CONCLUSIONS/NEXT STEPS: An upcoming evaluation will provide critical missing quantitative evidence of impact. Guided by program theory, it will inform this normative change intervention's (and grandmothers') contribution to the health of adolescent girls.

IAAH170507

Modern contraceptive use among female adolescents in rural Nigeria

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BACKGROUND: The world currently has the highest number of adolescents in all of history. Africa is home to quite a number of them, most of these adolescents in Africa live in rural areas where they are more disadvantaged and their reproductive decisions could have telling impacts on their lives, family planning has been identified as important to avoiding such impacts. Factors associated with the use of modern contraceptives among adolescent especially female remains an area that has been extensively researched but it appears that the importance of family planning messages of modern contraceptives use among female adolescents in rural Nigeria is under researched.

METHODS: This paper uses the 2013 Nigeria Demographic and Health Survey data with a weighted sample size (n=4434) to examine the association between exposure to family planning messages and use of modern contraceptives among female adolescents in rural Nigeria.

RESULTS: Findings indicated that exposure to family planning messages on radio and television were significant at p<0.05. Therefore, exposure to family planning messages on radio and television is associated with the use of modern contraceptives among female rural adolescents

CONCLUSIONS/NEXT STEPS: The study concludes that exposure to family planning messages on mass media especially radio and televisions are associated with modern contraceptives use among rural adolescents. Therefore, exposure to family planning messages and use of modern contraceptives among rural adolescents could create opportunities for more to be done in rural areas in terms of increasing the use of modern contraceptives among rural adolescents. It is therefore recommended that programmes that are residence specific and those that aim at improving the efficiency of media based family planning messages should be given higher priority.

IAAH170516

Reproducing, contesting, transforming gender norms over the adolescent life course in northern Uganda

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BACKGROUND: Few factors affect sexual and reproductive health as much as gender and the power imbalances associated with it. Across societies, gender norms are actively constructed with regards to power, privilege, access to and control of resources and filter health behaviors and outcomes. This paper presents results from a longitudinal cohort study in post-conflict Northern Uganda which sought to understand how gendered behavior, attitudes and norms develop over adolescence.

METHODS: The study followed a cohort of 60 very young, older, and newly married or parenting adolescents (male and female, 10-19) over three years. Through four in-depth interviews, participants shared details about their life histories, relationships, attitudes, and changes experienced due to interventions and policy changes. Participatory interview methods (including projective techniques and drawing) generated rich data.

RESULTS: By exploring participants' lived experiences, we created a visual

model of social construction that displays the complex life trajectories of adolescents in study communities, focusing on life-stage transitions. The model reflects how adolescents navigate multiple and contradictory norms about gender, sexual and reproductive health and violence as they strive for safety, economic security, school completion, health, and general wellbeing. During early adolescence, participants had greater flexibility in terms of chores and mobility, while the expectation of women's obedience to men and of men's right to use violence was taught from an early age. Older adolescents experienced restricted mobility and began to discipline siblings and teach peers to conform to ideal masculinities and femininities. As new spouses and parents, adolescents prioritized economic security, often embodying patriarchal norms.

CONCLUSIONS/NEXT STEPS: The model provides systematic insights into the gender socialization process to inform program design and implementation. We propose it as a foundation to identify the institutions, social networks, and resources that affect the decisions and behaviors of adolescents. We will discuss this work in relation to other frameworks which conceptualize gender socialization within the social ecology, contributing a grounded theory perspective rooted in empirical data, highlighting the reproduction and contestation of gender norms during socialization.

IAAH170523

Reproductive decision-making among women married as children: Comparing Ethiopia and Nepal

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BACKGROUND: Child marriage perpetuates gender inequality and hampers women's agency to advocate for their rights. Multiple studies have assessed the correlations between women's empowerment and reproductive outcomes, such as contraceptive use. However, findings are inconsistent underscoring the need to better understand reproductive decision-making in different settings (Upadhyay and Karasek, 2012). This paper compares reproductive decision-making among child brides in Ethiopia and Nepal.

METHODS: In this qualitative inquiry we used in-depth interviews (IDIs) with ever-married women aged 18-45 (married before age 18 and for at least 5 years) and participatory focus group discussions (PFGDs) with mothers and fathers who have daughters between the ages of 8 and 17 in Ethiopia and Nepal. IDIs and FGDs were audio-recorded, transcribed and translated. Inductive thematic method was used to code data with Nvivo 10 qualitative data analysis software. Resultant categories and emergent themes were harmonized.

RESULTS: In both countries interviewed women expressed a lack of agency and autonomy to make important life decisions and assert their reproductive rights. Intimate partner violence, especially marital rape, is a common theme in both contexts. However, while rape leads to child marriage in Ethiopia, sexual contact is almost always within the marriage in Nepal. Additionally, preference for a male child leads to increased reproductive coercion in Nepal. Further, mother-in-laws have a stronger control over their daughters' in-law marital decisions including use of contraception and social participation in Nepal. Though economic factors contribute to early marriage in both countries, fear of rape and bride abduction were prominently cited in Ethiopia while preservation of virginity and dowry cost for were reported to drive early marriage in Nepal.

CONCLUSIONS/NEXT STEPS: Women married as children lack the ability to assert their reproductive rights in both contexts though the cultural dimensions and drivers of early marriage may differ. This study contributes to our understanding of contextualized reproductive decision-making process in child marriages. Insights from the study are timely given international development efforts on women's empowerment and concerted global efforts to end child marriage.

IAAH170528

Efficacy of educational intervention module on improving awareness and knowledge of health and hygiene of adolescent girls

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BACKGROUND: Adolescent girls are included in continuum of care strategy by government of India by adopting RMNCH+A programme to improve health outcomes. But challenges remain for the penetration of services in the community due to wide socioeconomic disparities.

METHODS: The intervention study was conducted at Yuva clinic at Niloufer Hospital, and Shalibanda of Institute of child health, Hyderabad. A pre-test survey instrument was used to collect information on awareness and knowledge of nutrition, reproductive health, sexual transmitted infections and high risk behaviours. A two day educational intervention training programme was done using posters, flip charts and audio-visual aids. Post-test survey instrument was used and paired t test was carried out to determine improvement in awareness and knowledge of adolescent girls.

RESULTS: Educational interventional module has improved the knowledge, attitude and practices of adolescent girls of nutritional health and hygiene, reproductive health, psychosocial and legal issues. Over all significant improvement in knowledge was observed with 95% confidence interval (11.3, 13.8) after implementation of intervention.

CONCLUSIONS/NEXT STEPS: Training is effective in improving the knowledge, but health behavioural strategies should be developed to identify the barriers and overcome them to access and utilize these practices to improve health outcomes.

IAAH170529

Life style of adolescents as cause of non-communicable diseases (NCDS) incidence in adult hood

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BACKGROUND: From WHO definition health refers to physical, mental and social wellbeing and adolescents are people between 10-19 years old. NCDS are called life style diseases. NCDS like diabetes, obesity, hypertension, cardiovascular diseases and respiratory diseases are related to alcohol, tobacco and unhealthy food consumption which cause physical problem, mental and social problems. Increase in death of people less than 40 years old, researches have showed that it is related to adolescent behavior, where in adolescent period use people use to think that consuming alcohol is way of enjoying their life and others used to take tobacco. Research which carried out in Rwanda between 2012-2013 show that people between 15-64 years old are at risk factors of NCDS.

METHODS: Literature review, WHO reports about NCDS and research about 5 people who used to consume tobacco and alcohol in adolescent, how their life are now.

RESULTS: The research, among those five adolescents people who used to consume alcohol and tobacco in adolescent 60% experience respiratory diseases and mental problem like having no security in their homes. Death due to NCDS in adolescent is low but mental problems like low school performance is increasing, obesity and hypertension are increasing too. Behaviors of adolescent do not cause death in adolescent period, but they contribute to high rate of death to people under 40 years old due to NCDS.

CONCLUSIONS/NEXT STEPS: Life style of adolescents is causing death of large number of population worldwide caused by NCDS especial what they consumes thinking that it is way of enjoying while it is destruction than making life better. Through intensive sensitization and helping adolescent to come together for getting understanding of how their life can be enjoyed, while they are keeping life of tomorrow will reduce incidence of NCDS in word's population.

IAAH170534

Determining the factors that influence the condom use self-efficacy of female undergraduate students aged 18 to 24 years in a selected University in Manila

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BACKGROUND: The Philippine National Demographic Health Survey of 2013 indicated that 99% of sexually active unmarried women were knowledgeable of male condoms yet only 13.6% of them actually used this method thus leaving a gap between the knowledge and the actual condom use of women. This study aimed to determine the factors that influence CUSE of female undergraduates

aged 18 to 24 years in a selected university in Manila. Specifically, it described the risky behavior and knowledge on condom use of female undergraduate students, determined the perceptions of female undergraduate students on male condom use and assessed the CUSE and finally, established the relationship between selected factors and the CUSE.

METHODS: This study utilized a cross-sectional analytic design. Information on the female undergraduates' knowledge on condom use, risky behavior, interactions with their family and peers, perceptions about condom use and condom use self-efficacy were collected through a self-administered questionnaire.

RESULTS: Out of the 341 respondents, majority of them were non-alcohol drinkers and non- smokers. In terms of knowledge, most of the respondents scored high in the test. Respondents showed more positive perception towards condoms as a reliable and effective means of contraception and sexual protection. Most of the respondents were reported to have high CUSE.

CONCLUSIONS/NEXT STEPS: Many of the factors identified were found to have insignificant relationship with CUSE. However, it was found that discussion of sex with peers and discussion of contraception with family have the strongest relationship with CUSE. This research can be used for further policy interventions in reducing risks of STIs and HIV/AIDS and in promoting safe sexual practice.

IAAH170543

Brand of condom and its effect on compliance amongst college students

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BACKGROUND: Condoms is the most common form of contraception among college students. Free condom distribution programs help decrease STIs & pregnancies. There are many condoms in market that differ by brand name, size, texture, thickness, color, flavor, scent, & lubrication type. Condom use & preference is largely influenced by these characteristics. Generally health clinics distribute free condoms that are of generic brand and cost less. Research examining condom brand preference & use of free condoms is lacking. This study examined condom brand preference and whether it plays a role in improving free condom use in young adults.

METHODS: An anonymous & confidential survey was completed by college students 18 years & older. All students at University of Michigan Flint & Mott Community College, Flint MI were approached by the investigators & were eligible to participate. The 12 item survey assessed demographic information, sexual activity, sexual orientation, condom usage, condom brand preference, & likelihood of condom use based on brand. Only completed surveys were analysed (113). Data was analyzed using SPSS software for descriptive statistics, independent t-test and chi-square analysis. Study was approved by the Hurley IRB committee.

RESULTS: Demographics of the 113 respondents were; mean age of 21. 6yrs, 48 males, 52 females, 44% white and 42% Black, 13% other. 80% of participants were sexually active & 88% had ever used condoms. Majority (61%) of participants didn't have a favorite condom brand & 62% reported that they would use a free condom even if it wasn't their favorite band; however 58% of respondents wouldn't use a free condom if it was a brand they didn't know, regardless of a favorite brand. The main concern cited for not using an "unknown brand condom" or not using a condom that's not their favorite brand was, "worry it will break."

CONCLUSIONS/NEXT STEPS: This study found that a majority of respondents wouldn't use a condom brand they didn't know even if it was free. This study suggests that health clinics should consider distributing recognizable brand name condoms for better compliance. More studies with larger sample size may be important to look at the cost benefit analysis of brand condoms vs generic condoms in health clinics.

IAAH170545

Clustering of health related behaviors among Saudi adolescents: Findings from Jeeluna, a nationally representative study

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BACKGROUND: Several studies have revealed clustering of health-related risk behaviors in adolescents. Such knowledge allows more effective tailoring of health promotion programs by targeting more than one risky behavior at one time. However, nationally representative studies on clustering of risky health behaviors in youth are rare. Jeeluna, the first nationally representative study of adolescent health behaviors in Saudi Arabia allows an investigation into clustering among Saudi youth.

METHODS: This multi-stage cluster, school-based study was carried out in all 13 regions of Saudi Arabia among intermediate and secondary school students. The instructed but self-administered questionnaire contained multiple questions assessing level of risk behavior for 10 domains: diet, physical activity, sedentary and screen activity, safety, sleep, violence and bullying, tobacco [smoking, water pipe] solvents and medication abuse, marijuana, hashish, alcohol, and other illicit substances and depression/anxiety. All domains with a Cronbach Alpha over 0.30 were included which excluded the Solvents and Medication Abuse domain. Thereafter, the nine domains were analyzed using K-means clustering.

RESULTS: Constraining the domains in two clusters resulted in diet, physical activity, and sedentary to be in same cluster as expected and violence and tobacco and illicit drug use to be clustered in another cluster as expected. Also, safety is positioned as expected by theory with violence and tobacco and illicit drug use. In specifying three clusters, safety, violence, tobacco, and illicit drugs continued to stay together demonstrating their stable correlations. Physical activity, sedentary activity, and mental health continued to stay together while diet and sleep separated into a third cluster. Specifying four clusters resulted in domains with similar loadings. The best differentiation of the domain loadings between the clusters occurred in the three clusters. A dendrogram calculated using the hierarchical cluster method confirmed most of the classification seen in the K-means clustering.

CONCLUSIONS/NEXT STEPS: The clustering of risky health behaviors among Saudi adolescents in Jeeluna largely confirmed the clustering seen in developed countries. Such knowledge increases confidence that interventions in developed countries that target multiple behaviors will likely help reduce risky health behaviors among Saudi youth.

IAAH170546

ERICA: sexual initiation and contraception in Brazilian adolescents

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BACKGROUND: Recognizing adolescents as individuals with sexual and reproductive rights is essential for elaborating and introducing policies and programs. The use of contraceptives is desirable and is one of the landmarks of a healthy sexuality during adolescence. Studies with adolescents reveal that contraception at the last intercourse varies between 75.0% and 86.0% of which male condoms and oral pills are the most used methods. There are numerous studies that already investigated sexual and reproductive health behaviors of adolescents but, many aren't nationally representative. Therefore, the objective of this study was to estimate the prevalence of sexual initiation and contraceptive use at last intercourse of Brazilian adolescents.

METHODS: Data were obtained from the study of cardiovascular risks in adolescents (ERICA), a national school-based cross-sectional study. We included 74,589 adolescents from 32 geographic strata (27 capitals and five sets of municipalities with more than 100,000 inhabitants of each of the five macro-

regions of the Country). We have estimated prevalence and confidence intervals (95%CI).

RESULTS: 28.1% (95%CI 27.0-29.2) of the adolescents had already initiated sexual life, with higher prevalence among those aged 17 years (56.4%, 95%CI 53.9-58.9), males (33.5%, 95%CI 31.8-35.2), studying at public schools (29.9%, 95%CI 28.5-31.4). Among those who had started their sexual life, 82.3% (95%CI 81.1-83.4) reported the use of contraceptive methods at the last intercourse, and the prevalence of use was higher among adolescents aged 17 years (85.3%, 95%CI 82.7-87.6) and females (85.2%, 95%CI 83.8-86.5). Male condom was used by 68.8% (95%CI 66.9-70.7), with no difference by type of school or macro-regions; the contraceptive pill was used by 13.4% (95%CI 12.2-14.6), and more frequently used among women (24.7%, 95%CI 22.5-27.0) and 17-year-old adolescents (20.8%, 95%CI 18.2-23.6) and from urban settings(13.7%, 95%CI 12.5-14.9).

CONCLUSIONS/NEXT STEPS : ERICA's data analysis on sexuality and contraception shows heterogeneities in the prevalence of sexual initiation and use of contraceptive methods among Brazilian adolescents, depending on their age, where they live, and the type of school they study at. Younger adolescents and those living in the Northern region seem to be more vulnerable to the consequences of unprotected sexual intercourse.

IAAH170550

Menstruation stained by inequitable gender norms: Experience of adolescent girls from rural Rajasthan, India

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BACKGROUND: Despite growing evidence, menstruation continues to be perceived as a health and hygiene issue with little or no attention to the gendered dimension. This paper aims to strengthen evidence on gendered valuation of menstruation, and its influence on girls' self-esteem, self-efficacy, education and well-being; and argues for the need for programming on menstruation from rights and equality perspective.

METHODS: We use data gathered from over 7,000 adolescent girls and their caregivers in Dholpur district, Rajasthan as baseline for the PAnKH program. The survey includes series of questions on knowledge and practices around menstruation, self-efficacy, self-esteem and mental health. We run bivariate and multivariate analysis to assess knowledge and practices around menstruation, and examine how these influence girls' self-esteem, self-efficacy and mental health.

RESULTS: Knowledge and communication around menstruation among adolescent girls is low. Only 28% girls knew about menstruation before their menarche. Around 70% believe that it is dangerous for girls to go running or playing during menstruation and 86% believe that menstruation cleans body of impure blood. With menstruation, girls start experiencing restrictions on attending religious functions (94%), cooking (61%), and playing or meeting friends outside (36%). Due to fear of stains, and problems in changing and disposing pad, a-third of the girls reported that they are not always able to attend classes. Further, girls with correct knowledge and less restrictions were more likely to have better self-esteem, self-efficacy and mental health, than those with poor knowledge and more restrictions.

CONCLUSIONS/NEXT STEPS: Overall, knowledge and communication on menstruation are low, and practices restrictive. This creates a web of fear and shame among adolescent girls affecting their self-esteem and self-worth. Menstruation, though a physiological process, is embedded within gender relations, and associated with adolescent girls' health, safety and dignity. Recognizing this, ICRW with PRADAN, IFS and IN is implementing and evaluating PAnKH program. PAnKH is an integrated community-based adolescent girls' program, which aims to promote safe spaces to achieve positive education and sexual and reproductive health outcomes. The program builds girls' agency through gender transformative approaches and also engages parents, men and boys, and community leaders to create enabling environment for adolescent girls.

IAAH170551

Hindi translation, cultural adaptation and validation of adolescent resilience questionnaire for Indian adolescents

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BACKGROUND: Resilience represents the ability to cope up in stressful situations or events. It is defined as “positive developmental outcomes in the face of adversity or stress”. Many resilience measures/ scales are developed to measure young person’s ability to achieve positive outcome despite life challenges. The latest one is Adolescent Resilience Questionnaire (ARQ). In this study, we aim to translate ARQ in Hindi, adapt it to local culture, and validate it, encompassing the various aspects of resilience and contextual and cultural aspects unique to adolescent population of India. Bilingual ARQ is a brief, functional and simple to administer questionnaire to adolescents. It is a multi-dimensional measure which is useful in understanding the concept of resilience.

METHODS: This study was done at Kalawati Saran Children’s Hospital, New Delhi and associated school from Nov 2013 to March 2015. Our ARQ includes 88 questions, have 5 domains: Self, Family, Peers, School and Community. Translation of ARQ was done according to translational steps described by Guillemin et al. This pilot version of translated questionnaire was then tested among 50 students. Cohen’s kappa values calculated from the agreement between the responses to Hindi and English versions of the ARQ ranged from 0.88 to 1.00. Final version of bilingual tool was developed and was given to 204 adolescents of age group 12-16 years which further comprised of 97 males and 107 females. Study group was divided into <14 year and ≥14 year age. Responses of students to questions were on a Likert scale with 1-almost never, 2-not often, 3-sometimes, 4-most of the time and 5- almost always. The overall ARQ scale had a Cronbach’s alpha of 0.89 which is significantly higher than the satisfactory level of 0.70. Percentile scores were calculated which can be used in future to assess the need of counseling and support of all those scoring below 5th percentile for age and sex.

CONCLUSIONS/NEXT STEPS: Based on our results, we recommended this ARQ to be used by clinician to know the probability of developing risk factor in an individual so that remedial measures could be undertaken to prevent the development of risk factors and hence the illness.

IAAH170553

Association between exposure to pornographic materials and risk-taking among unmarried boys in Uttar Pradesh, India

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BACKGROUND: Media play an important role in shaping the attitudes and behaviours of adolescents. Many are exposed to pornography through media. Studies in the developed countries have shown that exposure to pornography produces a variety of negative outcomes, including perpetration of violence. In India, very few studies have examined the association between exposure to pornographic materials and risk-taking behaviours among adolescents and youth. Studies that have examined such association report that exposure to pornographic materials have been found to be positively associated with engagement in sexual experiences for young men and inversely associated with safe sex practices within premarital relationship. Drawing on data from a large-scale study of adolescents in the state of Uttar Pradesh, this paper examines the association between exposure to pornographic materials and risk-taking practices among unmarried adolescent boys aged 15-19. Specifically, it examines the links to premarital sexual experience, perpetration of violence against girls, and engagement in antisocial behaviors.

METHODS: Data were drawn from a study conducted among representative samples of adolescents in Uttar Pradesh, India. The adolescent survey focused on unmarried boys and girls of aged 10-19 and married girls aged 15-19 years. Data presented in this paper focused on 2,064 unmarried adolescent boys aged 15-19 years.

RESULTS: Preliminary findings show that, boys who watched pornography frequently reported higher levels of premarital sexual experiences, engagement in antisocial behaviors and perpetration of violence against women and girls. Findings also suggest that exposure to pornography was significantly associated with risk-taking practices among adolescent boys even after controlling for confounding factors. Boys who were exposed to pornography were more likely

to have engaged in premarital sex (OR 3.9-15.3), to have engaged in antisocial behaviours (OR 1.4-3.1) and to have perpetrated gender based violence (OR 1.5-2.9) than boys who were not exposed to pornography.

CONCLUSIONS/NEXT STEPS: Findings show that exposure to pornography was positively associated with premarital sex, antisocial behavior, and perpetration of gender based violence. The study calls for measures to stop the spread of pornographic materials and give family life education to adolescents and young people.

IAAH170557

Contraceptive counseling and adoption of postpartum contraception among young women in Rajasthan and Uttar Pradesh, India

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BACKGROUND: In India, unmet need for postpartum contraception remains quite high, especially among young couples. Studies on young women’s postpartum contraceptive use and the factors influencing it are limited in India. The paper seeks to understand the level and correlates of post-partum contraceptive use among young women in two states of India, Rajasthan and Uttar Pradesh, especially to examine the association between contraceptive counseling and adoption of postpartum contraception.

METHODS: The data for the study were taken from a survey conducted in Uttar Pradesh and Rajasthan in 2015. The survey covered 2,363 young women in the ages 15-24 years who had delivered in the two years prior to the interview. Multivariate analysis was conducted to examine the relationship between contraceptive counseling received during pregnancy and/or around the time of delivery or after delivery and young women’s adoption of postpartum contraception after controlling for socio-economic characteristics, agency, premarital knowledge of contraceptive methods, awareness of adolescent friendly health clinics and spousal communication regarding number of children to have.

RESULTS: Findings show that 48% of young women had started using a method in the extended postpartum period, that is, within the first year postpartum. Among the users, the most frequently used methods were condoms (48%) followed by safe period (17%) and withdrawal method (18%). Multivariate analysis shows the importance of contraceptive counseling. Young women who had received counseling were two times more likely than others to adopt postpartum contraception. The other factors that were significantly associated with the adoption of postpartum contraception were young women’s level of education, number of children that they had, premarital knowledge about family planning methods, and couple communication regarding number of children to have.

CONCLUSIONS/NEXT STEPS: Findings call for programmes to promote contraceptive use in the immediate postpartum period among young couples, especially, efforts to provide comprehensive contraceptive counseling.

IAAH170570

Predictors of return for review in recommended time after repair among Obstetric fistula patients: A case study of Kitovu Hospital, Uganda

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BACKGROUND: Tens of thousands of women and girls around the world suffer every year from obstetric fistula, a preventable childbirth injury that results in urine and/or stool incontinence. Fistula treatment through surgery is reported to be successful with adherence to post discharge advice by surgeons. This study aimed at exploring predictors of return for review to hospital among obstetric fistula patients in Uganda.

METHODS: The study design was a cross-sectional conducted to establish the association between women factors and adherence to return for review in right time as recommended by surgeons. At the multivariable stage, predictors of return for review to hospital were assessed using a logistic regression.

RESULTS: Findings from the multivariate logistic regression indicated that women who were married were more likely to return for review as advised by surgeons in the recommended time compared to unmarried women (OR=11.9). Further, results indicated, the more children a woman has the less likelihood of them to return to the facility as advised by surgeons in the recommended time (OR=0.65). Women that perceived their leakage as not much were less likely to

return to for review as advised in the recommended time when compared to those women that thought they had healed completely (OR=0.24). Furthermore, the results indicated, women who were working as maids or servants were more likely to return for review as advised by surgeon in the recommended time when compared to women that were housewives (OR=5.13).

CONCLUSIONS/NEXT STEPS: Spousal support contributes to a big proportion towards return for review as recommended from hospital hence the need to have men involved in health decisions. Other factors include parity; occupation status and level of leakage are statistically significantly related to status of return for review. Empowerment of women with support geared towards increasing their income is very crucial.

IAAH170573

Clinical profile and retention on pharmacological treatment among opioid dependent adolescents: A retrospective chart review

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BACKGROUND: Opioid use among adolescents has risen dramatically in the past decade. Decreasing age of initiation of opioid use along with high rates of relapse and treatment dropout in outpatient pose a great challenge to health care providers. There is scarcity of scientific evidence on the effectiveness of pharmacological agents for opioid dependence among adolescents. This research aims at assessment of the clinical profile and rate of retention on pharmacological treatment among treatment seeking opioid dependent adolescents in a retrospective manner.

METHODS: 11 years data (2003-1014) on treatment seeking adolescent opioid users who received pharmacological treatment, was retrieved from hospital records of a national level drug dependence treatment centre and was statistically evaluated for clinical profile, retention in treatment and its correlates.

RESULTS: Out of 713 files retrieved 288 were opioid dependent adolescents, majority of them (99%) were males, educated below 8th standard (55.7%), school drop-out (31.7%). Most common opioid used was heroin (78.4%). Majority of them were also dependent on nicotine (84.7%) and other substances. 54.7% never came for follow-up. The median number of follow up and duration of follow-up were 1 and 1 week respectively. Detoxification could be initiated at the first visit for all of them. Maintenance treatment either with opioid antagonist or partial agonist could be initiated only in 6.3% (naltrexone) and 9.8% (buprenorphine). Various socio-demographic and substance use parameters showed positive correlation with duration of follow up.

CONCLUSIONS/NEXT STEPS: These findings open up scope for interventional research for improving retention, compliance to various pharmacological agents for opioid dependence among adolescents.

IAAH170603

Action to create alcohol and community change in Zambia

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BACKGROUND: Harmful drinking of alcohol is costly and a cancer to Zambia's society with a staggering economy, Zambia is among the global countries with high rates of alcohol intake. Alcohol has been known as one of the behavioral risk factor of many diseases including mental health. Many children and adolescent have fallen prey of harmful use of alcohol and their behavior have defeated both parents and the government

DESCRIPTION: For Zambia, lack of policy direction and inadequate enforcing mechanism for existing pieces of legislations it enacted, control of alcohol consumptions and marketing, places of drinking, time of venues operation, illicit brewing and mushrooming of cheap illegal alcohol products which do not meet health standards, have been exposed to children and adolescents, and it has been of a grave concern to many Zambians. For rural Zambia, alcohol has become an entertainment for children and adolescents. Over 70% of Zambia's population comprises of children and adolescents, and 75% of them are unemployed and do not contribute to the growth of the country, only spend their time in illegal activities with irresponsible alcohol intake.

LESSONS LEARNED: Marketing and sophisticated advertisements and promotion techniques buy off the minds of children and adolescents, as they

link alcohol brands to sports, and other attracting activities. Many unauthorized outlets, unlicensed, unregulated and productions of alcohol products have increased and made accessible to children and adolescents in Zambia.

CONCLUSIONS/NEXT STEPS: The impact of alcohol marketing to children and adolescents is an important factor for consideration in implementing alcohol strategies in Zambia. Community programs are essential as they influence social norms and reach people where they are, and Zambia can substantively reduce consumption of alcohol countrywide with comprehensive community programs.

IAAH170604

Menstrual health, practices and knowledge among rural adolescent girls in Rohilkhand region

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BACKGROUND: Menstruation is a normal physiological process but the onset of menstruation is a unique phenomenon for adolescent girls. Menstruation and menstrual practices are still clouded by taboos and socio-cultural restrictions resulting in adolescent girls remaining ignorant of the scientific facts and hygienic health practices, which sometimes result into adverse health outcomes. Hygiene related practices of women during menstruation are of considerable importance, especially in terms of increased vulnerability to reproductive tract infections (RTI). Women having better knowledge regarding menstrual hygiene and safe practices are less vulnerable to RTI and its consequences.

METHODS: It was an observational, descriptive community based study with cross-sectional design carried out in a rural setup of western UP. A pre-designed pre-tested semi-structured questionnaire was prepared for collection of data. List of 294 adolescent girls who attained menarche was prepared beforehand. Data were then compiled in an Excel sheet and were analyzed by using Epi InfoTM Version 3.5.1.

RESULTS: The age of the respondents (n=294) varied from 11 to 18 years with mean age of menarche being 11.9 yrs. The education of mothers was primary in 29.2%, middle school and above in 29.2% with the rest being illiterate (41.8%). 49% knew about menstrual cycle before menarche. In most cases their first informant was their friend (40.8%). Only 56.2% knew bleeding occurs from uterus. 55.4% used sanitary pad only while 77 (26.3%) of the respondents uses old washed cloth. Regarding hygienic practices 71% had daily bath while Handwashing with soap and water was present in 74%. Hygiene practices were frequently practiced by higher economic groups.

CONCLUSIONS/NEXT STEPS: There is a large gap regarding knowledge about menstruation regarding its cause and site of origin. The mother daughter relation is still reserved, as girls tend look towards friends for their menstrual queries which leads to misinformation. The hygiene practices are majorly dependent on socio-economic status and the mother's education. The study correlates well with the fact that mother's education is the most important factor for upliftment of health standards of rural adolescent girls, which in turn is dependent upon the family's socio-economic status which in reality has become vicious circle of sorts.

IAAH170626

Menstrual disorders: A neglected reproductive health concern of adolescent women in India

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BACKGROUND: The start of adolescence is accompanied by menstrual initiation. Menstrual complaints are the second most common gynaecologic complains. Although majority of the girls/women are affected by menstruation related morbidities, there is little information available on the determinants and consequences of menstrual dysfunction. This study examines the prevalence, determinants and consequences of menstrual disorders of adolescent ever-married women from a population-based study in India

METHODS: The study uses a nationally representative cross-sectional survey data conducted in 2011 (District Level Household and Facility Survey-IV). A total of 5347 ever married adolescent women were interviewed. The survey asked the respondents about menstrual disorders including menorrhagia, amenorrhagia, polymenorrhagia, dysmenorrhagia etc. in past 3 months. Bi-variate

and Multi-variate analysis were performed to examine the prevalence of menstrual disorders by various socio-economic characteristics and gynaecological complaints reported by the respondent. The relationship between menstrual disorders, obstetric outcomes and RTI (Reproductive tract infections) was assessed using logistic regression.

RESULTS: In all, 12 % of the respondents (649) reported any menstrual disorder in past 3 months. Dysmenorrhea (8.6%) followed by irregular periods (3.6%) was the most common menstrual disorders reported. The major determinants of menstrual disorders include poor socio-economic background of the respondents, experience of any still birth (OR 2.34,95%), abortion (OR 2.8,95%), use of IUD (1.75,95%), number of pregnancies and use of female condom (OR 1.3,95%). The respondents with any RTI were at higher risk of menstrual disorders. Those who reported vaginal discharge were 5 times more likely to report any menstrual disorder.

CONCLUSIONS/NEXT STEPS: There is a need to recognize menstrual health as part of public health policy for sexual and reproductive health of the women. It will be useful to collect information on the availability and accessibility of health care services for treatment of menstrual dysfunction in large-scale survey data.

IAAH170632

Looking beyond 18... There is a Need to Rethink New Indicators around Marriage.

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BACKGROUND: The steady and significant decline in the rate of child marriages in India (NFHS-4, 2012-13) poses serious concerns around the issue but the questions is does that mean there is an improved agency and empowerment of girls? This research study will examines such indicators and argue for their inclusion in future programming and monitoring.

METHODS: The study will use the baseline data from the PANKH study in Dholpur, which includes a sample of 7,766 girls aged 12-19 years, both married and unmarried, and their respective primary female caregivers.

RESULTS: In a matter of one decade, there has been a decline in the proportion of girls married at age 18 from over 50% to under 15% in India. In Rajasthan, the decline (NFHS-3 & NFHS-4) has been from 65% to 35%. But there are certain critical indicators that show the other side of the story. The data from PANKH study shows when asked, 56% of the unmarried adolescent girls aged 15 or older describes their feelings around getting married, as they either felt "scared", "anxious" or "unhappy" about it. Almost all of them either had or expected to have an arranged marriage. Among married girls', just 8% had been consulted about when they wanted to marry, 7% who they wanted to marry, and only 12% had met/spoken to their prospective husbands alone before the marriage. Unmarried girls also reported that they will not be involved in decision-making of their own marriage. This paints a grim picture of girls having little voice in key decisions around their marriage, contributing to the anxiety felt by most girls entering the institution either before or after the age 18.

CONCLUSIONS/NEXT STEPS: The institution of marriage in India, like marrying young, limited role for girls in decisions around marriage, the provision of dowry, and rigid gender roles, have various implications on girls' and women's agency, education and their sexual and reproductive health within the marriage. With falling estimates of child marriage, policies and research around marriage must look beyond the single indicator of age, considering broader dimensions to ensure wellbeing of girls.

IAAH170634

Profile of substance using adolescents seeking help in a tertiary care hospital: A prospective study

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BACKGROUND: Substance abuse by adolescents is a major health problem. World Health Organisation (WHO, 2013) estimates that globally 25 to 90 % of children and adolescents have ever used at least one substance of abuse. The present study aimed to examine the socio-demographic factors with substance abuse and pattern of drug abuse among adolescents.

METHODS: For the study, 30 male adolescents within age range of 12-18

years, coming to OPD of NDDTC, Ghaziabad were selected using purposive sampling. Descriptive statistics were used to analyse the data.

RESULTS: The mean age of the patients were 15.15 (SD 5.67) and more than half (67%) belonged to lower socio-economic status. Poly-substance abuse was seen in 83.33%, medicinal opioids and cannabis were the most common substances abused. Most common reason for initiation of substance abuse was peer pressure. Almost half of the population (58.33%) had family history of substance abuse and 100% had peers with history of substance abuse. 41% patients reported conflict in the family with 16% reporting history of physical abuse. 79.16% patients reported dropping out of the school.

CONCLUSIONS/NEXT STEPS: Since early onset of drug use has been found to have poor prognosis, it is important to understand the psycho-social issues in the adolescent period.

IAAH170644

Child Marriage and Marital Relationship Quality in Ethiopia

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BACKGROUND: Relationship Quality (RQ) is theorized to be the precursor of healthy behaviours within couples (Lewis et al, 2006). Recent studies are beginning to elucidate how RQ and the level of communication between spouses might differ for women married as children as opposed to those who marry later, but more information is needed. Our study uses unique nationally representative survey data from Ethiopia (n=4300) to examine the impact of child marriage on RQ among a sample of ever married women aged 15-45 years. Additionally, we use qualitative data to further contextualize the marriage of child brides.

METHODS: Multivariate ordinary least square (OLS) and instrumental variable (IV) regressions were conducted to estimate the impact of child marriage on spousal communication. Further analysis will be implemented to examine the impact of child marriage on other RQ domains such as trust, satisfaction and conflict and shared power. Additionally, thematic analysis was conducted to understand the marriage of child brides.

RESULTS: Regression results suggest that child marriage, especially among the very young, has a significant negative impact on spousal communication. A majority of child brides expressed a lack of emotional connection with their partners. Most of these feelings stemmed from a resentment of being forced into marriage, mistrust of their spouses as a result of infidelity, lack of effective communication and intimate partner violence.

CONCLUSIONS/NEXT STEPS: Our study will contribute to understanding and contextualizing marital relationships of Ethiopian child brides, so that better interventions can be designed to serve them.

IAAH170645

First sexual intercourse and body imagem in Brazilian female adolescents

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BACKGROUND: Adolescence, a critical period of the human development, is accompanied by intense physical and psychological changes. Such changes affect the construction of the identity, the self-image and, consequently, future health behaviours. From the special events of adolescence, sexual initiation deserves prominence. There is an association between early sexual initiation and risk behaviours and also between self-image and sexual initiation. However, there is a lack of research about the consequences of the sexarche on the self-image. Faced with such a gap, this research aims to study the relationship between sexual initiation and body satisfaction in female Brazilian scholar adolescents.

METHODS: A cross-sectional study was conducted in a national school-based multicentre sample of 37,377 female adolescents. The adolescents were classified according to their nutritional status using as reference the World Health Organization curves for Body Mass Index (BMI) and categorized by age, sexual initiation and body satisfaction. Data collection tools used were anthropometry and self-administered questionnaires through PDA with questions about socioeconomic characteristics, life habits, sexual behaviour, satisfaction with body weight and pubertal development.

RESULTS: 53.9% of the female Brazilian scholars were not satisfied with the body weight, despite the fact that the majority (72.5%) were found to have a

healthy BMI. When compared to the body satisfaction, only the group of 12 years sexually active girls showed a significant predominance in dissatisfaction (64%) when compared to the non-initiated (47.2% dissatisfied) with a $p = 0.045$. However, the multivariate analysis did not show an association between sexual initiation and satisfaction with the body weight.

CONCLUSIONS/NEXT STEPS: There is a large number of scholar adolescents dissatisfied with their body weight. Sexual initiation was not confirmed as one of the factors associated with satisfaction, according to this study. However, new studies are necessary, with a prospective design and a methodology that includes other variables associated with self-image and a sexual initiation as media, relationship with parents and religiosity.

IAAH170649

Differences in contraceptive use initiation after sexual debut among female adolescent and young adults across different levels of wealth in the Sub-Saharan Africa: Case of 7 PMA2020 targeted African countries.

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BACKGROUND: Family planning may result in significant economic and population health outcomes especially if delivered as part of a complete reproductive health services package(1)(2). 53 million of 75 million total number of unwanted pregnancies are preventable and 22 million of 30 million unwanted births would be averted in the developing world(3). The London summit on family planning in 2012 led to the family planning 2020 (FP2020) goal that aims at reaching 120 million additional users of modern contraceptive methods globally(5). This will only be reached if the needs of large populations in need such as adolescents are addressed. This study focused on a multi-country comparison of the association between wealth levels and time to contraceptive use initiation after sexual debut.

METHODS: Publicly available Performance and Monitoring Accountability 2020 (PMA2020) data collected between June 2015-June 2016 for Kenya, Uganda, Ethiopia, Ghana, Nigeria, Burkina Faso and Niger were used. The PMA2020 used multi-stage cluster design, typically using urban-rural, major regions as the strata. In each country, it used a nationally representative probability sample of females aged 15 to 49 years were interviewed. This specific analysis was restricted to female 15-24 years who reported sexual debut after ten years of age.

RESULTS: For lowest wealth tertile, the median time interval to contraceptive initiation was greater than 14 years for all countries except Ethiopia where it was 12 years. The median survival estimate for the middle wealth tertile was lowest for Kenya 6(5-7) years and was highest for Ghana (>14years), Niger (>14years), and Nigeria (>14years). The highest incidence rate was found to be 10 new contraceptive users per 100 women-years in Kenya and was lowest in Nigeria, 2 new contraceptive users per 100 women-years. Within countries, the Hazard ration of contraceptive use after sexual debut between of middle and the highest wealth tertile compared to lowest wealth tertile were not statistically significantly different.

CONCLUSIONS/NEXT STEPS: Reducing the time gap between sexual debut and first contraceptive use should be one of focuses of national policies and global commitments such as the FP2020 and new contraceptive users per women years after sexual debut would a more reliable measure of progress.

IAAH170652

Adolescents with Chronic Illness or Disability: Implementing the “THRxEADS” mnemonic as a screening and interview tool for trainees and healthcare providers

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BACKGROUND: It has been well documented that adolescents with chronic illness can experience significant stress with associated physical, emotional and social problems. While the HEADS questionnaire is a well-accepted and excellent screening tool for adolescents, it does not specifically address some of the key issues related to adolescents living with chronic illnesses or disabilities, such as those related to transition from paediatric to adult care, coping with a chronic illness and treatment adherence. The mnemonic

“THRxEADS” (T for Transition, H for Home, Rx for Medication and Treatment, E for Education and Eating, A for Activities and Affect, D for Drugs and S for Sexuality and Reproduction) is a clinical tool designed to enhance the HEADS assessment and highlight the unique needs of adolescents with chronic illness. The rationale and use of this tool has been explained in a recent publication in the Journal Paediatrics and Child Health (Chadi et al. 2017). Some example questions may include: “How much of your health care is your responsibility?” or “What do you like/dislike about your medication?”

DESCRIPTION: The THRxEADS screening tool has been integrated into informal teaching sessions among first year paediatric residents in a tertiary care paediatric hospital. The tool has been identified as a helpful interview and teaching aid by medical trainees. Our team is commencing an ongoing quality improvement project that includes a short (15-30 minute) didactic sessions at the beginning of each rotation for new trainees rotating through our service. A pre and post session discussion outlines both level of comfort with chronic illness and disability-specific topics and knowledge of what to ask.

LESSONS LEARNED: Based on qualitative feedback collected thus far, the THRxEADS mnemonic is a simple and effective way to raise trainee awareness about issues specifically related to chronic illness and disability in adolescents.

CONCLUSIONS/NEXT STEPS: Our plan moving forward is to continue to gather feedback from the didactic sessions offered to new trainees rotating in adolescent medicine as well as implement formal hospital-wide educational sessions to sensitize physicians and allied health professions about the use and value of the THRxEADS mnemonic.

IAAH170654

Youth Shapers - MENA Youth Consultation on Adolescent Health

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BACKGROUND: Egypt is hosting the first MENA region Adolescent Health conference that will bring adolescent health scholars, practitioners and young researchers to showcase their efforts in this emerging public health specialty. In order to ensure that young people from Egypt and the Arab region are represented and invited to take on speaking roles in the conference, UNFPA Egypt will gather around 50 young people from Egypt and the surrounding Middle East and North Africa nationals to the Youth Shapers pre-conference event.

DESCRIPTION: The Youth Pre-Conference/Consultation will take place between 11th-12th of May preceding the MENA Region youth Conference on Adolescent Health. This pre-conference event will aim at establishing a regional alliance for Adolescent Health led by youth networks and supported by UN agencies and INGOs. This pre-conference event will provide a platform to mobilize regional youth inputs into the regional Adolescent health plans under the Regional Framework of Joint Strategic Actions for Young People in the Arab States, Middle East and North Africa Region (2016-2017), Global Strategy for Women’s, Children’s and Adolescents’ Health (2016-2030). These regional and global frameworks are further contextualized nationally and in the case of Egypt based participants, reference to Egypt’s National Population Strategy (2015-2030) is deemed necessary.

LESSONS LEARNED:

- Identify adolescent health priorities for MENA
- Regional and Egypt-based youth organizations and networks mapping exercise
- Exploring linkages between adolescent health and youth, peace and security
- Panel on the state of Adolescent health in the region and countries.
- Presentation on the International, Regional and Egypt specific Frameworks and agendas (EWEC, AAHA, Egypt NPS and others)
- Technical Briefing on the current regional Adolescent Health Draft plan
- Recommendations for enhanced youth involvement in Adolescent Health.

CONCLUSIONS/NEXT STEPS:

- Gather and document young leaders’ initiatives on adolescent health in Egypt and in MENA countries
- Establish a Regional Alliance of Young Leaders for Adolescent Health

- Draft a MENA Region Youth Position Paper on actions and commitments for Adolescent Health
- Gather young people's recommendations to the Regional Adolescent Health Strategy and national action plans.

IAAH170658

Factors associated with health risky behaviour among Brazilian adolescents: an integrating review of literature.

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BACKGROUND: The purpose of this work is to identify the knowledge of the factors associated with health risky behaviour among Brazilian adolescents.

METHODS: It was used an integrative review of the literature available at the following databases: IBECs, MEDLINE, Cochrane, SciELO e LILACS, regarding the risky behaviours as advised by the Centres for Disease Control and Prevention, including: consume of alcohol and other drugs, tobacco, risky sex behaviour, unhealthy eating habits, physical inactivity and violence.

RESULTS: Thirty-seven studies, predominantly about risky sexual behaviour, tobacco use and violent behaviour, were analyzed. The advancing in age favoured unprotected sex and the use of alcohol and tobacco. The influence of family and friends was related to smoking and alcoholism. Males were more involved in situations of violence, while females presented higher numbers of physical inactivity. A lower socioeconomic status was related to higher rates of unprotected sex, physical inactivity, unhealthy eating habits and violence. Attendance of private school was related to unhealthy eating habits.

CONCLUSIONS/NEXT STEPS: Risky behaviour in the adolescence are related to social, economic and family factors, which tend to overlap. To reduce social and gender inequality and to work, since childhood, in good health practices, strengthens healthy behaviour amongst the youth.

IAAH170666

Diagnostic dilemma and management principles in adolescent munchasen syndrome

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BACKGROUND: Munchasen syndrome by proxy is well established in literature. Children and adolescents also can induce illness themselves or participate as passive members in the illness falsification by caregivers. Factitious disorder in adolescents presents with symptom patterns which pose diagnostic dilemma in identifying motivation behind symptom production particularly to establish if there is a conscious motive. The term 'pediatric condition falsification' is used when the motivation of the behaviour is not given importance. As in other pediatric somatic symptom disorders, pediatric factitious disorder also has a better prognosis with non-confrontational approach, the focus being symptom reduction, uncovering the conflict area, assessing family dynamics and behavioural approaches as and when necessary.

METHODS: We present two interesting adolescent patients with unique symptom presentation. Their clinical presentation, clues to diagnosis, family psychopathology, treatment principles employed will be discussed in detail.

RESULTS: Both the case scenarios illustrates a typical presentation of physical symptoms in two adolescents which did not have organic basis. Family psychopathology was significant in both adolescents. The fact that the symptoms lacked an organic basis, multiple hospital visits, submissiveness for investigations, dramatic description of the symptoms, discrepancy between symptoms and investigation results and diagnostic dilemma made us to arrive at a diagnosis of factitious disorder. A non confrontative family system based and behavioural approach was employed in case A and case B respectively. Both of them showed significant improvement and no symptom recurrence for more than 6 months during follow up.

CONCLUSIONS/NEXT STEPS: It is essential to consider factitious disorder

in the differential diagnosis when we come across symptoms with unique presentation in children and adolescents. Systematic non confrontative approach, delineation of unconscious motives both in the patient and primary care giver, involving other significant family members when appropriate are some of the core strategies that helps in faster improvement and better prognosis.

IAAH170678

Health of Adolescent Girls in Rural Uttar Pradesh: A District Level Analysis of NFHS-4

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BACKGROUND: Age at marriage and age at first birth are crucial in determining overall development of girl child. Literature shows that women who become pregnant and give birth very early in their reproductive lives are subject to higher risks of complications or even death during pregnancy and birth and their children are also more vulnerable. Therefore, preventing births very early in an adolescent's life is an important measure to save the lives of adolescent girls. Uttar Pradesh being the most populous state of India is crucial in achieving SDGs including health of adolescents. Therefore the study aims to analyze reproductive health situation of rural adolescent girls at the district level of Uttar Pradesh.

METHODS: Study has used data from District level fact sheet generated by latest National Family Health Survey-4 (2015-16) Govt. of India. Variables taken for analysis were school attendance by female, sex ratio at birth, sanitation facility, percentage of women married before 18 years, and percentage of women already married or pregnant.

RESULTS: Almost 25% women aged 20-24 years of rural Uttar Pradesh got married before age 18 years, variation across the districts are huge ranges from 5 percent (Lucknow) to 71 percent (Shrawasti). Moreover, 23 districts are as such where more than 30 percent women got married before age 18 years. Data also reveals that in 28 districts, more than 5 percent adolescent girls (15-19 years) were already married or pregnant during survey period; highest in Mathura (12 percent) and lowest in Lucknow (zero percent). With respect to sanitation facility, 59 districts are as such where more than fifty percent households either using open field or unimproved toilet facility for defecation. Sex ratio at birth was observed discriminatory against girl child as high as in 61 districts. Girls attending school was found poor in majority of districts of Uttar Pradesh.

CONCLUSIONS/NEXT STEPS: The study suggests that there is urgent need to change the mind-set of parents and others about reproductive health of adolescent girls and its impact on psycho social development. In addition, Govt. active role in implementing the laws made to protect reproductive health rights of the girl child is required.

IAAH170679

Receipt of Clinical Preventive Services Among Adolescents and Young Adults, United States, 2016

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BACKGROUND: Clinical preventive services (CPS)—including screening, counselling, and vaccinations—present important opportunities for health promotion for adolescents and young adults (AYA), yet prior research suggests many AYA do not receive recommended services. We identified factors that facilitate/inhibit the receipt of CPS.

METHODS: We used data from a national internet survey with adolescents (13-18y), parents of adolescents, and young adults (19-26y). Questionnaire construction was guided by a literature review, formative research, and the Information-Motivation-Behavioural skills model. AYA (n=1918) were asked about 11 specific CPS received at the last visit with their regular provider. We used multivariable regression to identify independent predictors of 5 outcomes: the number of CPS received at the last visit, the receipt of 3 specific services, and receiving a flu shot in the past 12 months. Analyses were stratified by gender providing 10 multivariable models (5 outcomes*2 genders).

RESULTS: Overall, 79% of AYA reported having a regular health care provider. AYA strongly supported the idea of preventive visits and were generally positive about the care received; their most common concern was providers being distracted by their computers (16%). AYA reported receiving 3.7 of 11 CPS at their last visit; this was similar by gender but lower among young adults than adolescents. Less than half reported receiving a flu shot or discussions about sentinel services (tobacco use, drug and alcohol use, or STIs/HIV at their last visit). Slightly over half of AYA (54%) reported completing a health checklist at their last visit. Independent predictors for at least 3 of 10 CPS models included age, living in rural areas, amount of time spent with the provider at last visit, use of a checklist at the last visit, the number of years seeing the provider, attitudes about CPS, having ever discussed confidentiality with a health care provider, and AYA involvement in risk behaviours.

CONCLUSIONS/NEXT STEPS: Receipt of CPS by AYA was influenced by youth characteristics and motivations, provider actions, and characteristics of the office setting. Restructuring office visits by using clinical checklists and assuring adequate time for preventive visits appear to be promising interventions to improve receipt of CPS among AYA.

IAAH170696

Healthy Lifestyle Behaviours of Adolescent Students

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BACKGROUND: Adolescence period is an important period because of the transition from childhood to adulthood. Adolescents who are in this period show healthy lifestyle behaviours is very important for healthy adulthood. The aim of this study is to assess the healthy lifestyle behaviours of adolescent students.

METHODS: The research was conducted between 30th December, 2016 and 10th February, 2017 as a descriptive study in a vocational high School. The research did not perform sampling and included 219 students who is 9th grade, could be reached, agreed to participate in the research. Data was collected using an introductory questionnaire developed by the researcher and "Adolescent Healthy Life Style Behaviour Scale". The research was carried out by obtaining the written permission of Ondokuz Mayıs University ethic committee and verbal consent of the students. The data obtained in the research was analyzed by SPSS 21.0 program. The data was evaluated using descriptive statistics and independent-t test.

RESULTS: The mean age of the students participating in the study was 14.5 ± 0.6. 46.1% of the students were female and 53.9% were male. 84% of adolescents have a moderate income. 90.4% of adolescents do not smoke, 50.7% do regular sports, 14.6% have chronic disease. 63% of adolescents eat fast food and 67.1% of adolescents who eats fast food consume once a week. The average score of the adolescent healthy lifestyle behaviours scale was 107.97 ± 16.2. The scores of healthy lifestyle behaviours of male adolescents and adolescents who sports regularly were found to be higher. Male students scores were found to be higher in physical activity, nutrition, stress management subscale of healthy lifestyle behaviours and female students score in interpersonal relations subscale of Healthy lifestyle behaviours.

CONCLUSIONS/NEXT STEPS: It has been determined that the healthy life style behaviours of adolescents in the first grade of high school education are moderate. Male adolescents have better healthy lifestyle behaviour than female adolescents. By promoting healthy lifestyle behaviours of these students at the beginning of the adolescence period, healthier adults and therefore a healthier society can be created. At this stage, the public health nurses may provide training to the adolescents at the school to increase the healthy lifestyle behaviours.

IAAH170714

Correlates of sexual behaviours among sexually active adolescent girls aged 15-19 in Uganda

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BACKGROUND: Although previous studies have examined trends in HIV/AIDS knowledge and sexual behaviours among young adults (15-24), little is known about the correlates of condom use, contraceptive use and multiple sexual partnerships among sexually active female adolescents in Uganda. This study explored correlates of sexual behaviours among adolescent girls aged 15-19, focusing on social-cognitive variables.

METHODS: A cross-sectional survey conducted in 2015 covered 16 purposively selected districts of Uganda, and used a stratified multi-stage probability sampling design targeting men and women aged 15-49.

RESULTS: Intention to use condoms at next sexual encounter was correlated with reporting high self-efficacy to use a condom, $r = .52$ ($p < 0.01$; 95% CI 0.39, 0.63). Knowledge on the risk of having multiple sexual partners, $r = .19$ ($p < 0.01$; 95% CI 0.06, 0.33) was moderately correlated with intention to only have one sexual partner. Discussing contraceptive use with someone had a moderate correlation with likelihood to use a contraceptive method, $r = .48$ ($p < 0.01$; 95% CI 0.38, 0.59). Already having a child ($\beta = .61$, $p < .001$) is associated with the likelihood to use a contraceptive method.

CONCLUSIONS/NEXT STEPS: The correlates in this study should be targeted in future interventions. There is need to increase health education on risky sexual behaviours and position the need for open dialogue on sexuality among parent-adolescent and provider-adolescent to increase adolescents' confidence to make informed health decisions and choices for service uptake.

IAAH170715

Latent Class Analysis of Problem Behaviours and Predictors of Latent Class Membership Among Adolescents in the Republic of Korea

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BACKGROUND: Youths in adolescence are at risk of engaging in problem behaviours (e.g., smoking, drinking, and sexual intercourse), which have detrimental effects on their health. It is well known that adolescents simultaneously engage in multiple problem behaviours. Given the co-occurrence of multiple problem behaviours among adolescents, it is important to investigate these behaviours concurrently rather than investigating each of them. To do so, we investigated latent classes of problem behaviours among Korean adolescents and predictors of latent class membership (LCM).

METHODS: We analyzed nationally representative secondary data: the 4th and 5th waves of the Korean Children & Youth Panel Survey (KCYPs) obtained from the cohort of 2,351 7th-grade students in 2010. In waves 4 and 5, the students were in grades 10 and 11, respectively. We conducted latent class analysis using 7 problems behaviours (two smoking-related behaviours, two drinking-related behaviours, sexual intercourse, beating, and stealing). After identifying a latent class model that fits the data well, we investigated successful predictors of LCM. Nine predictors used in our study included gender, parental education, household income, relationships with teachers and friends, parental affection, abuse by parents, aggression, and depression.

RESULTS: After comparing interpretability, parsimony, and indices of model fit across one- to five-classes, we chose the three-class model: the Low Risk (LR) class (78%), the Non-Habitual Alcohol Use (NHAU) class (14%), and the Habitual Cigarette and Alcohol Use (HCAU) class (7%). Students in the LR class had either near zero or zero probability of all seven problem behaviours. Those in the NHAU class had a high probability of alcohol use at least once during the past year, whereas they had low probabilities of the other six behaviours. Those in the HCAU class had high probabilities of daily cigarette and monthly alcohol use during the past year. Except for household income and depression, the other seven covariates successfully predicted LCM.

CONCLUSIONS/NEXT STEPS: Given empirical evidence found in our study, problem behaviours among adolescents should be understood collectively rather than individually. Furthermore, the successful predictors of LCM should be taken into account in developing effective strategies to prevent adolescent problem behaviours.

IAAH170717

Would abortion services in India benefit from lesser hurdles?

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BACKGROUND: Around 8% of maternal deaths are due to unsafe abortions. About 1-10% of abortion seekers are adolescents. This study aims to study the reasons trained providers are wary about providing the service to young girls.

METHODS: Questionnaires were distributed in 24 obstetrics and gynaecology societies. Homogenous stratified random sampling was done. 766 responses were obtained. Frequencies were analyzed. The duration of the study was for one year in 2015-2016.

RESULTS: About 55.5% accepted to perform the service. Around 81.3% were willing to refer. About 82.2% wanted age proof; 86.4% wanted guardian proof; 66.8 wanted the girl's consent; 60% had no moral objection and 46.7% were aware about the legal acts. Medical methods of termination were chosen by 91.3% and post abortion services were offered by 91.9%.

CONCLUSIONS/NEXT STEPS: Service providers are wary about the procedure for young girls. Service providers were less aware about the legal issues involved in the procedure. The suggestions offered by the study are that there should be no ambiguities in the legal acts and there should be clarity for the service provider to provide the service without fear.

IAAH170731

Early Marriage; contribution and consequences on Maternal and Child Health in Pakistan

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BACKGROUND: Girls who marry before the age of 18 are more likely to experience domestic violence than unmarried girl and are also more likely to report that their first sexual experience was forced. Often married to much older men, girls are more likely to believe that a man is sometimes justified in beating his wife than the women who marry in older age. The practice of child marriage is particularly pertinent in rural areas where an estimated 37% of girls are victims of child marriage compared to 21% in urban areas. Adolescent girls are not physically, mentally and emotionally prepared for childbirth, and global figures show that pregnant girls below the age of 15 are 5 times more likely to die during pregnancy than those above 20.

DESCRIPTION: In Pakistan, the age at marriage among women between 15-49 years has increased from 17.9 years in 1951 to 19.1 years in 2007-8, yet 14.2 percent of Pakistani brides are under 19 and 8 percent of adolescents women are already mothers between the age of 15-19. Different measures have been taken in recent years in Pakistan to protect children's rights, such as the ratification of "Convention of the Rights of the Child", and adoption of the "Prevention of Anti Women Practices Act, 2011". A decade of advocacy aiming at amending the 'Child Marriage Restraint Act' has so far been unsuccessful, and the legal age of marriage still differs for girls and boys (16 and 18 respectively).

LESSONS LEARNED: Early marriage is still one of the leading causes of maternal mortality in Pakistan. It is important to implement the law, particularly in rural areas where girls get married in early age. There is lack of collaboration to address the issue of child marriage, efforts to educate people against the negative impact of child marriage is the need of time.

CONCLUSIONS/NEXT STEPS:

1. Advocate non-government organizations working in the rural areas of the country.
2. Collaboration is needed among government and non-government entities to work together to eliminate child marriage.
3. Educate parents/communities to increase the age of marriage, particularly girls age of marriage
4. Implementation of law through penalties and punishments.

IAAH170740

Bien Grandir!: Using evidence-based programming to transform social norms among very young adolescents in urban Kinshasa for improved sexual and reproductive health in older adolescence and adulthood

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BACKGROUND: Early adolescence (10-14) represents one of the most critical yet least understood periods of human development. Very young adolescents (VYA) often lack the information and skills to cope with this rapid transformation and many parents are unprepared to help them. This need is especially pronounced in DRC, where 17% of girls have sex before 15 and gender-based violence is pervasive. Bien Grandir! Will contribute to evidence on effective programming for this group, including the most vulnerable VYAs – those out-of-school and in urban poor contexts.

DESCRIPTION: Bien Grandir! uses a socio-ecological approach with an age-appropriate, gender transformative intervention package to provide VYA girls and boys with accurate information about sexual and reproductive health (SRH) and foster discussion about related social norms. In- and out-of-school VYAs explore materials in groups, while parents, teachers, health workers and community members participate in activities to create a supportive environment. The program, currently being piloted with 1000 VYAs in 40 schools in Kinshasa, aims to increase gender-equitable practices and contraceptive use in late adolescence through early intervention.

LESSONS LEARNED: Experiences developing and piloting the intervention reinforced certain program strategies and provided lessons for improvement. Engagement with a Technical Advisory Group ensured support for materials adaptation and stakeholder buy-in. Designing the intervention around an ecological model that engages VYA's influencers also resonated locally. However, challenges working in private schools and ensuring parent approval and male engagement prompted changes to implementation. As scale-up begins, this evidence will be applied to tailor launch strategies based on school type and to adjust activity timing.

CONCLUSIONS/NEXT STEPS: A planned qualitative program evaluation will provide additional feedback on the pilot to inform scale-up to 40 more schools in September 2017. A rigorous monitoring plan will assess feasibility and acceptability during scale-up, and the Global Early Adolescent Study will evaluate impact on gender and social norms related to SRH and contraceptive use. The study will collect data annually, providing critical information on how influences in early adolescence effect health outcomes in older adolescence.

IAAH170744

Reproductive Health Behaviour of Adolescent Students and Their Perceptions Regarding Family Life Education

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BACKGROUND: Adolescents and youths pose a number of reproductive and sexual health challenges. Present study was conducted under Indian Council of Medical Research (ICMR), India sponsored project with the objectives: 1) To investigate reproductive behaviour of adolescent students, their perceptions regarding family life education. 2) To suggest potential solutions for improving their reproductive health problems with adolescent friendly approach.

METHODS: Cross-sectional survey among adolescent students of selected schools during September 2010 to August 2013 with prior approval by Institutional Ethics Committee. Information was collected on socio-demographic characteristics and reproductive health behaviour, sexual aspects of health, involvement in sexual activities, awareness regarding reproductive tract infections, perceptions regarding family life education needs and other reproductive health issues. Information was collected by conducting personal interviews in privacy. Chi-square test was used for studying associations of different reproductive parameters.

RESULTS: Among all 1819 students surveyed including 1039 boys and 780 girls, 415 (22.8%) respondents had intimate friends. Discussions regarding reproductive health related issues included sex related material (83.0%), contraceptives (69.6%), sexual intercourse (65.1%), and teenage pregnancy (61.7%). Girls were more aware of contraceptives (86.3%) as compared to boys (81.8%). Overall use of contraceptives mainly emergency contraceptive was reported by 5.1% respondents only whereas indulgence in sexual intercourse was reported by 6.7% adolescent students. Girls were having more sex related worries (32.8%) as compared to boys (25.9%) and difference between two proportions being highly significant (P=0.005). Felt need of sex education was found among 73.3% students. Girls felt significantly higher degree of felt need of sex education (P<0.001). Most preferred place to impart family life education was schools (50.6%).

CONCLUSIONS/NEXT STEPS: Adolescent students were facing several reproductive health related problems and their sexual behaviour reflected risks of unsafe sexual practices and other risky behaviour. There is need of Reproductive Health Education (RHE)/ Family Life Education (FLE) at school levels for addressing reproductive health with adolescent friendly approach. Findings of

the present study may be helpful in attaining desired reproductive health benefits in terms of delaying age at marriage, reducing incidence of teenage pregnancy, and reduction in unsafe sexual and other risky behaviours of adolescents.

IAAH170748

Emergence of Consequences of Gadgets Misuse among Indian Adolescents: A Meta Narrative review

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BACKGROUND: The current Gadgets Oriented era, although it has made life of adolescents better, faster and improved working ability in shorter time, but it is causing also an emergence of a newer form of disorders in Adolescents namely “Problematic Gadgets Use (PGU)” not only globally but also in India as per data’s from Smartphones and Internet addictions from many studies in literature. This makes inevitable to study the overall effect of Problematic Gadgets Use (PGU)” as attempted by authors in this study.

METHODS: First any kind of studies on “Problematic Gadgets Use (PGU)” were searched from major electronic search engines such as PubMed, Cochrane database, Psyc INFO, Biomed Central, Google Scholar etc, followed by extensive manual search of articles even in unpublished form till 30th June 2017 of last 10 years; and then comparison of prevalence’s in India from other developing and developed world was done by adopting Meta-narrative review approach to get the study results. The inclusion criteria for PGU adopted in study was - any kind Systematic Review and Meta Analytic study on Gadgets addiction for final analysis by Meta-narrative review method.

RESULTS: Meta Narration revealed that - Out of total of 45 articles which were considered in systematicreview from whole world in previous studies; the smartphone addiction magnitude in India ranged from 39% to 44% as per fixed effects calculated ($P < 0.0001$) and out of those 45 articles total- which finally included -27 articles only 7 studies on related PGU in India were eligible in this criteria and hence they were taken for final meta-narration review approach; which finally revealed that although the overall pooled prevalence of “problematic Gadgets use” was lower i.e. 21.3% [95% C.I.=0.2%-63%], despite heterogeneity among studies [($Q=5340$, 95% C.I.=99.83 to 99.87)], but it was statistically significant ($p < 0.0001$) indicating PGU is an emerging problem among Adolescents of India.

CONCLUSIONS/NEXT STEPS: Problematic gadgets use in Indian adolescents is appearing as an emerging adolescent health problem and urgent gadgets regulatory guidelines and strategies are needed in India.

IAAH170752

Prevalence of substance abuse among the adolescent students of an engineering college

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BACKGROUND: Substance abuse among adolescents is an increasing problem world-wide. Adolescence is a developmental period where behaviour is influenced by emotional and social functions and to cope up with such changes they usually adopt experimenting on various life styles. In developing countries like India, substance abuse has been most frequent life style change due to its easy accessibility. In this study, we have made an endeavour to assess the prevalence of substance abuse and its correlates among adolescents.

METHODS: An institution based cross-sectional study was conducted among the students aged under 19 years in an engineering college located in Eluru City. A predesigned, pretested and semi-structured questionnaire was used to collect the required data which was compiled in SPSS Vr. 23 (trial) and analyzed.

RESULTS: Out of the total participants of 339, 159 (46.9 %) were males and females were 180 (53.1 %). Prevalence of smoking, Smokeless tobacco and Alcohol consumption was found to be 49 (14.45 %), 15 (4.42 %) and 38 (11.21%) respectively.

CONCLUSIONS/NEXT STEPS: The prevalence of substance abuse was high among adolescents and there is a need to educate and counsel them properly about the harmful effects of various substances abused in the community and to develop a positive attitude towards healthy lifestyle. Key words: Adolescents, Alcohol, Smoking, Smokeless tobacco.

IAAH170753

Contraceptive Vaginal Rings and Family Planning Needs of Adolescent/ Young Girls in sub-Saharan Africa (SSA)

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BACKGROUND: Contraceptive vaginal rings are newer contraceptives that are woman-controlled. The PVR is designed specifically for use by breastfeeding women within first year postpartum. The NES/EE ring is an option for women who are not breastfeeding/beyond the first year postpartum. Given the high rate of pregnancies and unmet need for contraception among adolescent women in the sub-Saharan Africa (SSA), the PVR and the NES/EE hold promise for adolescents’ contraception in the sub-region.

DESCRIPTION: Adolescent pregnancy rate is very high in SSA with rates of 28% in Western and Central Africa and 25% in Eastern and Southern Africa. In Niger, it is as high as 51%. SSA accounts for 28% of global adolescent mothers. Of the 10 countries with the highest percentages of adolescent pregnancies, 9 are in SSA. While global adolescent pregnancies have declined, disparity has grown in SSA for reasons including reluctance to visit FP facilities for lack of privacy and perceived greater male control associated with male condom. Introducing the PVR and NES/EE will enhance choice and empowerment for adolescent girls. An acceptability study of the PVR in Kenya, Nigeria and Senegal found that 51% of PVR users were young people who never used a contraceptive, 35% chose the PVR because it is woman-initiated/controlled and 50% continued for 6 months; a huge success given that 50% of users of any contraceptive discontinues after 6 months. Adolescent participants in this study viewed the PVR as enhancer of autonomy and physical wellbeing. Although the NES/EE is still an investigational product, users experience will likely be the same as that of the PVR.

LESSONS LEARNED: Adolescent childbearing and unmet needs are quite high in SSA. Lack of negotiating power for contraception among adolescent are partly implicated. The introduction of the PVR and NES/EE in the sub-region may be a game-changer, being woman-controlled technologies and will help first time parents with birth spacing. As the PVR will be available in pharmacy and other drug shops as over the counter product, adolescent girl’s access to FP may improve.

CONCLUSIONS/NEXT STEPS: The PVR is currently being registered in Nigeria, to be followed by Kenya, Malawi, Senegal and Zambia in the coming years.

IAAH170757

Determinants of unmet need for contraception among adolescents residing in rural and urban areas of gedeo zone: a comparative cross sectional study.

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BACKGROUND: On average, unmet need is greater among unmarried adolescents than among married adolescents. And among unmarried adolescents, unmet need is significantly higher among those aged 15-19 compared to those 20-24. Early pregnancy can be harmful to the health of both the mother and the child. For example, research in Ethiopia found that girls who had given birth between the ages of 15 and 19 were twice as likely as those aged 20-24 to experience obstetric fistula, and three times as likely as those aged 25-29.

METHODS: A Community based comparative cross sectional study design was conducted among adolescents in Gedeo Zone SNNPR to determine the level of unmet need for family planning. The study area was stratified in to rural and urban area for comparison and data was collected from 824 sexually active adolescents in the study area. Descriptive statistics were computed for the status and pattern of unmet need, socio-economic and socio-demographic variables and other characteristics of the respondents. Logistic regression (specifically Bivariate), was used to identify factors that are associated with unmet need. A multivariable logistic regression model was used to assess the

determinants of substance use. The unadjusted (crude) and adjusted odds ratios together with their corresponding 95% confidence intervals were computed.

RESULTS: From the total of 824 adolescents expected to be participated in the study 798 were successfully responded for the enquiry and the prevalence of unmet need for family planning is found to be much higher which is 47.0% for urban adolescents and 45.6% for rural adolescents. Adolescents from low economic status, illiterate adolescents, adolescents who do not have exposure to previous sexual and reproductive health service have higher unmet need. Adolescents that have habit of discussing about contraceptive method with the sexual partner before sexual intercourse and adolescents who discuss freely with their parents are less likely to have unmet need for family planning

CONCLUSIONS/NEXT STEPS: The prevalence of unmet need for family planning among adolescents in this study is found to be a burning public health issue that needs robust intervention to save the adolescents. Hence responsible bodies should divert their area of focus toward this segment of population.

IAAH170758

Predictors of Abusive Substance Use among Adolescents Residing In Urban and Rural Areas In Gedeo Zone: A Comparative Cross Sectional Study.

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BACKGROUND: Adolescence is a period of transition from childhood to adulthood during which adolescents develop biologically and psychologically and move towards independence. Although we may think of adolescents as a healthy group, many die prematurely and unnecessarily through accidents, suicide, violence and pregnancy-related complications. Some of the serious conditions of adulthood (for example, sexually transmitted infections (STIs), like HIV; and tobacco use) have their roots in adolescent behaviour.

METHODS: Community based comparative cross sectional study design supported with Qualitative study will be conducted among adolescents in Gedeo Zone, SNNPR. Chi-square test, logistic regression (specifically Bivariate), was used to identify factors that are associated with substance use. Multivariable logistic regression models were used to assess the determinants of substance use. The unadjusted (crude) and adjusted odds ratios together with their corresponding 95% confidence intervals was computed.

RESULTS: Adolescents who have no work are 25.9% less likely to use substance than who spend their time in school. Those adolescents who have friends that use substance were 62.6% less likely to use substance than those adolescents who have a friend that do not use substance. Adolescent who have negative attitude towards substance use were 2 times more likely to use substance than those adolescent who have positive attitude towards substance use. This finding is congruent with qualitative study from FGD one male school adolescents said "I have a bad feeling to substance even I do not fill comfort when I imagine about chat chewing and cigarette smoking and I am definitely sure that I will never try this substance in my entire life".

CONCLUSIONS/NEXT STEPS: Since personal attributes and peer substance use constitute the majority of the explained variance in adolescents' drug use, intervention programs should be designed to target risk factors within these domains. However, reducing discrimination and violence, and trying to facilitate positive parent-child relationships through social policy may also be worthy targets of interventions which can result in a lessening of adolescents' drug involvement.

IAAH170760

Contraception and pregnancy: What Bangladeshi adolescent and youth are keen on?

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BACKGROUND: Bangladesh has one of the largest adolescent and youth populations in the world with about 30% population belong to the age group 15-24. Their needs for sexual and reproductive health and rights (SRHR) information and services remain hidden because of socio-cultural and discriminatory gender norms and practices. They, therefore, are at risk of early pregnancy, sexually transmitted diseases etc. Considering this, James P Grant School of Public Health (JPGSPH), BRAC University and University of

Amsterdam has partnered with Maya.com.bd to conduct a study named "Digital Sister for Urban Youth" aiming to understand the actual SRHR needs of Bangladeshi adolescents and youths and develop evidence-based digital communication tools easily accessible to them.

METHODS: This is a partial analysis of the qualitative part of this mixed method study where data has been gathered from both the Maya online platform and field research. The study has been approved by the Ethical Review Committee (ERC) of JPGSPH, BRAC University.

RESULTS: The study has found that adolescent and youth were curious about emergency contraceptives as many of them wanted to know about the name, duration and efficacy of birth control pills to safeguard them from getting pregnant after having unprotected sex. They preferred anonymous online platform like Maya Apa or Google for finding answers of their queries as information is not available to them due to conservative society in Bangladesh. In the online platform, some of them also asked for information about using oral pills to abort unwanted pregnancy. Married couples were concerned about losing fertility as a consequence of using oral pills or emergency contraceptive pills for long time. In addition, most of the girls were concerned about having irregular menstruation after taking emergency pills and they were feared about such irregular menstruation may result them to unwanted pregnancy. People of this age group also have some misconceptions about contraception and pregnancy.

CONCLUSIONS/NEXT STEPS: All these results indicate that adolescent and youth in Bangladesh have limited access to information on contraception and pregnancy, therefore, an easily accessible digital platform is highly required for them to help them developing healthy SRHR practice.

IAAH170761

Abortion management outcomes and its associated factors in Yirgalem general hospital Sidama zone, southern Ethiopia

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BACKGROUND: Each year, throughout the world, approximately 210 million women become pregnant and 135 million of them deliver live born infants. The remaining 75 million pregnancies end up in stillbirth, or spontaneous or induced abortion. Several millions of women who underwent abortion care also bear several consequences including infection, massive blood loss, chronic pelvic pain, infertility and death. Objective of the study: Determining management outcomes and its associated factors of abortion in Yirgalem hospital.

METHODS: Health facility based a cross-sectional study design was used. Medical record review of 186 women who received abortion service from July 1st 2015 to June 30th 2016 was done. Then data were entered to computer using SPSS version 20, Descriptive analysis was done to determine socio demographic characteristics and logistic regression analysis and to identify factors associated with management outcome of abortion, 95% CI and odds ratio used to present the result.

RESULTS: Majority of patients with abortion were belongs to age group of 18- 25 years old. More than half 123 (66.2%) of the patients underwent surgical method of the total management outcomes 36(19.4%) of the patients discharged with unfavourable management outcome. Procedures used to terminate the pregnancy AOR=3.5, 95% (1.1, 10.5), gestational age at which abortion occurs AOR= 3, 95% (1.2, 7.6) and delayed seeking of medical help AOR= 4, 95% (1.3, 11.9) were found to be significantly associated with unfavourable management outcome.

CONCLUSIONS/NEXT STEPS: High numbers of patients with abortion managed for abortion were resulted unfavourable management outcome. However, no death and sever complication recorded as the result of abortion management. Undergoing surgical abortion, gestational age of above 12 weeks and 'delay of more than 3 days to seek medical help are found to be vital factors associated with developing unfavourable outcome of abortion treatment. Medical management approach of abortion and health education for youth about danger of abortion should be strengthened. Key words: Abortion Management outcome Yirgalem hospital.

IAAH170762

Discontinuation rate of implanon and its associated factors among women who ever used implanon in Dale District, Southern Ethiopia,

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BACKGROUND: Early discontinuation of implanon contraceptive methods and reasons for such discontinuation remain a major concern for family planning programs. In less developed countries, contraceptive discontinuation due to health concerns are generally higher, these complaints are often related to service quality. In different countries significant number of women becomes exposed to conception after discontinuation and accidental pregnancies that end up in abortion & stillbirth.

METHODS: To assess discontinuation rate of implanon and identify its associated factors among women who ever used implanon in 2015/ 2016 in Dale district, Southern Ethiopia. Community based cross-sectional study design was conducted from January to February, 2017. A total number of 711 women who ever used implanon in 2015/2016 were selected using multistage sampling. Logistic regression analysis was used to determine the effect of factors on the outcome variables. Finally, the results were presented with adjusted odds ratio (AOR) & confidence interval of 95%.

RESULTS: The overall early implanon discontinuation rate in this study was 160 (23.4%) with mean duration of implanon use of 9.6±2.5 months. The main factors for discontinuation of implanon were women who didn't counselled about family planning methods (AOR= 2.77(CI 95%: 1.68- 4.58), women who didn't appointed for follow up (AOR= 2.58(CI 95%: 1.61-4.14), women who didn't satisfied by the service (AOR=2.55(CI 95%: 1.63-3.97) and women who didn't have information on family planning before implanon insertion (AOR= 1.66(CI 95%: 1.11-2.48) were the predictors of implanon discontinuation.

CONCLUSIONS/NEXT STEPS: Implanon discontinuation rate in this study area was high. Appropriate counselling will improve the continuation rate of implanon. Key words: Implanon, early discontinuation, Dale, Ethiopia.

IAAH170768

Novel collaborative approaches to screening young people for genital chlamydial infection

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BACKGROUND: Northern Sydney Local Health District (NSLHD) delivers health care to a population of 910,260 through six public hospitals and numerous ambulatory care clinics. Genital chlamydial infection is the most common notifiable sexually transmitted infection (STI) in Australia and youth is a major risk factor. Untreated infection can lead to complications including pelvic inflammatory disease, epididymo-orchitis and infertility. Young people are a priority population for screening within the New South Wales STI Strategy. Currently less than 10% of sexually active young Australians are tested for chlamydial infection.

DESCRIPTION: In youth services of NSLHD, routine psychosocial assessment occurs, identifying if a young person is sexually active. In order to increase screening, two collaborative partnerships were formed between youth health services and the sexual health service to offer routine, opportunistic and confidential screening to sexually active young people at three sites. The key ingredient in the partnership was the transfer of specimens to the sexual health service for confidential coding prior to testing in the laboratory, and the follow-up of results by the sexual health service, including treatment and contact tracing of sexual partner(s). One of the youth services for this screening is headspace - a national youth mental health foundation for young people aged 12-25 with two centres located within, and led by, NSLHD. Two physical sites were chosen for the project. The second partnership involved Royal North Shore Hospital Paediatric and Adolescent services, which admit approximately 4,500 children

and young people up to age 18 annually. Screening for genital chlamydial infection was offered to all eligible, admitted young people.

LESSONS LEARNED: Collaboration between the two departments enabled the strengths of each to facilitate increased screening for chlamydial infection. Staff in each department gained professionally from the collaborative interactions. In the early stages, when uptake of the offer of screening was low, modifications to simplify procedures, especially data collection, were required.

CONCLUSIONS/NEXT STEPS: So far, 111 specimens have been collected. Final analyses of the youth attending headspace clinics, and inpatients of the paediatric ward, will be conducted following 24 months of collection.

IAAH170771

Influence of lifestyle choices and health status of young females in Delhi

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BACKGROUND: Changing social and built environment together with increasing urbanization present numerous risks and challenges before adolescent's health and nutrition. There exists limited research on the association of life style patterns and health/nutritional status among adolescent girls in urban areas. The current study aims to understand 1) the pattern of lifestyle among young females; 2) factors determining lifestyle choices among young females; 3) association of lifestyle patterns and health/nutritional status.

METHODS: Primary data on 300 young females (15-19 years) was collected from selected urban environs in Delhi using multi stage stratified sampling design. Detailed information related to household characteristics, demographic and social characteristics, physical activity, dietary patterns, leisure time activities and anthropometric characteristics of young females were collected. Appropriate Univariate (frequency distribution), bivariate (cross tabulations) and multivariate statistics (multiple linear regression models; adjusted logistic regression model) have been applied to achieve the objectives of the present study. Chi-square test and ANOVA test was also used.

RESULTS: Data suggests marked demographic and socioeconomic differentials in lifestyle patterns of young females in Delhi. Close to one-fifth of young females were indulged into substance abuse. Physical activity was negatively associated with BMI among young females. Consumption of fast food and eating desert were positively associated with BMI.

CONCLUSIONS/NEXT STEPS: There is a need to increase more nutritional counselling on healthy eating habits in school and thus to take appropriate interventions to improve the nutritional status of adolescent of girls. So, therefore, it is important to be aware of decision with regards to lifestyle choices and must have a separate program as related to education curriculum and also at the community level.

IAAH170776

Menstruation Hygiene and Health Education: Keeping Girls in School in Wakiso District.

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BACKGROUND: For many girls in Uganda, life stops when they get their period. Girls in rural Uganda miss up to eight days of study each school term because they are in their periods, a study of menstrual management in Uganda found. This was due to lack of washrooms, lack of sanitary pads and bullying by peers. The eight days on average translates into 11% of the total learning days in a year. It's a school absence rate that is hard for the girl to make up for and partly accounts for girls dropping out of high school.

METHODS: A school based cross-sectional study design was conducted in selected primary and secondary schools in Wakiso District, Uganda. The project was aimed at increasing awareness and improving Menstrual Hygiene Management (MHM) among school going adolescent girls through improved access to water, sanitation and hygiene facilities within the schools. Data were analyzed statistically by simple proportions.

RESULTS: A total of 4484 students from 5 schools were reached through sensitization trainings on MHM, good hygiene and sanitation practices through formation of 5 sanitation health clubs. Both girls and boys were empowered

with MHM information which included information on female menstrual life cycle, understanding their days (monitoring their circle), Phases of the menstrual cycle (ovulation cycle), menstrual hygiene and how to manage menstrual cramps, Proper use of the different MHM products including disposal pads, reusable pads, menstrual cups, cotton cloth, and many more other products was imparted. 300 reusable pads and 20 menstrual cups were distributed to most needy adolescent girls, 10 teachers trained from the respective schools. 2887 students benefitted from 10 hand washing facilities, 5000 litre water harvesting tank and 25 talking compound messages on MHM, good hygiene and sanitation practices that were installed in the schools.

CONCLUSIONS/NEXT STEPS: An enabling environment has to be created to provide school girls with hygienic sanitary wears and private space to manage their menstrual health. This can be done by providing adequate improved school WASH facilities including MHM facilities of 'acceptable quality and quantity including availability of water for personal hygiene and for washing re-usable sanitary changing/resting room, latrines, emergency sanitary protection materials and disposal units.

IAAH170778

Understanding use and non-use of family planning services among young married women in India

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BACKGROUND: In India, both early marriage and motherhood still place adolescents and their children at a great disadvantage. In 2015-16, one-fourth of women aged 20-24 were married before age 18 year and about 10% of women aged 15-19 were already mother or pregnant. Delayed first birth among adolescents is a central mechanism to a healthy and productive life ahead. Hence, understanding the family planning situation among women adolescent is critical. The present study aims to understand various issues related to family planning among Indian married women aged 15-19 years.

METHODS: This study used data from fourth round of the district level household survey (DLHS-4) conducted in India during 2012-13. The DLHS is household based survey which provides information on key reproductive and child health indicators in India at district level. We focused on use of modern contraceptive (mCPR), level of discontinuation and its reasons and reasons for non-use of family planning services among currently married women aged 15-19 years. Bivariate and multivariate analysis is used in the study.

RESULTS: Preliminary finding shows that only 11 % of women aged 15-19 were using any modern contraceptives at the time of survey. This compares with just one-fifth of the total mCPR in the country. Adolescent were primarily using condoms and pills. A stark geographical variation exists in use of family planning services among the adolescents – it was 3 % in Karnataka to 37 % in Andhra Pradesh. Among the non-users, main reason for not using a modern method was fear of side-effects, health concerns and opposition from family. Importantly, opposition from husbands was significantly higher among the adolescent than older women.

CONCLUSIONS/NEXT STEPS: Finding suggests that opposition from husband is the main reason for non-use of family planning services among the Indian adolescent. Hence, ongoing program should be focused on couple counselling and husband involvement to uptake family planning use among young Indian women. This is important to achieve Sustainable Development Goals (SDG) 3.7 which calls for universal access to family planning services to ensure healthy lives and well-being. This is also imperative in save lives of the mother and their newborn.

IAAH170784

Female Literacy Rate by State with its Respective Maternal and Child Health Indicators Comparison Study

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BACKGROUND: Maternal and child health is one of the greatest challenges developing countries face today. This has spurred a global healthcare movement aiming to protect the new mothers and children. The Indian government in particular has invested several resources geared towards improving the state of maternal and child healthcare in the country.

METHODS: The objective of this study is to compare the socio-development index of females in each state with its respective maternal and child health indicators. Data was collected from official government documents of the National Family Health Survey, India Census 2011, and the National Sample Survey Office.

RESULTS: A correlation was found between female literacy and the four maternal and child health indicators: the percent of mothers who received full antenatal care, mothers who received postnatal care from a health personnel within two days of delivery, children age 12-23 months fully immunized (BCG, measles, and three doses each of polio and DPT), and children age 6-23 months receiving an adequate diet. The findings show that as female literacy has increased, maternal and child health has significantly improved.

CONCLUSIONS/NEXT STEPS: This correlation concludes that only health improvement is not enough to invest in for developing governments. In order to see heightened improvements in maternal and child healthcare, the focus should also be geared towards increasing female literacy. In general, more resources should be used in promoting female empowerment alongside maternal and child health in order to improve maternal healthcare overall.

IAAH170785

Adolescents Risk Factors for Health and Social Problems in Mumbai, India: A Cross National Comparison with Australia and United States.

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BACKGROUND: This cohort study was set up to identify modifiable risk and protective factors that could improve the lives of young people in Mumbai, India. It has a cross-national components as it uses a similar design, survey instrument and methodology to studies done in the USA and Australia. The study aims to determine whether or not students in Victoria State, Australia, Washington State in US and Mumbai city in India report similar healthy and problem behaviours, and whether similar risk and protective factors are predictive of the development of these behaviours.

METHODS: The cohort was recruited by randomly sampling Mumbai schools with students in Grades 5, 7 and 9 (average ages 10, 12 and 14). Students from randomly sampled grades were then invited to participate in a survey during the academic year 2010-2011 (N = 4,770). A sample of these students were then longitudinally followed and resurveyed from 2011-2012; 2012-2013; 2013-2014. The sample recruitment methods and survey instrument were designed to match a similar study that recruited students in the same grades in Washington State (United States of America, US) and Victoria Australia in 2002.

RESULTS: The findings reveal lower rates of alcohol use for students in the three grades in Mumbai, lower tobacco and illicit drug use in grades 7 and 9, but similar rates of tobacco and illicit drug use in grade 5. Rates of some antisocial behaviour were higher in the grade 5 Mumbai cohorts and depressive symptoms were higher for all the Mumbai cohorts. The prevalence of risk factors were similar across the 3 nations.

CONCLUSIONS/NEXT STEPS: Based on the evidence that associations show cross-national similarities, prevention science interventions developed in the US and Australia will be implemented and evaluated in India in the developing world context.

IAAH170789

Safe and Legal Abortion – Challenges for young women in India

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BACKGROUND: In India, young women face social, economic, and health system barriers in accessing sexual and reproductive health services, including safe abortion services. Social stigma, judgmental attitude of providers, lack of knowledge, and paucity of accessible and trained providers leads women to seek these services from convenient but unskilled providers resulting in maternal deaths, especially among women in the age of 15-24 years accounting for 41% of maternal deaths.

DESCRIPTION: In Jharkhand, Ipas Development Foundation (IDF), works in two blocks to strengthen knowledge, awareness, and access among young

women on sexual and reproductive health (SRH) services including safe abortion services. Using a youth-focused communication intervention, co-designed and implemented by young women from the community, their knowledge on SRH is being strengthened. Providers in the project area have been sensitized for providing youth friendly services. The community health intermediaries are oriented to provide women information and referrals on SRH services and safe abortions services. As a part of the intervention, IDF working closely with five health care facilities both public and private having trained 21 doctors to ensure high quality of comprehensive abortion care (CAC) services. Till date, these sites have provided SRH services and safe abortion services to 2000 women. Through a cadre of youth leaders, IDF has reached 20,000 women providing information on SRH issues, including safe and legal abortion services.

LESSONS LEARNED: A youth-focused communication strategy, is vital to strengthen women's knowledge and uptake of SRH and safe abortion services. Another key lesson learnt is the involvement of community health intermediaries from the planning phase to provide accurate information is critical to better outcomes including establishing linkages between women and health facilities. Engaging the community helps in the smooth roll out of the intervention and creates awareness in the community on key issues.

CONCLUSIONS/NEXT STEPS: Lack access and knowledge of SRH and safe abortion services pushes women to unsafe providers resulting in injuries and deaths. A youth centric intervention is effective for increasing women's control over their health. In the coming years, IDF intends to make the model scalable to strengthen women's knowledge, and ability to access SRH and safe abortion services.

IAAH170798

Menstrual Hygiene Practices: A cross-sectional study among school-going adolescent girls in Mulshi Block of Pune District

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BACKGROUND: Menstrual hygiene, an important under-recognized public health issue includes use of most suitable menstrual absorbent, adequate washing and cleaning of genital area, timely change of absorbent and appropriate disposal of the waste. These practices vary with socio-economic and geographic factors, making it important to understand them. To study the utilization and waste disposal practices of menstruation absorbents among school-going adolescent girls and the factors influencing the utilization and disposal of menstruation absorbents.

METHODS: A cross-sectional descriptive study in 11 schools from 8 villages were purposively selected in the Symbiosis International University catchment area. 375 adolescent girls between 11-19 years who had attained menarche self-administered a questionnaire. A hygiene score was calculated and categorized into 4 levels- good, average, poor, and very poor. Ethical clearance was obtained from IEC of IIPHG and SIU.

RESULTS: The mean age of the participants was 14.62 ± 1.30 years. 89.1% were Hindu followed by Buddh, and Muslim. A majority of 80.8% of girls had attained menarche during mid-adolescence with mean age at menarche being 13.31 ± 0.943 years. Almost half (54.7%) of the girls did not know about menstruation before menarche. Mothers were the first source of information at menarche for 83.3% of the girls, followed by grandmothers and sisters. Nearly half (45.3%) of the girls used sanitary napkins. Lack of awareness and disposal problem were the major reasons for not using sanitary napkins. Average hygiene level was found among 65% girls, followed by poor (29.8%), good (3.1%), and very poor (1.6%). 30.6 % missed school during menses with the major reason being pain and discomfort (43%).

CONCLUSIONS/NEXT STEPS: Overall, majority of the girls had an average level of hygiene with most of the girls using cloth having a poor level of hygiene. Awkwardness, pain and discomfort, and lack of facilities for disposal can be seen as major challenges. None of the girls using cloth as absorbent had good hygiene level. More awareness has to be generated regarding use of absorbents and facilities made available for appropriate disposal.

IAAH170810

A descriptive study to assess the resilience and life satisfaction of novice nursing student of a selected nursing college of West Bengal, India.

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BACKGROUND: Developing sound resilience power and fulfilling life satisfaction is essential for novice nursing students to pursue and reach their

goals in professional, family and personal life. Existing literature has shown that both resilience and life satisfaction aid in handling stress. Stress increases the risk of rumination and/or worry especially in females and they are more empathetic than other healthcare students. Additionally, optimism is linked to higher life satisfaction, whereas pessimism is related to symptoms in depression. The present study aimed to assess the resilience and life satisfaction among novice nursing students and to find the demographic associates.

METHODS: A descriptive survey was conducted at the nursing college of West Bengal, India. Total 56 numbers of B.Sc. Nursing students studying first year were selected using convenience sampling for the study. Structured socio-demographic performa and standardized Connor Davidson Resilience Scale (CD-RISC) and Brief Multidimensional Life Satisfaction Scale (BMLSS) were used to collect data on resilience and life satisfaction among nursing students.

RESULTS: Data were analyzed with descriptive statistics, Chi square and Pearson's correlation test by using SPSS version 16.0. The nursing student (56) reported mainly resilience level (64.9 ± 10.68) and life satisfaction level (22.3 ± 5.46). Resilience is positively correlated ($r = 0.98$) with level of life satisfaction.

CONCLUSIONS/NEXT STEPS: The present study finding suggests for the need of improved resilience & life satisfaction for better life management of student nurses.

IAAH170814

Removing Blinders: Including Long-Acting Reversible Contraceptives as an Option for Youth

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BACKGROUND: Young people comprise a sizeable proportion of the world's population, and continue to grow in some regions, including Sub-Saharan Africa. Unintended pregnancy among youth is a global public health issue among younger women who lack contraceptive knowledge and access to services. Long-acting contraceptive methods (LARCs) such as the implant and intrauterine device (IUD), are highly effective and safe for all women, yet are rarely considered acceptable for/by youth (15 to 24 year-olds), especially if unmarried or nulliparous. The Health Communication Capacity Collaborative (HC3) project assessed the barriers to youth LARC uptake and used the results to create adaptable social and behaviour change communication (SBCC) tools to address this status.

DESCRIPTION: The SBCC tools include a series of six posters for youth, a video and discussion guide for providers, and a client pamphlet. The materials aim to mainstream LARCs as an option for youth by generating curiosity and demand among young women and couples, and encouraging youth-centred, LARC-first and LARC-inclusive youth contraceptive counselling from providers. The materials' editable Microsoft Word, InDesign and mp4 files have been shared with requesting organizations in more than 20 countries, most of which are in Sub-Saharan Africa.

LESSONS LEARNED: The biggest lesson learned was that such materials are unique and in high demand. The original materials were only available in English. Due to the general lack of French-language resources, and because nearly 25% of requesting countries were francophone, HC3 facilitated the materials' French translation. We also learned that sharing files via InDesign posed challenges for some organizations that did not have this software package.

CONCLUSIONS/NEXT STEPS: Providers and youth benefit from eye-catching, educational and engaging SBCC materials that correct LARC misconceptions and biases and increase knowledge of the benefits of LARC for youth clients. These materials addressed a significant gap in youth contraceptive resources. Next steps include disseminating the French LARC resources more broadly, and pairing this material suite with another HC3 youth/LARC activity: FP IN Focus - a youth-driven, video-based, demand generation tool designed to reach youth where they are - on their mobile phones - with LARC information (corresponding FP IN Focus abstract also submitted).

IAAH170816

Shifting the power: Using community mobilization approaches to increase uptake of social reproductive health services among adolescent girls in Narok County, Kenya

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BACKGROUND: Women and adolescent girls in Narok County of Kenya face numerous negative social gender norms such as female genital mutilation (FGM) and early childhood marriages that limit their control over their own health seeking behaviours, resulting in lower utilization of reproductive and adolescent health services. These harmful social norms are predicated around unequal power dynamics between men and women hence suppressing women's voices. This power inequality has resulted in 78% of women in Narok County to undergo FGM with early childhood marriages contributing to 40% of adolescent pregnancies against 18% of adolescent pregnancies in Kenya. Harmful social norms therefore pose a big obstacle for adolescent girls as a result of gender inequality, male dominance and poor health seeking behaviour.

DESCRIPTION: Intervention SASA is a community approach that challenges the power inequalities from harmful social norms that portray men as more powerful than women. It aims at changing the community's perceptions to power so that there is a shift in power to women and adolescent girls in order to make better health seeking behaviour decisions. This is achieved through increased public awareness on harmful effects of negative social norms, empowerment of women to adopt better health seeking behaviours and involvement of men to be more supportive of their spouses and daughters in seeking health services. Results Through the SASA approach, there has been marked increase in demand for SRH services by adolescent girls and women, male accompanying their spouses to health facilities has also increased with more men setting aside resources for their spouses to seek services such as antenatal care and skilled deliveries.

LESSONS LEARNED: Through the SASA community dialogues more women have been empowered to adopt positive health seeking behaviours as observed in increase in uptake of ANC and FP services in the graph above. Their male spouses have demonstrated greater motivation and value in supporting their women.

CONCLUSIONS/NEXT STEPS: Integrating greater male involvement through the SASA approach by having male SASA activists and using the approach as a tool for lobbying and advocacy for improved service delivery in health.

Non-Communicable Disease

IAAH170011

A systematic review of prevalence of cardiovascular disease risk factors among adolescents: implication for localized CVD prevention among youth

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BACKGROUND: Cardiovascular disease (CVD) is prevalent in adults but its risk factors are usually established in childhood and adolescence. There is therefore the need to assess adolescents cardiovascular health in order to develop effective programs to prevent cardiovascular diseases. The objectives of the review were to identify and critically appraise literature on modifiable risk factors among adolescents, determine their prevalence as well as identify questionnaires used for assessing lifestyle CVD risk factors in the studies included.

METHODS: A comprehensive search was conducted in bibliographic databases available via the Stellenbosch University's library in October and November, 2014. Descriptive and cross sectional studies reporting on prevalence of one or more modifiable CVD risk factors among adolescents were included. Data extracted were entered into Microsoft (MS) Excel spreadsheets. The data could not be pooled together for meta-analysis because of the wide variation of data therefore the result of the review is presented in a narrative form

RESULTS: Fifteen studies were included in this review. Majority of the studies were from developed countries. The combined age range was 9-20 years. There was high prevalence of modifiable CVD risk factors across the countries. European countries showed high prevalence of smoking among adolescents. The prevalence of dyslipidemia ranged from 2.5% of total cholesterol in rural Iran adolescents (n:12) to 48.9% high TG in rural Mexican adolescents. Overweight and obesity prevalence ranged from 0.6% prevalence in an age (10 yrs) of a study(n:12) to 48.7% in another study (n:7). Studies from the US showed a decreasing trend in pre hypertension and hypertension, overweight and obesity. Few studies identified questionnaires used in assessing lifestyle CVD risk factors but only one study reported its psychometric properties.

CONCLUSIONS/NEXT STEPS: This review found a widely varied prevalence of CVD risk factors among adolescents across countries, while US shows a decreasing trend in the last few years, some countries prevalence are very high and there are no data on CVD risk factors trend among adolescents in most of the developing and developed countries. Studies on adolescents' cardiovascular health are sparse particularly in developing countries and there are no national studies on adolescents cardiovascular health in Africa.

IAAH170052

A study on the perceived stress and coping behaviours amongst Indian adolescents with chronic kidney diseases

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BACKGROUND: Chronic Kidney Diseases (CKDs) are fast becoming an emergent issue of adolescent health, adding themselves to the existent burden of non-communicable diseases. CKDs are estimated to affect almost 11% of the Indian population. Acknowledging the presence of CKDs amongst adolescents and the provisioning of adequate tertiary preventive efforts is essential in order to eventually influence the treatment outcome. This is important as the chronicity of the disease has been associated with a poorer prognosis due to high treatment costs. Hence, the objective of the study was to explore factors which contribute to the perceived stress and the coping mechanisms used by Indian adolescents living with CKDs.

METHODS: A qualitative research study situated in a constructivist paradigm was conducted. A guided interview schedule was used to conduct in-depth interviews of seven study participants within the ages of 10-19 years with a diagnosis of CKD from West Bengal. The data generated was transcribed, coded and analysed thematically.

RESULTS: The findings indicated that adolescents with CKDs identified the following as potential stressors: individual experiences of the disease diagnosis, doctor's visitation, adherence to treatment regimens and chronicity of the disease. Being members of a peer support group, more information seeking and peer avoidance in specific contexts were the commonly used coping mechanisms identified by the respondents.

CONCLUSIONS/NEXT STEPS: The absence of a large scale screening program within India seems to result in a delayed diagnosis. The findings describe an in-depth understanding of the stressors involved and resultant coping mechanisms amongst adolescents with CKDs. The findings help in identifying palliative treatment approaches that can serve adolescents with CKDs in policy outcomes.

IAAH170060

Tobacco use among adolescents entering Québec Youth Protection Centers

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BACKGROUND: Every year about 5000 adolescents enter Quebec Youth Protection Centers (YPCs) either for their protection or because of behavioral problems. This study evaluated health risk behaviours of adolescents entering these institutions in order to adapt and provide appropriate medical and psychosocial services for them.

METHODS: In 2009, adolescents aged 14 to 17 living in six Quebec YPCs were recruited. Data on substance use, sexual risk behaviors and related health consequences were obtained during structured face-to-face interviews. Logistic regression analyses were carried out to identify factors associated with daily tobacco use.

RESULTS: Among 499 participants (boys: 59%; median age: boys: 16, girls: 15) 91% reported lifetime tobacco use, and 65% reported using tobacco daily in the year prior to admission. In univariate analyses, factors significantly ($p < 0.05$) associated with daily smoking were: history of regular use (3x a week+) of alcohol (31% daily vs. 11% non-daily smokers), cannabis (78% vs. 36%) or other drugs (43% vs. 13%) during the last year; school delay or dropping out (48% vs. 34%); and family history of problematic alcohol or drug use (84% vs. 71%). Many sexual risks were also associated with daily smoking: first sexual relation under age 14 (36% vs. 26%); having 6 or more lifetime sexual partners (55% vs. 36%); engaging in group sex (43% vs. 26%) and having a history of pregnancy (30% vs. 16%).

CONCLUSIONS/NEXT STEPS: Daily tobacco use is very prevalent among youth entering YPCs and is associated with problematic use of several other psychotropic substances. Daily smokers also reported many risky sexual behaviours leading to significant health consequences. Following this study, measures were taken to develop and implement a plan to increase tobacco and substance use screening and provide appropriate counseling and referral for all youth entering care. As well, public health policies were adopted to create smoke-free environments in all child protection centers across Quebec.

IAAH170113

Epidemiological and clinic-pathological evaluation of cancers among adolescents from regional cancer centre, Allahabad, India

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BACKGROUND: Adolescence begins with the onset of physiologically normal puberty, and ends when an adult identity and behavior are accepted. This period of development corresponds roughly to the period between the ages of 10 and 19 years, which is consistent with the World Health Organization's definition of adolescence. Cancer is not common in teens, but a variety of cancer types can occur in this age group, and treating these cancers can be challenging for a number of reasons. Our objective was to analyze the cancer trends, sex ratio, and histology in adolescent population.

METHODS: This study is a retrospective study conducted in the Department of Radiation Oncology, Regional Cancer Centre, Kamala Nehru Memorial Hospital, Allahabad, which caters to the patients attending and referred from periphery to the hospital for cancer management and care. The records of all the malignancies diagnosed histo-pathologically in the age group 10-19 years during a period of 2-year from January 2013 to January 2015 were retrieved and analyzed.

RESULTS: A total of 9685 cases were registered during 2013-2015. Of these cases, 188 (1.9%) were in the age group of 10-19 years. Among them, males and females accounted for 63% and 37% respectively with 1.72:1 ratio. The malignancies were divided into hematological 39% and non-hematological malignancies 61%. The most common site involved in solid malignancies in

the age group 10-19 years were bone 25%, followed by CNS 15%, GIT 14% and HNC 14%. The most common histopathology encountered in hematological malignancies encountered were ALL 42%, followed by HL 33%.

CONCLUSIONS/NEXT STEPS: The current study is a single institution based study restricted by a small sample size and has several limitations. This study is an attempt to provide a complete spectrum of cancers in adolescent population diagnosed on histopathology. The spectrum of malignancies has a great regional variability owing to the environmental and genetic differences. More research in this field will help us understand the needs of this unique sub group of population of India.

IAAH170122

Adolescent cohorts assessing growth, cardiovascular and cognitive outcomes in low and middle income countries

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BACKGROUND: Life-course studies are needed to explore how exposures during adolescence, particularly puberty, contribute to later cardiovascular risk and cognitive health in low and middle-income countries (LMIC), where 90% of the world's young people live. The extent of any existing cohorts investigating these outcomes in LMIC has not previously been described.

METHODS: We performed a systematic literature review to identify population cohort studies of adolescents in LMIC that assessed anthropometry and any of cardiovascular risk (blood pressure, physical activity, plasma glucose/lipid profile and substance misuse), puberty (age at menarche, Tanner staging, or other form of pubertal staging) or cognitive outcomes. Studies that recruited participants on the basis of a pre-existing condition or involved less than 500 young people were excluded.

RESULTS: 1829 studies were identified, and 24 cohorts fulfilled inclusion criteria based in Asia (10), Africa (6) and South / Central America (8). 14 (58%) of cohorts identified were based in one of four countries; India, Brazil, Vietnam or Ethiopia. Only 2 cohorts included a comprehensive cardiovascular assessment, tanner pubertal staging, and cognitive outcomes.

CONCLUSIONS/NEXT STEPS: Improved utilization of existing datasets, and additional cohort studies of adolescents in LMIC that collect contemporaneous measures of growth, cognition, cardiovascular risk and pubertal development, are needed to better understand how this period of the life course influences future non-communicable disease morbidity and cognitive outcomes.

IAAH170159

In-school tobacco control leadership program

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BACKGROUND: India is experiencing an epidemic of tobacco use. Children in India are particularly vulnerable. Every 16 seconds, a child in India tries tobacco for the first time. Children growing up in Mumbai's slums live in conditions of extreme poverty and deprivation. Given these ground realities, in 2002, Salaam Bombay Foundation began working with the Mumbai demographic which is the most risk-prone towards tobacco use – slum children in Mumbai's municipal schools.

DESCRIPTION: 3 year In-School Leadership Programme has been designed to build awareness of tobacco's harmful effects, develop life skills needed to refuse tobacco and empower students to become advocates for change in their communities. Students in Mumbai's municipal schools are enrolled in the 7th grade. The programme begins by building awareness about tobacco: the different types of tobacco products, the health consequences of tobacco use, and India's tobacco control law. In the second phase of the programme, students learn important advocacy skills and engage directly with relevant stakeholders.

LESSONS LEARNED: The combined strategies of building students' life skills, providing opportunities for advocacy efforts, changing social norms, and engaging students in their broader communities are central to this tobacco use

prevention program. Working closely with the government educational structures to embed these interventions in local infrastructures have helped in amplifying the reach of the program. It has been observed that the program has additionally resulted in improved perceptions of one's life prospects and self-efficacy, and increased actions taken to prevent tobacco use among others.

CONCLUSIONS/NEXT STEPS: This is the first large scale school-based tobacco control advocacy program in Maharashtra. The schools have been supportive for advocacy education and this intervention has had a significant impact on students' becoming advocates for a tobacco-free society. Considering the fact that advocacy by children shows impact, future advocacy activities will be strategized for and by the children of the committee, hence further allowing them to become change agents in the community.

IAAH170175

Knowledge attitude and practice toward carbonated soft drink among nursing students in rims Imphal

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BACKGROUND: Many carbonated soft drinks are optionally available in versions sweetened with sugars or with non-caloric sweeteners. The excess consumption of these carbonated beverages is creating havoc in teenage population as it contains no essential nutrients and harms their general as well as oral health. Consumption of these drinks has markedly increased among younger population in spite of its ill effect and many people are not aware of it.

METHODS: A cross-sectional study was done from 19th October to 15th November, 2016, among nursing students of RIMS Imphal, Manipur. A self-administered questionnaire was used to collect the data and analysed using SPSS-version-21. Descriptive statistics like percentage, mean and standard deviation were used. Chi-square test was used to assess the association between background characteristics and knowledge, attitude and practice towards carbonated soft drinks. A p-value of <0.05 was taken as significant. Objectives: To determine the knowledge, attitude and practices towards soft drinks among BSc. Nursing students of College of Nursing, RIMS, Imphal.

RESULTS: Out of 184 respondents, 4 were males and the mean age is 20.41±1.36 and majority of them heard about carbonated soft drinks. 3/4th of the participants were found to be adequate knowledge. 1/3rd of the participants had favorable attitude towards carbonated soft drinks.

CONCLUSIONS/NEXT STEPS: There was no significant association between frequency of carbonated soft drinks consumption and knowledge on carbonated soft drinks as well as attitude towards carbonated soft drink. However, there was significant association between academic year of participants and their knowledge regarding carbonated soft drinks.

IAAH170186

Risk of diabetes and hypertension among adolescent in Shimla district of Himachal Pradesh

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¹*MAMTA HIMC*

BACKGROUND: The adolescent population is largely believed as beyond the ambit of non-communicable diseases (NCDs). Even, the National Programme for Prevention and Control of Cancer, Diabetes, Cardio-vascular Disease and Stroke does not consider adolescent at the risk of NCDs. However, studies have shown that non-modifiable risk factors for NCD start at relatively early age which may lead to disease conditions. In this context, the present study aims to recognize risk of NCDs (diabetes and hypertension) among adolescents in two selected blocks of Shimla district of Himachal Pradesh in India namely, Mashobra and Theog.

DESCRIPTION: The present study uses the data of adolescent in the age the group of 15-19 only from the ongoing Health Rise project supported by Abt Associates and funded by Medtronic. In the Project, camp based approach is applied to screen the population in the age group of 15-70, after community mobilization. The screening for diabetes and hypertension is carried to identify suspected cases; if the random blood sugar (RBS) is ≥140 and blood pressure value is ≥ 140/90 respectively. Also, suspected cases are counseled and followed-up to visit the higher health facility for confirmatory test and disease management if found positive for either of the diseases.

LESSONS LEARNED: The findings, so far, indicate that there are 12.5% adolescent (772) in total screened population (6144) with 47% and 53% male and female respectively. During screening, 4.3% adolescent found suspected for either diabetes or hypertension. After the intensive follow-up, 30.30% cases turned to the health facility after first counseling at the camp. Thereafter, 6.06%, 15.15% and 18.18% suspected cases reached to the health facility after first, second and third follow-ups. We found that intensive follow-up and counseling increases the turn-out for confirmatory test. Seven in ten adolescent reached to the higher health facility for confirmatory test and turned out to be negative for NCD.

CONCLUSIONS/NEXT STEPS: In the study area, around 4.3% adolescent may be considered for high risk of acquiring either hypertension or diabetes and they require regular counseling for lifestyle modifications. The diagnosis and primary prevention of these adolescent is very important because they may develop the disease in the later ages.

IAAH170203

Prevalence of risk for a substance use disorder among adolescents in a south Indian population

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¹*Christian Medical College*

BACKGROUND: Substance use disorder is prevalent among adolescents in India. The prevalence rate varies from 34% among females and 43% among males conducted in other parts of the country. This study was conducted as there is no previous research in this area in this community. The aim of the study therefore was to determine: (1) the prevalence of Non-dependent patterns (NDP) of substance use and (2) the prevalence of dependence on any substance (DP).

METHODS: This cross sectional study was conducted during January 2015 to January 2016, among older adolescents in 4 colleges / universities from urban and semi-urban settings in Vellore. These colleges were run by either the Government or by private management. Data collection was carried out by a pediatric trainee (year 2 pediatric resident). Assessment of risk for NDP was carried out using the section on substance abuse in the YRBS questionnaire. Assessment of risk for DP was carried out using CRAFFT questionnaire with a diagnostic threshold score of ≥ 2. Prevalence of NDP and DP were analysed and expressed as percentages. Prevalence from the perspective of gender and number of years in college were also similarly expressed. Privacy and safety of data was maintained.

RESULTS: Prevalence of NDP was 30.9% (296/958) and DP 22.1% (105/497). NDP was 29.9% (286/810) among males and 0.9% (9/145) among females. DP was noted in 25.3% (98/388) of males and 7% (6/86) of females. Prevalence NDP was the highest among first year students in college. Prevalence declined with each passing year of college from 13.5% to 0.5%. Prevalence of DP also demonstrated a similar decline after the first year into the college, from 8.9% to 0.2%.

CONCLUSIONS/NEXT STEPS: Prevalence of NDP was higher than that of DP. Our data will be compared with similar studies in India and abroad.

IAAH170204

Psychometric properties of the subsection on substance abuse in YRBS questionnaire, in diagnosing substance dependence

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BACKGROUND: Development of or adapting a questionnaire to measure substance dependence (SD) needs further exploration of the psychometric properties in the studied community or cultural setting. YRBS is the questionnaire to screen adolescents with various health needs among this age group including substance abuse. This study evaluated the diagnostic accuracy and the different validities of the subsection on substance use of the YRBS questionnaire, in order to aid in the diagnosis of SD (substance dependence) in a primary care setting.

METHODS: This cross sectional validation study was conducted among university / college students of either gender from urban or semi urban settings. From the four colleges, 475 students were recruited for the study using convenient sampling. Diagnostic accuracy of subsection on substance use of

the YRBS questionnaire was established against the CRAFFT score of ≥ 2 . The face validity, content validity, construct validity and internal consistency were examined. The same rater administered the index measure of YRBS – SD, and the reference standard measure of CRAFFT. The overall diagnostic accuracy was analyzed using the receiver operating curve characteristics (ROC curve) and area under the curve (AUC). Diagnostic cut off value for YRBS – SD was arrived at based on sensitivity, specificity, predictive values. Internal consistency was measured using Cronbach's alpha and construct validity was evaluated using the principal component analysis. The study was approved by the Institutional review board. Privacy and safety of data was maintained.

RESULTS: AUC was 0.89, 95% CI (0.86-0.92); Z-21.83, $p=0.0001$. Cut off score for identifying SD in the YRBS – SD, using a cut-off of > 1 should be used (Sensitivity - 60%, Specificity- 94%). Internal consistency as measured by Cronbach's alpha was 0.77%. In the principal component analysis, we derived a 2-factor structure which explained cumulatively 65% of variance.

CONCLUSIONS/NEXT STEPS: We have established the diagnostic accuracy and the cut off scores for the commonly used YRBS – SD as a measure for identification of substance use disorder. This measure can now be used a diagnostic measure for SD.

IAAH170205

Predictive factors for substance dependence among adolescents in a south Indian population

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BACKGROUND: The prevalence of substance dependence among adolescents, using different measures was 21-30.9%, in a south Indian population. The predictive factors associated with this high prevalence of substance dependence (SD) among adolescents were studied. The aim of the study was to identify the protective and risk factors associated with adolescent substance dependence that might be either modifiable or unmodifiable.

METHODS: This cross sectional study among university students enrolled in four colleges in urban and semi urban regions, was conducted between January 2015-16. The dependent variable was the presence or absence of substance dependence. It was assessed against the independent variables of age, gender, year at college, course they were studying, father's education, mother's education, father's occupation, mother's occupation, family income, current use of a substance by a family member. Univariate logistic regression and binary logistic regression using the dichotomous dependent variable and the above mentioned independent variables were carried out. Constant was included in all the regression analysis. SPSS software was used and all p values <0.05 (2 tailed) were considered significant. The institutional IRB approved this study as proposed. Privacy and safety of data was maintained.

RESULTS: Both in the univariate and in the multivariate logistic regression analysis, age of the adolescent if higher (OR=1.49; $p=0.002$), the gender of the adolescent if male (OR=4.50; $p=0.001$), the presence of a family member currently using a substance (OR=5.30; $p=0.0001$) were demonstrated to be risk factors. Grade in the school board exit examinations if higher (OR=0.64; $p=0.009$), and employment of the mother if better (OR=0.84; $p=0.006$) were protective factors. Better employment of the father which was a significant protective factor in the univariate analysis (OR =0.82, $p=0.5$), lost its significance when adjusted for other variables.

CONCLUSIONS/NEXT STEPS: The risk factors and protective factors for substance dependence among older adolescents studying in universities, in a south Indian population were identified by this study. Preventive services for substance use disorders should weaken the risk factors and strengthen the protective factors whenever modifiable.

IAAH170240

Substance abuse among adolescents living in urban slums

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BACKGROUND: Christian Medical College, Vellore (CMC) is a tertiary care multispecialty hospital and teaching institution. Low cost effective care unit (LCECU) is a unit comprising experts in Community medicine and Family

medicine. As the name suggests LCECU provides affordable health care and caters to five urban slum regions in Vellore. Solvent abuse is a scourge of the urban poor in several countries in the world and is prevalent among adolescents in these regions. This study was undertaken to assess the magnitude of adolescent substance abuse in the urban slums in Vellore. The primary aim of this study is to assess prevalence and patterns of substance use among adolescents living in this region. The second aim is assess factors associated with substance use such as, socio-economic status, maternal and paternal substance use, age at initiation and educational status of the parents and participants.

METHODS: Based on a study done in Odisha, northern India, sample size was calculated as 272. Systematic random sampling will be followed. Informed consent will be obtained from participants ≥ 18 years and a verbal assent if they are < 18 years, along with informed consent from parent/guardian. A questionnaire has been developed from 2 validated adolescent questionnaires. Data collection will be done by direct interview by one of the investigators. Privacy will be ensured. Epi-data for data entry and SPSS software for analysis will be used. Detailed diagrammatic algorithm of the study numbered here as steps: 1) Study area – 5 urban areas covered by LCECU, CMC, Vellore; 2) Total number of households – 2400; 3) Sampling – systematic random sampling (every 8th house); 4) Study participants – male and female adolescents, 10-19 years; 5) Exclusion: 5a. who is unable to communicate due to physical/mental disability; 5b. Temporary resident; 6) Informed consent/Assent; 7) Direct interview using questionnaire; 8) Data entry using Epi-data software; 9) Analysis using SPSS Sample collection will be completed by the end of July, 2017. Analysis of data will be completed by the first week of August, 2017.

CONCLUSIONS/NEXT STEPS: Substance abuse in urban slums in Vellore is a new area for research. Results from this will enlighten us regarding burden of disease and to plan strategies to address it.

IAAH170266

Self-control - Importance in Prevention of NCD

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BACKGROUND: With the ongoing changes in sociocultural aspects in developed cities maintaining a healthy life style has posed a challenge to children as well as parents. Healthy life style is very important for prevention of NCD in adolescents. The ability to say "NO" is very important to promote physical activity, avoiding Junk food and prevention indulgence in tobacco and alcohol This study assesses perceived self-control in school children from Gurgaon, Northern India.

METHODS: Tool: Perceived Self Control (PSC) test by Humprey (1982) Higher the score more is the self-control. Reliability coefficient $i-.71$. four factors (a) Personal SC (b) Interpersonal SC (c) Self-Evaluation, (d) Consequential Thinking. Self filled questionnaire after explanation- Sample: 252 children from Gurgaon HES, Coed, English Medium School. Divided: Group I: 11 - 14 yrs; Group II: 15 - 17 years.

RESULTS: Age and gender: Boys: Gr: I>II: Personal SC .69 v/s 1.12 ($p=0.006$) Girls: Gr II>Gr I: Self-evaluation 1.18 v/s .72 ($p=0.005$) Analysis of sibling single child: Gr II>Gr I: Self- evaluation .60 v/s 1.21 ($p=0.014$); Gr II > Gr I: PSC 3.30 v/s 4.71 ($p=0.050$) with sibling: No difference. The means of sub—scores fall in the range of .71 to 4.46.

CONCLUSIONS/NEXT STEPS: This sample had good levels of perceived self-control which is a positive aspect and this should built upon by giving the life skill education so that they can translate this into actual practice to develop positive health behavior. The lower scores in the younger group can be attributed to their lesser cortical brain development. However since the predisposition to adult NCD begins unhealthy life style at this age and tracks into adulthood, it is important to focus on these young children and empower them with good self-control skills to overcome impulsive behaviour which is natural at this age. We do workshops on life skill education which enhance these skills.

IAAH170274

Awareness and education of prevention of NCD – working through school programs

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BACKGROUND: NCD prevention is very important in Adolescent age group as the unhealthy behaviours like eating unhealthy food, sedentary life style and indulgence in Tobacco and Alcohol which cause NCD begin in this age and track into adulthood. The mission of AACCI is promoting healthy life style for prevention of life style diseases.

DESCRIPTION: We have started a program to increase awareness and prevention of NCD in community and schools. We educate parents and other adults in the community, teachers and students in schools. We have created interactive modules that explain the importance of Healthy life style- importance of not skipping breakfast, eating healthy, physical activity, adequate sleep, adverse effects of excess social media and electronic gadgets. We also take the anthropometric measurements for BMI and waist/ hip ratio, BP and family history to screen for metabolic syndrome. High risk adolescents are referred for further evaluation. Their life style is surveyed through questionnaires and we share the results with the schools. We also educate parents and teachers explaining to them the need of healthy food at home and stopping aerated sugary drinks and High density, High salt, High sugar, High Fat food in school canteens.

LESSONS LEARNED: 1) Post work impact was seen both at home and school. The children start bringing healthy home cooked lunch boxes. Teacher's report children are more into the field playing games and are more alert. Some schools also reported the obese children were taking weight loss seriously. 2) Impact is also seen that the school administration understand the importance of having healthy food served in the school canteens and allowing children more time for physical activity. 3) Instead of just focusing on the adolescents themselves, roping in parents and teachers helps to reinforce our interventions at home and school as an ongoing exercise which benefit adolescents in the long term.

CONCLUSIONS/NEXT STEPS: We will continue this project and are now going forward with a Youth wing of AACCI to expand our Peer educator program for the various training modules and increasing our presence on social media which we have not done so far.

IAAH170399

Creating tobacco free educational institutions: Preventing young children from initiating tobacco

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BACKGROUND: The Global Youth Tobacco Survey conducted amongst the students in India by Govt of India, reveals that 14.6% of 13 –15 year students are using tobacco products in India. As per Section 6 of the Cigarettes and other Tobacco Products Act, 2003 (COTPA), there is a ban on the sale of tobacco to and by minors and prohibition on sale of tobacco products within 100 yards of educational institutions and mandatory signage should be displayed prominently near the main gate and on the boundary wall of the school/institute.

DESCRIPTION: To gauge public opinion regarding awareness of the law and implementation, we engaged with different key stakeholders in the state of Jammu & Kashmir in district administration, education department, health department, media, police department for sensitization and capacity building, awareness building campaigns and media advocacy.

LESSONS LEARNED: Several orders were issued directing all officials to implement COTPA section 6. As a result of which, 70% of educational institutes in J&K are tobacco free. Tobacco Free Educational Institutions signages are displayed near educational institutions. Advocacy efforts resulted in, Education Minister to launch Tobacco Free Educational Institutions to strengthen and sustain Tobacco Free Educational Institutions. An order was also issued by the J&K state board to introduce a complete chapter on the harmful effects of smoking tobacco in Urdu textbook of class. Director Education directed to all the Chief Education Officers and Zonal Education Officers to self-declare their institutes as tobacco free.

CONCLUSIONS/NEXT STEPS: There was a variance in the success and progress due to different socio-political and administrative factors. This also highlights the need for targeted interventions among youth in general and students in particular, especially given the marketing overdrive of the tobacco industry to promote the use of tobacco among youth. The achievements and challenges across the different settings helped in evolving best practices that are now being duplicated in other parts of the country.

IAAH170403

Prevalence of tobacco use amongst adolescents of 13-15 age group attending rural health training centre ,Sampatchak, Patna

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BACKGROUND: Tobacco use among adolescents is a part of the spectrum of deleterious health behaviours leading to acute and long term health problems. The diverse socio-economic, cultural and political milieu characterizing Indian states presents several challenges in delivery of health care services and organizing preventive programmes. While the traditional models of health care delivery have been found to be inadequate, there is a lack of new insight to appropriately manage the diseases of transition represented by high risk behaviours. Objective of the study was to find prevalence of tobacco use among 13-15 years of age of adolescents in Sampatchak.

METHODS: A cross sectional study was conducted among adolescents of age group 13-15years attending Rural Health Training Centre in Sampatchak , Patna by using pretested, self-administered questionnaire from October 2016 to December 2016. Out of 200 ,160 were responders. Out of 160, 123 were boys and 37 were girls. Data was analysed through Epi info 7 software

RESULTS: Point prevalence of tobacco use amongst 13-15 year old was 5.2%. Current tobacco use was predominantly a male feature and use of smokeless variety was more common. One third of current tobacco users (30.8%) purchased tobacco product in a store and one-fifth used it at home. Nearly half of the never smokers (43% to 54%) were exposed to tobacco smoke outside home and 83% supported a ban on smoking in public places. A male tobacco user was perceived to have more friends and was reported to make them look attractive.

CONCLUSIONS/NEXT STEPS: There is need for targeted and focused interventions by adopting a comprehensive approach. Anti-tobacco programmes should make inroads into rural areas. The focus in schools should be to make them tobacco-free. The school authorities should be included in stricter implementation and monitoring of the implementation of legislation. Regular and systematic education programmes catering to teachers, children and also their parents should be undertaken.

IAAH170404

Compliance with Uganda's new smoke-free law in hospitality venues: Challenges and opportunities from a civil society perspective

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BACKGROUND: Few African jurisdictions have implemented comprehensive smoke-free legislation, and where it does exist, compliance tends to be low. Since Civil Society Organizations (CSOs) are well placed to support compliance, we aimed to assess CSOs' perceptions in relation to Uganda's new smoke-free legislation, introduced as part of the 2015 Tobacco Control Act

METHODS: Key CSOs in Kampala were invited to take part in an interview. We conducted in-depth interviews with fourteen individuals holding CSO leadership positions. We used generic qualitative methods and qualitative description to analyse data.

RESULTS: Participants reported low compliance with the smoke-free law in hospitality venues, with on-site designated smoking areas and shisha use seen

as key issues. Contributing factors to non-compliance included low enforcement (and a perception that enforcement was unlikely), low public knowledge of the law, and limited implementation activities and resources. Opportunities for improving compliance included educating and sensitizing key stakeholders, including enforcement agencies, hospitality venues, and general public. A key challenge was tobacco industry interference, specifically, myths that smoke-free laws damaged hospitality businesses. Rigorous enactment of penalties and publicity of penalties were seen as important enforcement strategies. Civil society organizations saw their role as helping to implement the law, through public education, stakeholder engagement, and advocacy.

CONCLUSIONS/NEXT STEPS: Following smoke-free law implementation, timely and rigorous enforcement, and education for business owners and the public is critical to establish credibility and ensure compliance. The Ugandan government should move swiftly to establish a coordinated implementation and enforcement plan. Civil Society Organizations consider themselves as having a key role to play in promoting awareness of and compliance with smoke-free laws, therefore Governments could initiate activities to realize the potential offered by CSOs and coordinate sector activities to address the issues that these groups have identified as challenges in achieving 100% smoke-free hospitality venues.

IAAH170454

Integrating non communicable diseases with other health services for young people: Curbing a rising epidemic

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BACKGROUND: Noncommunicable diseases (NCDs), such as cardiovascular disease, cancer, and diabetes, are becoming the leading causes of death in many less developed countries (LDCs) today. The four key risk behaviors for the main NCDs—tobacco use, harmful use of alcohol, lack of exercise, and unhealthy diet—are all modifiable behaviors that are typically initiated or established in adolescence and young adulthood. Addressing these behaviors among youth not only helps them grow into healthier adults, it is also key to curbing a rising NCD epidemic in LDCs. Tackling these risk behaviors among youth requires broad-ranging multi-sectoral efforts. Within health care settings, one way to better reach youth with NCD services is to integrate them into existing sexual and reproductive health (SRH), HIV/AIDS, and maternal and child health (MCH) services, which are typically key entry points to the health system for young people.

DESCRIPTION: We conducted an extensive review of literature on integration of NCD services and other health services targeting young people to gain an understanding of its impact on efficiency, effectiveness, and cost-effectiveness of service delivery in different settings.

LESSONS LEARNED: We identified various success stories from different parts of the world that illustrate how integrating NCD services, particularly those targeted at prevention and early intervention, with other health services for young people can have a number of benefits. More young people can be reached with NCD services, limited resources can be pooled to gain cost and other efficiencies, and young people receive more comprehensive services that are essential for healthy growth and development.

CONCLUSIONS/NEXT STEPS: Although there is a growing number of cases showing successful integration results, more research is needed to identify which integration strategies have the most potential for improving efficiency and effectiveness of service delivery. There is an urgent need to raise awareness about NCDs and the potential benefits of service integration targeting youth, and to develop guidelines and operational plans for integrating NCD services with other health services targeting young people in LDCs. There is also a need to develop evaluation frameworks to assess complex, integrated programs, so the impacts of integrated services can be rigorously evaluated.

IAAH170497

Inclusion of Children and Youth in the NCD Agenda

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¹NCD Child

BACKGROUND: The WHO Global Action Plan for Prevention & Control of Non Communicable Disease (NCDs) agenda does not recognize the special needs of children and adolescents, nor the close relationship between maternal

and child survival, NCD prevention, universal health coverage and other population health priorities needed to help all young people live healthy and productive lives. NCD Child is a global advocacy coalition committed to inclusion of children and youth in the NCD Agenda, and inclusion of youth voice and a life-course approach for all who are living with or at risk for NCDs. To ensure inclusion of young people in national NCD plans, NCD Child launched a series of regional workshops to engage pediatricians, other civil society groups, young advocates, and government as champions for inclusion of children and young people in NCD plans.

DESCRIPTION: In collaboration with the AAP, the International Pediatric Association, and CLAN, an Australian NGO advocating for the rights of children with chronic health conditions, NCD Child sponsored a series of regional champions workshops for child health advocates to create and support country-level teams to address NCDs affecting children and youth in their country - with the long term outcome to increase dialogue and policy addressing in attention to the needs of children and young people living with or at risk for NCDs. Since 2015, regional workshops were held in Peru, India, Kenya, and Canada and workshops are planned for Europe and the Mediterranean in 2017.

LESSONS LEARNED: The workshops led to country teams and a network of 124 champions from 40 countries. Intermediate outcome include increased national pediatric society commitment to NCDs and new or advanced relationships between pediatric societies, government, CSOs and youth. NCD Child mini-grants have helped launch national plans, and we are monitoring the work of the country teams to facilitate learning and exchange between country teams. Specific examples of successful projects led by champions will be reviewed.

CONCLUSIONS/NEXT STEPS: The impact of country champions includes greater recognition and inclusion of adolescents' issues in national NCD plans and in WHO and UN accountability frameworks, leading to greater equity and to better health and health care for young people.

IAAH170511

Socioeconomic status and blood pressure correlates in female school age children and adolescents Inabakaliki, South-east Nigeria

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BACKGROUND: Modifiable behavioral risk profile has been shown to affect blood pressure profile in children and adolescents. A combination of these risk profile increases the risk of prehypertension and hypertension in adolescents. This study aims to determine the effect of parental socioeconomic status on blood pressure and its correlates in female school children and adolescents.

METHODS: Structured questionnaire was used to obtain information on socio-demographic profile of school age female children and adolescents, anthropometric variables including height, weight, Body Mass Index and Ponderal index were measured. Blood pressure of the respondents was measured on three occasions using the mercury sphygmomanometer. The respondents were drawn from schools in Abakaliki using a multi stage sampling technique. Data was analyzed using SPSS Version 20.0. Correlation and regression analysis were done for the dependent variables and Chi square was used to test the strength of association.

RESULTS: One thousand one hundred and fifty five female children and adolescents 6- 18 years enrolled for the study. The modal and median age was 12yrs. About 590 (51%) of the respondents were of low socioeconomic status while 334 (29%) and 231 (20%) belong to the upper and middle socioeconomic classes respectively. Twenty eight (2.4%) of the respondent were obese and all belong to the upper class. For the overweight girls, forty seven (54%) were of the upper class while 22(25.3%) belong to the lower class. A greater number 91(74.5%) of the underweight respondents were of the lower class. All anthropometric variables correlated positively with the socioeconomic status and blood pressure. Among the hypertensive, systolic hypertension was noted in 6(21%) and 17(58.6%) of the upper and lower classes respectively while 7(21%) of the upper class respondents and 22(66%) of the lower class respondents had diastolic hypertension P<0.01.

CONCLUSIONS/NEXT STEPS: Socioeconomic status affects blood pressure

profile and its correlates in female children and adolescents in Nigeria. Behavioral risk modification needs to be strengthened in the management of adolescent hypertension.

IAAH170524

Prevalence of alcohol consumption, tobacco (smoking) use among adolescents, and to evaluate the various factors potentially influencing these behaviors

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BACKGROUND: People are most likely to begin mis-using tobacco, alcohol, during adolescence and young adulthood. By the time they are seniors, almost 70% of high school students will have tried alcohol, and nearly 40% will have smoked a cigarette. Adolescents are “Biologically Wired” to seek new experiences and take risks, as well as to carve out their own identity. Trying these substances may fulfill all of these normal developmental drives, but in an unhealthy way that can have very serious long-term consequences. According to WHO, 67% of premature deaths and 33% of the disease burden among adults is due to behavioral patterns that emerge during adolescence. The aim of this study to assess the prevalence of alcohol consumption, tobacco (smoking) use among adolescents, and to evaluate the various factors potentially influencing these behaviors.

METHODS: This cross-sectional study was conducted from January to December 2016 among 400 adolescents (10–19 years old) studying in different schools in Gwalior township India. A Restructured and Pretested questionnaire were used for data collection. Participants’ alcohol consumption, smoking habits, tobacco and guttka chewing were explored. Prevalence of these habits in adolescent age group is assessed.

RESULTS: The prevalence of alcohol consumption, tobacco and Guttka chewing and smoking was found to occur in 4.5%, 9% and 5.8% of participants, respectively. The mean age of the participants’ first consumption of alcohol and tobacco use was reported to be approximately 17 and 11 years respectively. Most boys take cigarette 5-10 times in a day and since 2-3 years. They take alcohol 2-3 times in a month and since 1-2 years. Various factor associated with use these substances, are the desire for new experiences, an attempt to deal with problems or perform better in school, and simple peer pressure.

CONCLUSIONS/NEXT STEPS: There is need of healthy environment in school, counseling and health education is utmost importance. Counseling services should be provided in school. Open access to these substances should be restricted.

IAAH170535

Burden of cardiovascular diseases in India: An exploratory spatiotemporal analysis in India during 2004-2014

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BACKGROUND: The impact of CVDs on mortality, morbidity & economy is adverse and it is significantly increasing. So country households face poverty trap which recycles generation to generation although 90% CVDs are preventable. Indian literature underscores to explore the regional level CVD estimates up to now, thus this is the first study which has an overall objective to examine the morbidity burden of CVDs across regions during 2004-2014.

METHODS: NSS 60th (2004) & 71st (2014) round data on morbidity & health care were used. Total 87 NSS-regions were created by merging the districts according to agro-climatic & political characteristics. Moran’s I was used to examine the spatial dependence from 2004 to 2014 for the outcome as well as predictor variables. Univariate & Bivariate LISA cluster & significance map and were generated to explore the hot spots, cold spots & spatial outliers. OLS, SARM, panel regression models were also used to account for space across time and space-time both to explore the spatial determinants of morbidity burden of CVDs.

RESULTS: Drastic acceleration of CVD burden across regions as suggested

by LISA after a decadal change indicates that India is shifting to the final stage of epidemiological transition which is positively correlated with the demographic transition. Most of the southern regions are the hotspots of CVD burden. The proportion of Rich, 60+, urbanisation & divorced/widowed/separated has a positive impact on CVD burden but employment & literacy plays a protecting role across space & time.

CONCLUSIONS/NEXT STEPS: Quick & strict implementation of WHO’s ‘Best Buys’ interventions, like tax increase on alcohol and tobacco, bans on tobacco and alcohol advertising, promotion and sponsorship, health information and warnings, public awareness through mass media on diet and physical activity etc. at grass root level and also increase in employment and literacy is much needed.

IAAH170577

Building bridges between the two conventions: World Health Convention Framework on Tobacco Control and United Nations Convention on the Rights of the Child

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¹Tobacco free association of Zambia

BACKGROUND: The World Health Organization Framework Convention on Tobacco Control calls upon states to ensure that education, information, and public awareness concerning tobacco use and children are initiated and increased in countries. In order to address children and youth in tobacco issues, Zambia needs to look at tobacco policy issues from children’s perspective and build bridges between the two Conventions, the World Health Organization Framework Convention on Tobacco Control and the United Nations Convention on the Rights of the Child.

DESCRIPTION: Articles 17 and 24 of the Convention on Right of a Child emphasize child’s right to information in promoting their health, and assistance with practical application of knowledge. Article 17 emphasizes child’s right to information and materials from various national and international sources, especially those concerned with promoting social, spiritual, and moral well-being of the child, physical and mental health. Article 24 is based on child’s right to the highest attainable standard of health. This includes right to information, access to education, health issues, along with support in applying their knowledge in everyday life.

LESSONS LEARNED: Zambian children and youths have low awareness of the harms of both tobacco use and in non-smokers. Zambia has not established school curriculum on tobacco control and no awareness programs have been established in schools.

CONCLUSIONS/NEXT STEPS: Evidence-based practices regarding information and education of children on tobacco issues must be adopted widely. Information campaigns which focus on knowledge, attitudes and behaviors on focus target groups must be used, convey a clear message, ensure that it is suitable for children, should be a long-term and be both factually correct and relevant.

IAAH170598

Non-communicable diseases in children and adolescent in Zambia

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BACKGROUND: Non-Communicable Diseases (NCDs) have significant impact on children and youths. Approximately 1.2 million deaths from Non-Communicable Diseases occur each year in people under the age of 20 years. Children die from treatable Non- Communicable Diseases, including rheumatic heart disease, type-1 diabetes, asthma, and leukemia. For Zambia no data has been conducted, and there is little information of Non-Communicable Diseases.

DESCRIPTION: Zambia has partial implementation of both national and international agreements entered, to risk factors for Non-Communicable, such as tobacco control, alcohol regulation, and nutrition and essential medicines. This has resulted to poor policy direction and many companies are producing unhealthy foods that attract children. Many children and youth behaviors have led to adult Non- Communicable Diseases. Childhood exposure to tobacco use, alcohol and unhealthy processed foods have led to obesity, diabetes and malnutrition to long term impacts on health and development in children and adolescents.

LESSONS LEARNED: Zambia has inadequate diagnostic capacity, unaffordable interventions, and inadequate workforce which lead to unnecessary suffering, early mortality, and preventable disability for children and adolescents. Families in low communities cannot afford diagnosis, treatment, and have no access to medicines, pain management and palliative care.

CONCLUSIONS/NEXT STEPS: Non-Communicable Diseases is a growing epidemic in Zambia and should be given a priority in policy settings for Zambia. Children and adolescents require health care, education and social and community services specific to their needs. It is essential ensuring health care systems have adequate detection, treatment, and management services for children living with Non-Communicable Diseases. Investing in preventable and treatment for children and adolescents is an effective strategy for reducing the burden of NCDs, and addressing it throughout the life-course can reduce and improve lives of those living with illness.

IAAH170621

Prevalence of modifiable risk factors of NCDs in urban school going adolescents

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BACKGROUND: Non-communicable diseases (NCDs) are a group of gradually progressing, largely preventable diseases of long duration. They are currently the leading cause of preventable mortality and disability in the world. NCDs kill more than 36 million people each year. Nearly 80% of NCD deaths (29 million) occur in low and middle income countries. They share mainly 4 risk factors – tobacco use, physical inactivity, harmful use of alcohol and unhealthy diets.

METHODS: A school based cross-sectional study was conducted among 600 adolescents studying in class 8th-10th in schools of Mehrauli, New Delhi to find out the prevalence of modifiable risk factors of non-communicable diseases among urban school going adolescents. Information was collected with the help of a self-administered questionnaire. SPSS version 12.0 was used for data analysis.

RESULTS: 37% students were in class 8th, 32% were in class 9th and 31% were in class 10th. Among all the study subjects, 72.5% were boys and 27.5% were girls. Only 24.5% students were physically active. Among all, 75.2% and 76.3% of the study subjects had consumed soft drinks and fast food respectively. Only 4% of the study population consumed ≥ 5 servings of fruits & vegetables/day. Overall 23 (3.83%) students had smoked, 19 (3.17%) subjects had used smokeless form of tobacco and 18 subjects (3%) had ever consumed alcohol. 10.7% study subjects were found overweight/obese.

CONCLUSIONS/NEXT STEPS: Among both boys and girls, most common risk factor was dietary risk factor followed by physical inactivity and anthropometric risk factors.

IAAH170656

Factors associated with risk behavior for health in Belo Horizonte adolescents: A review of the cardiovascular risk study in adolescents-Erica

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BACKGROUND: Adolescence is an important moment for adopting new practices, behaviors and gaining autonomy, but it is also a period of exposure to various health risk situations (MALTA, 2016). Across the world, adolescents are considered a priority group for health promotion because of the behaviors that expose them to various health risk situations. Behaviors started in adolescence may present health risks, such as smoking, alcohol consumption, inadequate food, sedentary lifestyle and unprotected sex (WORLD HEALTH ORGANIZATION, 2008). The present study aims to investigate the frequency of health risky behavior among adolescents aged 12 to 17 years in the city of Belo Horizonte / MG.

METHODS: The research was part of the ERICA, a national multicenter study

aimed to identify risk factors for heart disease and insulin resistance markers (metabolic syndrome) among adolescents from different regions and in the country.

RESULTS: When analyzing the prevalence of health risky behavior, it was observed that almost all adolescents (99.2%) had inadequate eating habits. In 58% of them, inadequate physical activity was observed, 44% had an inadequate sleep pattern, 23% had obesity, 22.1% had used alcohol in the 30 days prior to the survey and 21.7% did not combine the use of a condom and a contraceptive pill at the last sexual intercourse. A lower prevalence was observed in relation to smoking (3.8%) and in relation to the non-use of the condom in the last relation (7.2%).

CONCLUSIONS/NEXT STEPS: The results evidenced the need for health promotion proposals that contemplate the multidimensionality of the adolescent as well as the social, economic and epidemiological conformations that significantly impact the health of adolescents and young people.

IAAH170674

Oral Cancer Awareness Programme in Indonesia: To Cease Betel Nuts Chewing Habit and Oral Cancer Early Detection

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BACKGROUND: Oral Cancer (OC) is ranked 6th most common cancer worldwide. This cancer defines as carcinoma develops in lips, mouth, and oropharyngeal area. One of risk factors of oral cancer has been strongly associated with betel nuts chewing. It has become our concern that Indonesia has high level of betel nuts users.

DESCRIPTION: To prevent and control oral cancer development, it is highly necessary to create "a national oral cancer awareness programme in Indonesia" which has not been provided yet by our government until now. The programme will include oral cancer early detection and a proper routine education using medical, cultural, and linguistic approaches. This program will engage local trained dentists, cultural experts and linguists.

LESSONS LEARNED: I conducted a cross sectional study done in 2016, based on questionnaires and oral examination, occurred in multiple geographical areas within five diverse provinces: West Java, Jakarta, West Papua, West Kalimantan and Banda Aceh in community health services, dental hospitals and selected villages. It was proven that people living in West Papua, West Kalimantan, and Banda Aceh who possess betel nuts chewing habit have a significant prevalence number of Oral pre-malignant diseases (OPMD). OPMD is a potential oral cancer developing disease. We found 51 (29,48%) out of 179 people in West Papua, 8 (11,32%) out of 88 people in West Kalimantan, and 10 (4,52%) out of 221 in Banda Aceh had OPMD respectively. This number is remarkably underestimated high and has potential to develop oral cancer in the future. Betel nuts chewing habit is a cultural and religious activity inherited throughout many centuries. It creates complicated issue as it is also believed can give many advantages in health and psychological shooting effect leads to addiction. However, this bad habit is in urge stage to be ceased with education so to decrease mortality and morbidity rates among Indonesian due to oral cancer.

CONCLUSIONS/NEXT STEPS: Our next step as part of oral cancer awareness programme is to train more local dentists using WHO standardised training of oral cancer early detection and together with cultural experts and linguists will give oral cancer risks education using the most adaptable oral-visual education techniques.

IAAH170677

Oral cancer awareness programme in Indonesia: To cease betel nuts chewing habit and detect oral cancer early

Elizabeth Sari¹, Michael McCullough¹, Nicolacirillo¹

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BACKGROUND: Oral Cancer (OC) is ranked 6th most common cancer worldwide. This cancer defines as carcinoma develops in lips, mouth, and oropharyngeal area. One of risk factors of oral cancer has been strongly associated with betel nuts chewing. It has become our concern that Indonesia has high level of betel nuts users.

DESCRIPTION: The programme will include oral cancer early detection and a proper routine education using medical, cultural, and linguistic approaches. This program will engage local trained dentists, cultural experts and linguists. I conducted a cross sectional study done in 2016, based on questionnaires and oral examination, occurred in multiple geographical areas within five diverse provinces: West Java, Jakarta, West Papua, West Kalimantan and Banda Aceh in community health services, dental hospitals and selected villages.

LESSONS LEARNED: It was proven that people living in West Papua, West Kalimantan, and Banda Aceh who possess betel nuts chewing habit have a significant prevalence number of Oral pre-malignant diseases (OPMD). OPMD is a potential oral cancer developing disease. We found 51 (29.48%) out of 179 people in West Papua, 8 (11.32%) out of 88 people in West Kalimantan, and 10 (4.52%) out of 221 in Banda Aceh had OPMD respectively. This number is remarkably underestimated high and has potential to develop oral cancer in the future. Betel nuts chewing habit is a cultural and religious activity inherited throughout many centuries. It creates complicated issue as it is also believed can give many advantages in health and psychological shooting effect leads to addiction. However, this bad habit is in urge stage to be ceased with education so to decrease mortality and morbidity rates among Indonesian due to oral cancer.

CONCLUSIONS/NEXT STEPS: Our next step as part of oral cancer awareness programme is to train more local dentists using WHO standardised training of oral cancer early detection and together with cultural experts and linguists will give oral cancer risks education using the most adaptable oral-visual education techniques.

IAAH170690

The relationship between the high school students alexithymia levels and communication skills

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BACKGROUND: This study aims to investigate the relationship between the communication skills and alexithymia levels of high school students

METHODS: The research was designed with relational screening model. The study group consist of 395 female and 393 male totally 788 students who are studying in the center of Amasya.

RESULTS: In this study 'Toronto Alexithymia Scale', 'Communication Skills Inventory' and personal form are used. Pearson Correlation Coefficient, Regression Analysis and MANOVA are used to analyze the data

CONCLUSIONS/NEXT STEPS: According to the finding of research, has been reached a high negative relationship between the students' alexithymia levels and their communication skills, Alexithymia level has a significant effect on communication skills and gender cause a semantic difference on the students' alexithymia levels and communication skills.

IAAH170707

Neck and waist circumference as sex specific predictors of hypertension in Indonesian adolescents

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BACKGROUND: Neck and waist circumference are simple anthropometric measurements that have recently been associated with cardiovascular risk factors in adults. However, data are limited regarding the relationship between neck and waist circumference and cardiovascular risk factors in children and adolescents. The objective of this study was to investigate whether neck and waist circumference can be used as sex-specific predictors of hypertension in adolescents aged 14–17 years living in Yogyakarta.

METHODS: This cross-sectional study was [Avoid using the general verb "do/did/done/doing" in technical writing, unless the word is used as an auxiliary verb (for example, "several substances do not react").]conducted in the urban area of Yogyakarta, Indonesia. A total of 3,918 boys and girls aged between 14 and 17 years agreed to participate in this study. Their weight, height, waist circumference, neck circumference, systolic blood pressure (BP), and diastolic BP were measured. Neck circumference was analysed as the neck circumference to height ratio, and waist circumference was analysed as the waist circumference to height ratio.

RESULTS: The neck-circumference-to-height ratio was significantly associated with elevated systolic BP, independent of the body mass index, weight-to-height ratio, age, and sex (odds ratio [95% confidence interval]=1.17 [1.03–1.32]; p=0.02). This association was not seen for diastolic BP (odds ratio [95% confidence interval]=1.02 [0.95–1.09]; p=0.68). In male adolescents, the neck-to-height ratio was strongly associated with BP (p<0.001) even after correction with multivariate analysis (psystolic=0.004 and pdiastolic=0.045). [Try to avoid using the colloquial phrase "on the other hand" in academic writing.]By contrast, the waist weight-to-height ratio in female adolescents was associated with BP (p < 0.001) after correction with multivariate analysis (psystolic=0.0045 and pdiastolic<0.001).

CONCLUSIONS/NEXT STEPS: In this study, we demonstrated that the neck-to-height ratio is an accurate predictor of high BP in male adolescents and the weight-to-height ratio is an accurate predictor of high BP in female adolescents.

IAAH170755

Tobacco use among adolescent high school students in Delhi, India: A survey of knowledge, attitude and practices

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BACKGROUND: Tobacco use is a worldwide scourge affecting all individuals irrespective of age, sex, ethnicity or social class. However, adolescence is a particularly impressionable stage of life with teenagers easily succumbing to various bad habits, tobacco use being one of them. Hence, this study was conducted to find the knowledge, attitude and practices regarding tobacco use among school children belonging to the nation's capital. This knowledge can be the first step in the formulation of a preventive strategy against tobacco use in this crucial age group.

METHODS: A population based, cross-sectional study was carried out in a senior-secondary school in New Delhi, India, among 374 students studying in IX, X, XI and XII standards. A self-administered, anonymous questionnaire which was pre-tested by means of a pilot study was the study instrument. This questionnaire was filled up by all the participating students and was collected by the investigator on the same day itself.

RESULTS: In this study, the overall prevalence of tobacco use among high-school students, irrespective of duration and frequency of use was 16.84%. Out of these 63 students, 52 (82.54%) were boys and 11 (17.46%) were girls. More than two-thirds (68.25%) of the users communicated that they had either tried to quit or wanted to quit but hadn't tried it yet. Common reasons for abusing tobacco were given as 'relief of tension or anxiety' and 'peer influence' while reasons for abstaining among the non-users were 'fear of angering parents' or 'fear of health problems'. A majority (85.3%) of the respondents reported having knowledge about the harm caused by tobacco use.

CONCLUSIONS/NEXT STEPS: Although most adolescents are aware of the harmful effects of tobacco abuse, they initiate and continue its use. Considering the observation that the earlier the initiation of tobacco use, the poorer the prognosis; teenage can be considered the ideal age for any preventive interventions in this regard. These interventions should not only target the students themselves but their family members and teachers as well.

IAAH170808

Relation of knowledge levels and lifestyle factors with Blood pressure profiles of school going adolescents (13-15 years)

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BACKGROUND: Hypertension in children and adolescents is emerging as a public health problem. It is believed that hypertension and prehypertension in childhood, commonly leads to adult hypertension. During adolescence, teenagers make individual choices and develop personal life styles. There is a need to observe the prevalence of these lifestyle associated risk factors so as to plan intervention measures accordingly. The present study was designed to identify the association of blood pressure of normotensive, hypotensive and hypertensive individuals with their knowledge levels (nutritional and blood pressure related)

and lifestyle factors (physical activity levels, sleep pattern, stress levels, smoking and alcohol consumption).

METHODS: Adolescents, aged 13-15 yrs (N=500), from a public school in East Delhi, India were screened for blood pressure. Normotensive, hypotensive and hypertensive individuals (n=20 each) were administered a knowledge and lifestyle assessment questionnaire.

RESULTS: The results showed, that although all the three groups had suboptimal physical activity levels (RAPA-1 Scores- below 5), normotensive adolescents scored the highest among them. Sleep pattern was also similar, with 35-40% individuals sleeping 6 hours or less per day. No significant difference was observed in the stress scores between the three groups. Consumption of alcohol and smoking in the past 30 days was reported by very few (2 normotensive, 1 hypertensive and 1 hypotensive adolescents out of 60 claimed alcohol consumption; 2 hypotensive adolescents claimed smoking). Interestingly, hypertensive adolescents were the most knowledgeable group of individuals regarding diet, lifestyle and blood pressure.

CONCLUSIONS/NEXT STEPS: The findings clearly display the role of physical inactivity, sedentary behavior in development of hypertension, independent of knowledge levels about the disease. The present data supports the evidence that there is loss of sleep through adolescence, which could later in life, create a myriad of negative consequences. This indicates a need for counseling on lifestyle factors for adolescents.

Nutrition

IAAH170053

Lifestyle and self-esteem of overweight and obese adolescents in Bacolod City

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BACKGROUND: This research paper was intended to make a scientific investigation of the lifestyle and self-esteem of overweight and obese adolescents in Bacolod City, including three-hundred twelve (312) students from twelve (12) public high schools under the Division of Bacolod City.

METHODS: This is a descriptive research which made use of a survey (questionnaire) method. Participants were pre-identified using the Department of Education's Nutritional Status Record that indicates student's name, age, sex, birth date, year level, section and nutritional status.

RESULTS: There was no significant difference in the respondents' body mass indices when grouped according to physical activities (routine, leisure/recreational, organized/sports and play). No significant difference was also noted in the participants' level of self-esteem when grouped according to anthropometric measurements (weight, height and body mass index). When grouped according to food choices, however, a significant difference was noted between what the participants ate for lunch at school and their corresponding body mass indices.

CONCLUSIONS/NEXT STEPS: Excessive weight does not result to low self-esteem. Food eaten for lunch at school influences body mass index.

IAAH170117

Knowledge and practice of nutrition among sportsperson in Manipur

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BACKGROUND: Background: Nutrition plays a very important role in attaining high level of achievements in sports. Nutritional status has a direct bearing on the level of physical performance. Hence, physical fitness and training are very much dependent on nutritional status of sports personnel. Objectives: To assess the knowledge and practice of nutrition among sportsperson in Manipur and its association between various socio-demographic variables like age, sex, education level etc.

METHODS: A cross-sectional study was done from 26th August to 24th September, 2016, among currently registered sportsperson in Sports Authority of India, Manipur. A self-administered questionnaire was used to collect the data and analyzed using SPSS-version-21. Descriptive statistics like percentage, mean and standard deviation were used. Chi-square test was used for testing the significance between the proportions. Independent t test was used to see association between means. A p-value of <0.05 was taken as significant.

RESULTS: Out of 453 respondents, 60.7% were males and the mean age was 21.3±2.1. 41% of the participants had adequate knowledge about sports nutrition. One-third (33.3%) of those participants whose family member are engaged have adequate knowledge (p-value 0.004). Boxing (56.9%), taekwondo (43.2%) and weightlifting (30.2%) have adequate knowledge (p-value 0.002). Only 6.2% of those who practice sports nutrition had adequate knowledge (p-value 0.003).

CONCLUSIONS/NEXT STEPS: Less than half of the participants have adequate knowledge about sports nutrition. Boxer had better knowledge than other sportsperson.

IAAH170134

Adapting the child health and nutrition research initiative methodology to define adolescent health implementation research Priorities in South Africa

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BACKGROUND: South Africa has policies and strategies that promote a range of interventions to improve the health of young people. Unfortunately, there have often been significant challenges to implementing these policies. The present study explores the adaptation and use of the Child Nutrition and Research Initiative (CHNRI) research priorities methodology to develop and rank implementation science research questions that would support more effective implementation of interventions for adolescent health.

METHODS: Stakeholders from the National Departments of Health and Social Development, Regional Training Centres, NGOs and academic institutions, working at national and provincial levels, developed consensus around priority implementation research questions. The questions were then scored by the participants using adapted standard criteria (answerability, impact, implementation and equity), and were ranked based on their overall scores.

RESULTS: At least one question from each of the six major “barriers to sustainability” that had been derived through participatory processes featured in the top 12 ranked research questions: Data, Monitoring and Evaluation (4); Access, Equity and Engagement (3); Coordination and Partnerships (2); Resources (1); Leadership, Management and Accountability (1); Training and Support (1).

CONCLUSIONS/NEXT STEPS: Adapting the global CHNRI methodology to a national context proved to be extremely successful for developing consensus that could guide implementation research. Involving participants responsible for implementing policies and programmes provided both a reality check and also a vested interest in taking forward the results of the workshop. Lessons learned through this process will be useful for other countries for defining national research priorities.

IAAH170155

A Preliminary study on overweight and obesity among school going adolescent girls in a district of eastern Uttar Pradesh

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BACKGROUND: Introduction: Obesity among adolescents is emerging as a major global public health problem. Thus making the upcoming adult generation is more preponderant towards associated morbidities and mortalities in the later stages of their lives. Objective: To assess the magnitude of overweight and obesity among adolescent school going girls of Barabanki, Uttar Pradesh, India and to determine the factors associated with it.

METHODS: A cross-sectional study amongst 537 school going adolescent girls enrolled in 6th- 12th class in schools was conducted from December 2016 to February 2017 using multistage sampling technique. Information about diet intake, food preferences and physical activity was collected using pre-designed, pre-tested schedule. Anthropometric measurements were also taken which included body mass index (BMI), waist and hip circumference. Obesity and Overweight were assessed using age specific BMI cut-off value (Khadiilkar's criteria).

RESULTS: Of the 537 adolescent girls, 95 (17.6%) were overweight, 23 (4.2%) were obese. “Higher socio-economic status” (odds ratio 1.11; 95% confidence interval 1.02-1.22; p = 0.02); “frequent intake of junk food items” (odds ratio

3.4; 95% confidence interval 1.56-7.85; p = 0.01) and; “sedentary lifestyle” (odds ratio 2.56; 95% confidence interval 1.13-5.85; p = 0.01) were found to be the independent predictors of overweight and obesity.

CONCLUSIONS/NEXT STEPS: Adolescents belonging to higher socio-economic status, consuming comparatively more fast food items and involved in no or irregular physical activity were more susceptible to overweight and obesity.

IAAH170173

Burden and determinants of obesity among young adults of age group 13-17 years residing in tribal populated villages of Chhattisgarh: A community-based exploratory study

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BACKGROUND: A rising trend of adolescent obesity is an upcoming national public health concern. Previous studies and systematic reviews have suggested that obese adolescents are at significant risk of becoming obese adults and also a high economic cost associated with adult obesity and its co-morbidities. In view of this, the present study has been commenced to estimate the magnitude of adolescent obesity and explore the potential determinants among young adults residing in tribal populated villages of Chhattisgarh.

METHODS: A community-based nutritional study was carried out among randomly selected 1,296 adolescents (age group of 13-17 years) in one of the tribal populated sub-districts of Raipur, Chhattisgarh. A previous day diet intake history and “modified version of international physical activity questionnaire” were used to determine daily energy intake and expenditure from day-to-day activities, respectively. Multivariate logistic regression analysis was performed to find the probable determinants associated with adolescent obesity

RESULTS: Overall, 23.4 % of young adults were either overweight or obese. Obese and overweight adolescents had significantly higher BMI (Mean= 33.4, SD = 19.6 kgm²; p < 0.0001), waist circumference (90.3, 58.4 cm; p < 0.0001), energy intake (2306.4, 1820.7 kcal; p < 0.0001) and lower energy expenditure from physical activity (878.6, 1798.6 MET (metabolic equivalent)-min/week p < 0.0001) compared with non-overweight adolescent. Higher family earnings (Odds ratio [OR], 2.79, 95% confidence interval [CI] 1.29-6.38), skipping breakfast (3.09, 1.11-8.30), consumption of fruits < 4 days per week (2.18, 1.02-4.67), television viewing > 2 hours/ day (2.16, 1.3-6.2), energy intake (2.98, 1.19-15.6), significantly increased the risk of obesity, whereas increased physical activity (5.34, 1.68-15.58) decreased the risk. Irregular menstruation (3.34, 1.27-12.10) was also noted among the obese girls.

CONCLUSIONS/NEXT STEPS: Family food situation and dietary pattern were considered modifiable determinants of young adult's obesity and included: consumption of unhealthy diet, portion sizes, and fast food snacking, among the community residing in rural areas. National nutritional programs implemented in schools, where adolescents consume a sizeable portion of their daily calories and also participate in routine physical exercises, can assist to adopt a healthy dietary habit that has the potential to reduce the probability of a young adolescent to become an obese adult.

IAAH170199

Micronutrient intake among adolescents: A cross-sectional study across four districts in India

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BACKGROUND: Micronutrient deficiencies (hidden hunger), a major public health problem, result from poor quality of food with detrimental effects on growth and development during adolescence. This present endeavour, supported by nestle, aimed at assessing the intake of vitamin A, calcium, iron, and zinc among adolescents in India.

METHODS: This cross-sectional study was conducted at four sites - Delhi, Bangalore, Ganganagar and Patna during November and December 2016. Adolescents between 10-19 years including 150 boys and 277 girls were recruited in the study using multistage sampling. Nutrient intake was assessed

using the 24-h recall method, and the usual pattern of food intake was examined using a 7-day food frequency questionnaire. The study was approved by the MAMTA ethical review board.

RESULTS: Mean (\pm SD) age of both boys and girls was 15 (\pm 2.6) years. Median intake of vitamin A, calcium, iron and zinc among boys was 53 mcg (Range 0-113.2), 331.11 mg (Range 60-1599.6), 18.23 mg (Range 4.5- 112.3) and 4.5 mg (Range 0-15) respectively. In the case of adolescent girls, the median intake of vitamin A, calcium, iron and zinc were 11.2 mcg (Range 0-334.4), 250.48 mg (Range 22- 1861), 12.46 mg (Range 0.5- 120.4) and 4.62 mg (Range 0.1- 18.9) respectively. Nearly 80% boys and about 85% girls were not consuming even 70 per cent of the RDA for calcium and zinc. Less than 5% adolescents (4% boys and 1.2% girls) could meet half of the daily requirement for vitamin A through diet. The consumption of iron was also poor with nearly half of the boys and more than two third girls consuming not even 70 per cent of the recommended amount.

CONCLUSIONS/NEXT STEPS: Micronutrient intake was low among girls and boys both with relatively lower intake among girls. The agenda of hidden hunger with emphasis on addressing micronutrient deficiencies and improving their intake through wide scale public health interventions needs an instant push.

IAAH170200

Dietary intake among adolescents in India: Rural and urban comparison

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BACKGROUND: Contributing to one-fifth of the total population, adolescents constitute the major demographic and economic dividend, whose productivity depends upon nutritional status. The current research, supported by nestle, assessed the dietary intake among adolescents (10-19 years) residing in rural and urban areas of India

METHODS: We conducted a cross-sectional study in two rural (Patna, Ganganagar) and two urban districts (Bangalore and Delhi) in the month of November and December 2016. The data from 220 urban and 206 rural adolescents were collected using 24-hour diet recall tool and 7-day food frequency questionnaire. The study was approved by the MAMTA ethical review board.

RESULTS: Mean (\pm SD) age of adolescents in both rural and urban areas was 15 (\pm 2.6) years. Mean (\pm SD) intake of energy, proteins, and fats among adolescents from rural sites was 1541.7 (\pm 510.5) kcal, 39.9 (\pm 15.3) g, and 37.4 (\pm 26.5) g respectively. Similarly, the mean (\pm SD) intake of energy, proteins, and fats, among adolescents from the urban district was 1407.0 (\pm 462.9) kcal, 39.7 (\pm 15.52) g, and 26.9 (\pm 16.71) g respectively. There was a significant difference in the mean intake of fat and energy between the two areas with higher consumption among rural inhabitants ($p < 0.05$). Calcium intake was significantly higher among rural adolescents ($p < 0.001$) whereas it was vice versa for iron ($p < 0.001$). A greater proportion of adolescents from rural areas (33%) could meet 70% of their daily requirements for energy and fats compared to urban residents (24%) with the difference in fat consumption being significant ($p < 0.001$). The consumption of proteins was roughly similar in both the areas with only two third boys and half of the girls consuming 70% RDA (p value=0.8).

CONCLUSIONS/NEXT STEPS: Consumption of all the nutrients was markedly inadequate among adolescents from both the areas, but the intake among rural inhabitants was relatively better. The variance in dietary patterns and consumptions among rural and urban areas indicates towards a customized dietary intervention in public health nutrition programs.

IAAH170215

Prevalence of stunting and thinness among rural adolescent of Kintamani district, Bali, Indonesia

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BACKGROUND: The primary causes of undernutrition in Indonesia are its large population, socio-economic differences and inadequate access to health facilities. Nutritional assessments among adolescents are important as they are

the future parents and constitute a potentially susceptible group. Studies on the assessment of nutritional status of adolescents are less in number and a National database has not yet been developed. The present cross-sectional investigation evaluates the prevalence of undernutrition among rural adolescents (12 years - 16 years) from Kintamani District, Bali, Indonesia.

METHODS: The present investigation was conducted among 134 rural school-going adolescents (63 boys and 71 girls). The nutritional status was assessed in terms of stunting (Height-for-age below 5th percentile) and thinness (BMI-for-age below 5th percentile). Data were analyzed using SPSS version 20 and CDC Growth Chart.

RESULTS: The overall prevalence of stunting and thinness were found to be 38.8% and 25.4% respectively. A high prevalence of stunting was found among boys (27%) and girls (49.3%) ($p < 0.05$). The highest prevalence of stunting was observed among adolescents of 15 years (48.9%). The overall mean BMI for girls was slightly higher than boys (20.1 ± 3.3 kg/m² and 18.7 ± 2.1 kg/m² respectively). A higher prevalence of overall thinness was found among boys (27%) than girls (23.9%) ($p > 0.05$).

CONCLUSIONS/NEXT STEPS: There was a very high prevalence stunting and thinness among the boys and girls. There was a significant difference in the prevalence of undernutrition in terms of age and sex amongst them. Nutritional intervention is necessary to ameliorate their nutritional status. The results of the present investigation will help policy makers to formulate various developmental and health care programs.

IAAH170219

A comparison study on the prevalence of obesity, abdominal obesity, and hypertension among junior high school students in Denpasar City and Kintamani District, Bali

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BACKGROUND: Obesity and hypertension are two major chronic disease challenges facing adolescents globally. Hypertension is the principal risk factor for cardiovascular diseases and can lead to organ damage and even death. Early detection of hypertension and metabolic syndrome in adolescence is the best possible preventive interventions to reduce the risk factor metabolic and cardiovascular disease. Nowadays, obesity and hypertension frequently correlate with lifestyle and eating habit in urban society. This study was aimed to assess and compare the prevalence and risk factor of obesity, abdominal obesity, and hypertension among adolescent between urban and rural area.

METHODS: A cross-sectional study who involved 273 junior high school students (134 students from Kintamani, 139 students from Denpasar) from April to May 2016. The collected data include: aged, gender, social-economy assessed by questionnaires. Anthropometric measurement and physical examination conducted to assessed body height, body weight, BMI, waist circumference, hip circumference, waist to hip ratio (WHR), waist to height ratio (WHtR), obesity status, abdominal obesity status, and blood pressure. Obesity was evaluated by CDC curve and abdominal obesity was evaluated with cut-off point WHtR $e^{>0.5}$. Data were analyzed using univariate and bivariate (chi-square test and independent sample t-test).

RESULTS: From a total of 273 students (males 49.8%, females 50.2%) with aged range between 12-16 years old. Family history with obesity and hypertension was consecutively 51.3% and 28.2%. There was a significant difference prevalence obesity between Denpasar and Kintamani (37.4% vs 12.7%, $p < 0.0001$). There was also significant difference prevalence abdominal obesity between Denpasar and Kintamani (17.1% vs 45.3%, $p < 0.0001$). Significant difference prevalence hypertension between Denpasar and Kintamani (25.4% vs. 37.4%, $p = 0.032$) were reported.

CONCLUSIONS/NEXT STEPS: This study revealed urban area dominated the prevalence of obesity, abdominal obesity, and hypertension compared than rural area. Some demographic factor was associated with the problem such as socio-demographic characteristic, eating habit, physical activity, and sedentary lifestyle. From the findings of this study, early screening non-communicable disease, lifestyle modification, and health education should be practiced in all adolescent, both urban and rural area.

IAAH170220

Measuring examination anxiety in school children: Is it different in obese children

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BACKGROUND: Anxiety in Adolescents can be due a large no of factors related to their growing up and psychosocial issues. In the intensively competitive academic world in India there is lot of anxiety associated with examinations. Overweight and Obese children are known to have more anxiety than their normal weight peers due to body image issues and other factors. We regularly conduct workshops to help children overcome exam anxiety (EA) where we emphasize on healthy life style for better performance. We wanted to study if EA is more in adolescents with higher BMI

METHODS: Study Design: It is a School Based Cross sectional study Tool - Friedman and Benda-Jacob's Test Anxiety Scale (23 items-3 sub-factors) self-filled after explanation. No Names were asked for to promote honest answers - only Age, Gender, and Height weight to calculate BMI -classified as per WHO - Asian cut-offs Sample: 127 school children (9th, 10thSTD),77 (61%) were male and 50 (39%) were female students, divided into Group A -10-14 yrs and Group B 15-19 yrs.

RESULTS: The EA scores were higher in girls and in the older age group but the difference was not statistically significant On comparing the Exam anxiety scores and sub-scores of Social Derogation , Cognitive blocking and Nervous tension we did not find any statistically significant difference Association between BMI and TEA score is not significant in male (0.885) and female (0.070). All exam anxiety score are also statistically not significant with respect to BMI among girls and boys group.

CONCLUSIONS/NEXT STEPS: There was not much difference in the Exam anxiety in different categories of BMI. This is a good sign that this group was not body conscious and hence social derogation was not of concern to them. Alternatively this may also affect negatively that the children with higher BMI are not motivated to lose weight.

IAAH170239

Self-esteem in school children -is it different in obese children?

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BACKGROUND: Self-esteem is defined as "how we value our self". Research has shown that good self- esteem is one of the protective factors that protect young people from negative peer pressure and high risk behaviour. AACCI does Multicentric -WHO Life skill education programs (LSE) in School children. A pre-workshop survey of the participants is done to assess which skills need more emphasis.

METHODS: Ethical Research Declaration approval was taken from Institutional Ethical committee of AACCI. Permission taken from the Principal to conduct study and Consent taken from the participants Tool used -A widely used Rosenberg's self -esteem scale- self -filling questionnaire. Scale scores range from 0-30. Normal -15-25; < 15 low esteem and 26-30 -high esteem. Sample: 334 children- 10-15 yrs (Boys -214/ Girls -120) from a high SE status, English speaking, Co-Ed school from Mumbai. The group was divided into-Group 1- 10-12yrs (n=188-124 boys and 64 girls) .Group 2 13-15 years (n=146-90 boys and 56 girls). No names -to encourage honest answers. Only gender, age, and class and height and weight to calculate BMI were asked for. WHO - Asian cut-off was used to categorize BMI

RESULTS: Total Sample- BMI varied widely in age and gender: Normal weight only in 23-32% .Underweight: 60- 65% over weight: 3-10% and Obese: 0-10.7% mean Self-esteem score was in normal range: 18.64± 2.02. Boys 18.86±2.19; Girls 18.26± 1.6 .None of them showed low self-esteem. The scores of Obese children were different - Gr II older >GR II younger: 19.60 vs. 17.53 (p=0.001). On comparing age groups within the same BMI category - in Over weight: Gr II older >GR I - 20 vs. 17.69 (p=0.002).

CONCLUSIONS/NEXT STEPS: The younger obese children has lower scores.

They need interventions to boost up their self- esteem and motivate them for weight loss .Whereas the older obese children had higher than the average mean score .This can be interpreted that with increasing maturity the obese children overcome their body consciousness which is a positive aspect but it also shows that they continue to be obese because they don't care how they look which is bad from Health aspect as this will put them at risk for NCDs.

IAAH170250

BMI - Categories in children: Do they have more Exam anxiety?

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BACKGROUND: Research has shown that children who are overweight and / or obese are likely to have anxiety due to psychosocial issues. Examination anxiety (EA) is quite high in Indian children due to social pressure, academic load and intense competition AACCI (Association of Adolescent and Child Care in India) conducts workshops in schools to reduce Examination anxiety and also promote Healthy weight. A pre- workshop survey is done by standard tools to customize interventions. We wanted to also assess if EA is influenced by body weight. This would help to understand if these children need additional interventions

METHODS: Sample:712 school children (8th, 9th STD) -two schools in Delhi, India- divided- Group I -10-14 yrs and Group II-15-18 yrs Tool - Friedman and Benda-Jacob's Test Anxiety Scale (23 items-3 sub-factors -Social Derogation (SD), Cognitive Blocking (CB), and Nervous Tension (NT) -three key variables) self-filled after explanation. No names were asked for to promote honest answers -only Age, Gender, and Height and Weight to calculate BMI. The sample was divided as per WHO Asian Cut off of BMI category -underweight <18.5 normal weight 18.5-23.5; overweight 24 to 30 and obese >30.

RESULTS: We compared the examination anxiety total scores and subset scores of normal weight children with other categories of BMI but found no statistically significant difference in the scores. We also compared the older and younger age group within the same category of BMI but found no significant difference in scores.

CONCLUSIONS/NEXT STEPS: Our study does not show higher EA scores with higher or lower BMI. This is a positive sign -that they are not body conscious and this issue will not cause low self-esteem. However this can also translate into their not being health conscious and being less motivated to lose or gain weight and achieve a healthy BMI. Maintaining healthy life style- before and during examination time to improve performance is emphasized in our AACCI workshops on EA which also addresses healthy BMI.

IAAH170256

Can we achieve healthy BMI in children -? By empowering school students' self-control ability?

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BACKGROUND: High BMI can be an indicator, one of importance to paediatricians, as to whether young people are able to say "NO". Further, if the paediatrician can gain access into the adolescent's emotional life via the theme of body image, which is of great significance to youngsters at this age, they will be able to make good use of this entry point to tweak much impulsive behaviour that may emerge at this crucial age

METHODS: Sample:712 school children (8th, 9th STD) -two schools in Delhi, India, English medium, HSE group Divided into - Younger Group I-10-14 years; Older Group II 15-18 yrs. No names were asked to promote honest answers, only age, gender, Height weight to calculate BMI Tool: Perceived Self -Control test by Humprey (1982) -11 item scale higher the score more is the self-control.

The reliability coefficient is .71. It has high reliability and good psychometric properties.

RESULTS: BMI (WHO Asian cut-off) showed: Underweight- 45.7%; Normal weight 40.0%, Overweight - 9.9%; Obese 4.4% School 2 > school 1 Obesity - 10%; overweight- 3% On comparing PCS score with BMI Total sample Gr II > Gr I: Normal Weight 4.86 4.23 (p=0.007); Underweight 4.45 vs 4.03 (p=0.042) School 2 Gr II > Gr I Normal weight: 5.32 vs 4.21 (p=0.003); Obese 6.57 vs 3.50 (p=0.010) Comparing schools "Sch 1 > Sch 2 = Gr II > Gr I: Normal weight: 5.32 vs. 4.21 (p=0.044); Obese 6.57 vs. 4.56 (p=0.026).

CONCLUSIONS/NEXT STEPS: Significantly higher scores were seen in the NW and UW suggesting that good self-control helps maintain BMI, some probably also going overboard causing underweight. School 2 obese children also showed higher scores. Could this be an effort to portray good self-control? Or there indication that they have no insight? AACCI has planned a workshop in these schools for learning to maintain healthy body weight.

IAAH170279

Anthropometry and menarcheal age among school girls in Abakaliki Southeast Nigeria

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BACKGROUND: Menarche is a critical event in the development of the girl child. It usually occurs during the period of rapid growth and development, adequate nutrition during this stage of increase growth velocity is essential in order to maintain full growth and development of reproductive functions. Objectives: To determine the relationship between anthropometric variables and onset of menarche among school girls.

METHODS: The respondents were drawn from schools in Abakaliki using a multi stage sampling technique. Structured questionnaire was used to obtain information on socio-demographic profile of female adolescents, age of onset of menarche, anthropometric variables including height, weight, Body mass index, height for age, weight for age and Ponderal index were measured. Respondents were also assessed for development of secondary sexual characteristics. Data was analysed using SPSS Version 20.0. Correlation and regression analysis were done for the dependent variables and Chi square was used to test the strength of association.

RESULTS: Result: The results showed that 1155 girls aged 6-18yrs enrolled for the study. The median age was 12yrs. Menarche was observed among 402 (34.8) respondents. The age of onset of menarche ranges from 8yrs -16yrs, with a mean age of 12.82±1.28yrs. Among the respondents that achieved menarche 48(11.9%) had early menarche while 354(89.1%) had normal menarche. Obesity was noted among 28(2.4%) of the subjects while 87 (7.5%) and 122 (10.6%) were overweight and underweight respectively. 118(10.2%) were stunted while 114(9.9%) were tall. Body mass index, Ponderal index, significantly affected the age of onset of menarche. Anthropometric variables correlated positively with the age of onset of menarche.

CONCLUSIONS/NEXT STEPS: Conclusion: there is a decreasing age of onset of menarche among school girls in Abakaliki. Nutritional status as manifested by anthropometric variables significantly influences this trend. Specific intervention programs should be encouraged to improve the nutritional status of this group of children

IAAH170299

Eating behavior and perception towards body shape among undergraduate female students

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BACKGROUND: Eating disorders negatively affect a person's physical or mental health. They are associated with extreme emotions, attitudes and behaviors surrounding weights and foods. Early detection and treatment for the individuals at risk and those already having the disorder can prevent

complications. This study was conducted to determine the prevalence of eating disorder and its relationship with body shape concern among undergraduate female students in RIMS, Imphal.

METHODS: A cross-sectional study was done in RIMS, Imphal from 30th April to 23rd May, 2016. The study population comprised of all the undergraduate female students (M.B.B.S, Interns, B.D.S, B.Sc. Nursing) in RIMS. 447 students completed a questionnaire consisting of socio-demographic items, Eating Attitudes Test (EATS-26), behavioral questions and Body Shape Questionnaire (BSQ-16). Data were analyzed using SPSS-version-21. Descriptive statistics like percentage, mean and standard deviation were used. Chi-square test and Fisher's exact test were used for testing the significance between the proportions. A p-value of <0.05 was taken as significant.

RESULTS: Mean BMI (kg/m²) was 21±2.79, EAT-26 Score 9.08±7.4 and BSQ Score 19.5±9.53. Almost 10% had an EAT-26 score ≥ 20 (high risk). Only 11% were satisfied with their weight. 24.4%, 12.3% and 11% had mild, moderate and marked concern about body shape respectively. A significant positive association was observed between body shape concern and eating behavior. BMI was also found to be significantly associated with both body shape concern and eating behavior.

CONCLUSIONS/NEXT STEPS: On an average, 1 in every 10 female students showed the risk for development of eating disorder. Nearly half of the participants had mild to marked body shape concern. Those with moderate/marked body shape concern were at higher risk for eating disorder.

IAAH170310

Perceived self-control – maintenance of healthy weight

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BACKGROUND: Healthy nutrition is key to maintaining healthy BMI. Adolescents perceive that junk food which has high salt, high sugar is tastier than healthy food. Peer influence and advertisements further tempt them to unhealthy eating habits that lead to obesity. Empowering them with self-control will be the most practical strategy to help them to eat nutritious healthy food. This study was conducted to compare perceived self-control in school children assessed by a standardized tool with their BMI.

METHODS: Ethical research clearance was taken from AACCI Institutional Ethics Committee. Permission taken from the Principal and consent from the children. Perceived Self Control (PSC) test by Humprey (1982) was used. Higher the score more is the self-control. Self-filled questionnaire after explanation were done. To promote honest answers No names –only age, gender class and height weight to calculate BMI. Sample: 252 children from Gurgaon HES, Coed, and English Medium School) Divided Group I: 11 - 14 yrs and Group II: 15 - 17 years.

RESULTS: BMI categories: Age and gender Underweight F -40.9% M -56.6% Normal weight F-47.7, M 31.60; Overweight -F 11.4 M-7.90 obesity-F-0%, M 3.9% PSC scores and BMI: On comparing BMI and PSC score Highest mean score was 5.33 in obese boys. No statistically significant difference was seen in PSC score and BMI category. In comparing PSC scores in the same BMI category: Girls had higher mean scores: 4.5 vs 4.07 in normal weight and lower in over weight 3.80 vs 4.50.

CONCLUSIONS/NEXT STEPS: Healthy BMI was seen in only in: F-47.7%, M -31.60%. Though Obesity was low, 3.9% in Boys only; Overweight was significant both in both males and females PSC scores showed good co-relation when gender was compared with BMI in same category. Females had higher incidence of Normal weight than boys and also had higher scores. They had higher incidence of overweight and these girls showed lower PSC scores. Highest PSC score in this sample in the obese boys can be interpreted, as they having no insight, or their effort to portray good self-control as a defensive mechanism. Hence intervention to increase self-control in this sample will help to achieve healthy BMI. AACCI will be holding such workshops.

IAAH170322

A Study of prevalence of obesity among adolescents and association of BMI with blood pressure

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BACKGROUND: Childhood obesity is increasingly being recognized worldwide as a major public health problem reaching epidemic proportions. Hypertension is the most common comorbidity identified in overweight adolescents and the leading risk for mortality in adulthood. Prevalence of Hypertension in Adolescents was estimated to be 3% - 9% in various studies conducted in India. As early identification translates into early interventions and possibly prevention of later morbidity and mortality.

METHODS: An urban community School based cross sectional observational study conducted in Atomic Energy Central School, Mumbai, India. Healthy Adolescents in age group 9 to 16 years were included in study from Dec 2016 to March 2017. Weight, Height and Blood Pressure measured using standard equipment and procedure. BMI Z score by Indian Academy of Paediatric guidelines used to classify overweight and obese proportions of study population. Prevalence of obesity was calculated and relative Association with Blood Pressure were studied.

RESULTS: Among 1155 Adolescents 179 (15.5%) were obese, 230 (19.9%) were over-weight. While 79 (6.8%) were Pre- Hypertensive and 97(8.3%) found to be Hypertensive. Among 230 Overweight adolescents 16(6.9%) were Pre-Hypertensive and 20(8.7%) were HTN. Among 179 obese adolescents 19 (10.6%) were Pre Hypertensive and 41 (22.8%) were Hypertensive. Gender wise statistically significant (p=0.039) difference was found in Hypertension While there was no significant difference in obesity levels (P=0.519).

CONCLUSIONS/NEXT STEPS: Being an urban educated economically stable community, prevalence of obesity as well as HTN was found on higher range of various studies published in the country. One in three adolescent in the community was observed to be overweight or obese, hence there is a need to spread awareness about maintaining BMI within normal range in order to reduce the prevalence of Overweight/ Obesity and HT.

IAAH170335

A study on prevalence of anaemia among school going adolescent girls in Patna, Bihar

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BACKGROUND: Anaemia is a hidden public health problem. Despite government is putting all efforts to reduce the prevalence of anaemia, but the prevalence of anaemia is not decreasing. Only reducing the anaemia can prevent the morbidity and mortality in adolescent girls who are going to be future mothers. Thus this study was carried out with objective to study the prevalence of anaemia and knowledge about anaemia and its prevention in adolescent girls.

METHODS: A cross sectional study was carried out in both rural and urban schools of Patna from July 2016 to December 2016. Multistage random sampling was used to select the required sample size. Sample size was calculated considering prevalence of anaemia to be 60%, confidence interval 95% and permissible error 10% and 10% non-response; the sample came out to be 294 which were rounded off to 300. Statistical analysis was done with SPSS. Adolescent girls fulfilling inclusion and exclusion criteria were included in study. Haemoglobin was estimated using haemoglobin colour scale. Grading of anaemia was done using WHO reference. Permission from ethical committee and school were taken prior to study.

RESULTS: Out of 300 students 271 girls agreed to participate in this study. Mean age of study participants was 14.34±1.91 years. Overall prevalence of anaemia was 58.67%, with 4.79% of girls suffering from severe anaemia. In the rural schools, the prevalence of anaemia was found to be 67.96% and in the urban schools it was 50.34% respectively in adolescent girls. Knowledge about prevention of anaemia was present in 61.99%.

CONCLUSIONS/NEXT STEPS: Study shows prevalence of anaemia is more in adolescent girls of rural school. The prevalence of anaemia can only be reduced with strong inter-sectoral coordination and increasing awareness of adolescent girls at school level and community level.

IAAH170342

Cost of life for eating: A review of health related quality of life in adolescents with eating disorders (Anorexia Nervosa & Bulimia Nervosa)

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BACKGROUND: Epidemiological studies have suggested that the incidence of Eating Disorders (ED) among adolescent girls has increased over the last 50 years. Anorexia Nervosa (AN) & Bulimia Nervosa (BN) are disorders characterized by abnormal patterns of weight regulation and eating behavior and by disturbances in attitudes and perceptions towards quality of life (QOL). While Eating Disorders can affect individuals from any age group but the main onset takes place in adolescence itself.

DESCRIPTION: AN & BN may be life threatening but adolescents cost their life either to be in shape of any role model or due to some psychological stress or disorder or any other factor contributing to their neurology & hereditary, also there could be multiple aetiology but genetic factors plays a major role. The prevalence of AN & BN is very high in western countries but it has started deepening its roots in Indian adolescents also which is yet to be traced closely.

LESSONS LEARNED: Health related quality of life (HRQOL) estimations are very important for accurately estimating the individual & community burden from eating disorders and cost of their life for their eating. Little is known that how these body images, weight & shape related concerns arise & also the researches are revealing that a large section of adolescents in India have inadequate knowledge of ED & its risk factors as it is a growing mental health concern with serious consequences for those who struggle.

CONCLUSIONS/NEXT STEPS: To conclude, the statistics & studies are showing that the eating disorders cognitions in adolescents is spreading very rapidly, also the treatment of ED can be quite challenging, given the dearth of established treatment & poor motivational insights in them. Strong efforts are required to frame means for improving the HRQOL & risk factors of adolescents having ED. **KEYWORDS:** Adolescents, Eating Disorders, Health Related Quality of Life and Risk Factors.

IAAH170359

Perceptions of overweight by primary carers (mothers/grandmothers) of under-five and elementary school-aged children in Bandung, Indonesia: A qualitative study

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BACKGROUND: The prevalence of childhood overweight has increased in the past two decades in Indonesia. Even though prevalence is escalating, there is a lack of qualitative evidence to assist in the design and implementation of strategies to tackle the problem of overweight. This study aims to explore the view of primary carers, namely mothers and grandmothers, from different socio economic status (SES) groups, on childhood overweight in the Greater Bandung Area, West Java, Indonesia.

METHODS: We conducted 12 focus groups discussions with a total of 94 carers of under five and 7-12 year old children, from June to October 2016.

RESULTS: Three main categories emerged: the concept of overweight, factors contributing to overweight, and awareness and feelings towards overweight children. Most carers defined overweight subjectively. Several carers agreed with the concept "chubbier is healthier". All carers had some knowledge of the main factors that contribute to childhood overweight: dietary factors, activity levels and sedentary behavior, and hereditary factors. Carers described similar characteristics of overweight and had mixed feelings about overweight children, most of which were related to stigma. However, carers who identified their own children as being overweight expressed sensitivity about their children's weight status, especially their physical abilities. Almost all carers knew their children's current weight while less than two thirds knew their children's height.

CONCLUSIONS/NEXT STEPS: Our findings have several policy implications. Firstly, health-related knowledge of the primary carers is of great importance and needs to be augmented. To increase that knowledge, there is a role for front-line health practitioners (doctors, midwives, nurses) to be more active in educating the community. Secondly, there need to be simpler and more effective ways to disseminate healthy lifestyle messages to carers. Thirdly, more emphasis should be placed on carers monitoring their children's growth which in turn may encourage carers to take steps to keep their children in the healthy weight and height ranges.

IAAH170367

Persistent food insecurity after provision of housing to youth experiencing homelessness

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BACKGROUND: A growing body of research indicates that providing permanent supportive housing (PSH) to homeless adults within a Housing First approach can improve their health. The Housing First approach for adults is focused on provision of housing without the requirement to access supportive services. However, research is lacking regarding impact of PSH on the overall health and wellbeing of youth experiencing homelessness. In January of 2014, San Francisco, California (USA) opened the first city-funded permanent supportive housing building exclusively designated for transition-aged youth (ages 18-24). Since April of 2014, we have conducted longitudinal research to examine its effects. We present our qualitative findings regarding persistent food insecurity among participating youth.

METHODS: Methods: In the context of a larger mixed method study, we conducted 39 in-depth individual interviews at baseline and 30 follow-up interviews, which were recorded, transcribed and analyzed thematically.

RESULTS: PSH both decreases and increases food insecurity. Kitchen access, stable storage of food supplies in their room, and sharing of food within in-building social networks all decrease food insecurity. However, once housed, youth avoid accessing free sources of food such as food banks because they are loathe to be identified as homeless or to access food that others "need more than I do." Lack of cooking skills, fear of altercations with other residents and concern that they may have to share their food, limits their use of the kitchen. The location of the building in a gentrified urban food desert requires youth to pay for transportation to an affordable supermarket or to pay for high-end local food. Poverty and lack of a regular income forces many to resort to coping strategies including food theft, using drugs to stave off feeling hungry, skipping meals, garbage picking, or eating smaller meals than they would like.

CONCLUSIONS/NEXT STEPS: Although PSH shelters youth, food insecurity is persistent. Developmental differences between youth and adults may lead to persistent hunger that is not addressed by the Housing First/PSH model. Developmentally appropriate models for supporting youth in housing towards a successful transition to adulthood must include access to an affordable nutritious diet.

IAAH170382

Prevalence of obesity among students of Menofia University

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BACKGROUND: Overweight and obesity are defined as abnormal or excessive fat accumulation, that may impair health, which can be measured by Body Mass Index (BMI). In 2014, 39% of adults aged 18 years and over (38% of men and 40% of women) were overweight (WHO). Raised BMI is a major risk factor for non-communicable diseases such as cardiovascular diseases (mainly heart disease and stroke), leading cause of, diabetes, musculoskeletal disorders especially and some cancers (endometrial, breast, and colon).

METHODS: Objective: we aimed to assess prevalence of overweight and obese students at Menoufia University, And detect the main risk factors of obesity and keep it as data base for obesity prevalence at our university as an initiative to spread it all over Egypt's Universities. Materials and Methods: Analysis of height and weight data of about (435) students from 7 University Colleges. Students were randomly recruited from faculties of (Medicine, Law, Arts, Sciences, Engineering, Commerce, and Computer Sciences). A self-administered questionnaire of (500) was then used to assess their students' dietary habits, regular exercise, blood pressure, sugar levels.

RESULTS: (171) students were over-weight (BMI \geq 25) with rate 39.3 % and (52 students) were obese (BMI \geq 30) with rate 11.9 % in medicine & engineering colleges (140 students) overweight =57, obese= 18 students. Other 5 colleges (295 students) overweight =101 students, obese = 26 students. 130 overweight students did not have regular exercise.

CONCLUSIONS/NEXT STEPS: obesity is prevalent at Menofia University; more at scientific colleges (medicine & engineering) due sedentary studying life style and awareness about obesity, it's hazards and importance of regular exercise and healthy life style should be increased.

IAAH170387

Perception, knowledge and practices on balanced diet among adolescents, their parents and frontline functionaries in rural sites of Banda, Varanasi and Allahabad, Uttar Pradesh

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BACKGROUND: Uttar Pradesh is one of the poor performing states with high Malnutrition and anaemia among adolescent girls resulting in high MMR, IMR and low birth weight rate. The rate of anaemia among adolescent girls has doubled in the past decade. Adolescents gain around 15-20% of their optimum height, 25-50% of the adult ideal weight and 45% of the skeletal mass by the age of 19. Poor intake of energy, protein and other nutrients is one of the factors for malnutrition and anaemia.

METHODS: The cross-sectional survey using a mix method (quantitative and qualitative) was adopted in this study. The respondents (adolescents, parents and frontline health workers) were selected randomly from 30 villages and surveyed through semi structured questionnaire for qualitative information and FGDs and IDIs for qualitative information. A 24 hours dietary recall method was adopted to estimate their dietary practices. A total of 1069 adolescent girls, 1067 boys, 1774 parents and 69 frontline functionaries were covered under the study. Percentages and mean were calculated for quantitative variable and content analysis was carried out for qualitative data.

RESULTS: Over 80% of parents provided assertions that they understood the term balanced diet and strongly felt that their children were having balanced diet. However, only negligible 1.5% of parents could correctly recount essential eight food groups and 22% could tell about four groups which was the minimum response expected to say respondents had fair knowledge on balanced diet. Only 10% of parents could tell that balanced diet helps in physical and mental growth and only 2% said it has protective role. Besides, qualitative data shows that the perception regarding balanced diet is having costly food items like nuts and fruits. The dietary intake of adolescents is very low despite the increased iron needs associated with physical growth and puberty. The consumption of green leafy vegetables (less than 35%) and citrus fruits (less than 50%) was found to be low.

CONCLUSIONS/NEXT STEPS: The assertions on understanding of term balanced diet are contradictory to the actual knowledge and practices. Knowledge on essential food groups and nutrients is crucial to inculcate healthy eating practices among adolescents. This calls for comprehensive communication efforts to improve the knowledge and dietary practices among adolescents.

IAAH170390

Assessment of anaemia in adolescents in three districts of Uttar Pradesh

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BACKGROUND: Adolescence has been defined by the World Health Organization as the period of life spanning the ages between 10 to 19 years. This is the formative period of life when the maximum amount of physical, psychological, and behavioral changes take place. Adolescence is a vulnerable period in the human life cycle for the development of nutritional anemia. Nutritional anemia is a manifestation of under-nutrition and poor dietary intake of iron. This study was conducted with an objective to assess the anemia status among adolescent population.

METHODS: A cross sectional community based survey using a semi structure questionnaire and Hb testing was done for 779 adolescents (393 boys and 386 girls) between ages 10 to 19 years in one block each from three districts of Allahabad, Banda and Varanasi in Uttar Pradesh. Hemoglobin estimation was done using Haemocue equipment in the community setting. Anemia was identified using the WHO recommended anemia cutoffs.

RESULTS: The prevalence of anemia was highest in Allahabad district (44%) followed by Banda (40%), and Varanasi district (33%). Overall, boys were found to be more anemic than girls in the study. The prevalence of anemia was found to be highest (56%) in adolescent boys in the age-group of 10-14 years as compared to girls. Among girls, anemia was more prevalent in 15-19 age groups than the younger age groups. Also the consumption of green leafy vegetables and citrus fruits were found to be low among the adolescents (less than 50%). The

consumption of IFA was too low (16% among boys and 12% among girls) at the study sites. Similarly, the consumption of deworming was also low (18% among boys and 17% among girls).

CONCLUSIONS/NEXT STEPS: The prevalence of anemia is high among both adolescent boys and girls. The consumption of iron rich food (green leafy vegetables and citrus fruits) is low among the adolescents. Further, intake of IFA tablets and Deworming among adolescents is very low. There was not much difference between the prevalence of anemia in boys and girls in the study. Hence, health education should be given to the marginalized adolescents about the importance of IFA intake and inclusion of green leafy vegetables and citrus fruits in the diet over a longer duration.

IAAH170392

A study on factors affecting prevalence of overweight among adolescents of 12-19 years of age in urban Patna, India

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BACKGROUND: Overweight and obesity and their health consequences have been recognized as major public health problems worldwide. A significant increasing trend in the prevalence of overweight and obesity among adolescents has been documented over the last few decades in developing countries. The most significant long-term consequences of childhood and adolescent overweight and obesity are their persistence into adulthood with all of the attendant health risks, such as dyslipidemia, hyperinsulinemia, type 2 diabetes, hypertension, cardiovascular diseases, arthritis etc.

METHODS: A cross-sectional institutional study, adopting a multistage stratified sampling, was carried out during July 2016 to December 2016 on adolescents of 12 to 19 years of age of both sexes from Patna. Sample size was calculated assuming overweight and obesity prevalence to be 10%, confidence interval 95% and 20% allowable error. Sample size came out to be 900. Weight was measured for both boys and girls with minimum clothing using a standard weighing scale, with an error of ± 100 grams. The weighing scale was regularly checked with known standard weights. A portable anthropometric rod was used for measuring height of the candidates with an error to the nearest of 0.1 cm, using standard procedures. Obesity was defined as per international obesity task force. The data was analysed through Epi-info 7 software.

RESULTS: The overall prevalence of overweight was 6.1% among boys and 8.2% among girls; 1.6% and 1.0% were obese, respectively. The prevalence was significantly higher among adolescents who watched television ≥ 3 hours/day (10.4%) or belonged to a high socioeconomic background whereas it was significantly lower among those participating regularly in outdoor games ≥ 6 hours/week (3.1%) and household activities ≥ 3 hours/day (4.7%).

CONCLUSIONS/NEXT STEPS: This study emphasizes that regular physical exercise, doing household activities, regulated television viewing, and healthy eating behaviors could contribute to controlling overweight and obesity.

IAAH170458

Obesity, stunting and sedentary activity among adolescent in Indonesia

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BACKGROUND: The prevalence of obesity in adolescence has increased in Indonesia. This increase can be explained partly by stunting and sedentary activity. Obesity is one of risk factor for cardiovascular and other non-communicable diseases. The objective of this study was to assess the prevalence of obesity, stunting and physical inactivity among Indonesian adolescents.

METHODS: Data analyzed from a secondary data of Indonesia basic health research in 2013. Obesity and stunting were determined from BMI for age (z -score > 2) and height for age (z -score < -2) respectively from 63354 respondents in the age of 13-15 years old and 53,194 respondents in the age of 16-18 years old. Sedentary activity was sitting or lying down behaviours include TV viewing, video game playing, computer use, driving automobiles, and reading, with cut off points < 3 hours; 3-5.9 hours, ≥ 6 hours. They were divided in two groups, 10-14 and 15-1 years old.

RESULTS: The prevalence of obesity among adolescents was 2.5% for 13-15 years old and 1.6% for 16-18 years old respondents. However, there were 35.1% of 13-15 years adolescent and 31.4% of 16-18 years old who stunted.

For sedentary activities, there were almost one third (29.1%) of 10-14 years old and a quarter (25.5%) of 15-19 years old adolescents who had 6 hours or more physical in activities.

CONCLUSIONS/NEXT STEPS: It can be concluded that adolescents in Indonesia were low in obesity but very high in stunting and sedentary activities. The suggestion is stunting and sedentary activities during adolescence period should be minimized to prevent obesity and risk for cardiovascular and other non-communicable diseases at adult.

IAAH170495

Burden of anaemia amongst adolescents in a well performing coastal district of India

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BACKGROUND: Adolescence is defined as the period of human growth and development after childhood and before adulthood (10 to 19 years). During this time period, adolescent not only undergo physical and sexual development but also experience social and economic independence, development of identity, abstract reasoning and acquisition of skill among many others. Iron deficiency has been linked to be affecting all these developmental process an adolescent experiences increasing the chances of psychiatric disorder, developmental delay and mental retardation besides increasing reproductive morbidities among adolescent girls during their womanhood. According to World Health Organization (WHO) iron deficiency is the most prevalent nutritional deficiency and its timely correction could raise the national productivity by 20%. Numerous studies have been conducted highlighting the problem of anaemia among adolescent girls. There is a scarcity of data on anaemia among adolescent boys compared to girls due to lack of research. This study aims to find the prevalence of anaemia and the socio demographic factors associated with it among both adolescent boys and girls in a coastal district which has above average socio demographic and health indicators compared the national average.

METHODS: A community based cross sectional study was conducted among adolescents 10 to 19 years in a coastal district of Karnataka after prior ethical approval. A total of 543 adolescents were enrolled in the study. Haemoglobin estimation was done using HemoCue Hb 301. Statistical analysis was done using SPSS version 15.

RESULTS: The total prevalence of anaemia among the adolescents was 36.7%. Boys had higher prevalence of anaemia compared to girls ($p < 0.05$). It was also found that adolescents consuming WIFS were found to be more anaemic compared to the others.

CONCLUSIONS/NEXT STEPS: Much has been done to address the problem of anaemia among adolescents in our country. National nutritional programmes have been in place for decades but have not been able to generate the desired result. There is a need for operations research to consider other factors which could help in the improvement of the nutritional status of the adolescents.

IAAH170502

Increasing rate of undernutrition among adolescent girls in India

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BACKGROUND: Under-nutrition during the adolescence is an important public health problem in developing countries particularly in India. The nutritional status of adolescent girls, the future mothers, contributes significantly to the nutritional status of the community. India has the largest absolute population of adolescents in the world with over 250 million young people between 10 and 19 years. The present paper aims to assess the level of under nutrition among adolescents in India and its states.

DESCRIPTION: The data for the present analysis comes from the Rapid Survey on Children (RSOC-2013-14). The RSOC data is analyzed to explain the level of under nutrition among adolescent girls. The survey covered 105483 household all over the country including 37695 urban households and 67788 rural households. The RSOC measured the weight and height of all the girls aged 10-18 in all surveyed households.

LESSONS LEARNED: In the present RAOS study 62.5% of adolescent girls were undernourished (BMI <18.5). The study shows that 43.6 percent of the adolescent girls aged 10-18 were severely thin (BMI <17) and additional 18.9 percent were moderately thin or undernourished (BMI 17.0-18.4). A small proportion of the girls were either overweight (2.2 %) or obese (1.3%). Only 34 percent of the adolescent girls neither underweight nor overweight (normal). The under nutrition rate was high in Rajasthan (74.4%) and Goa (74%). Three fourth of adolescent girls in Goa state was severely thin (BMI <17). Meghalaya (31%) and Mizoram (36.8%) reported lowest percentage of thin adolescent girls in India. The level of under nutrition was high in rural area than in urban. Tribal adolescent undernourished girls are high in India.

CONCLUSIONS/NEXT STEPS: It is important to include adolescent nutrition as an integral component in National Adolescent Health Strategies that are being formulated. There should be clear-cut policy and strategies for reaching adolescents in school going, out-of-school, in urban slums, rural areas etc. Gender issues, behaviour/life-style modification using multispectral approach should be addressed. It is needed to involving adolescents and young people in the design, planning, implementation and evaluation of measures to improve their health and nutritional status.

IAAH170505

Is healthy BMI related to appreciation motivation?

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BACKGROUND: One important method for motivating young is appreciation. However that needs too much approval can also be counterproductive as they may have no self-motivation. Children need to learn to maintain a healthy BMI without being overly dependent on appreciation of others, and yet also not being so careless about social approval that they let their health slide. We did this study to see the relationship of BMI categories with Appreciation motivation scores.

METHODS: Sample: 712 school children (8th, 9th STD) -two schools in Delhi, India -HSE, English Medium .Divided- Younger Group I -10-14 yrs and Older Group II 15-18 yrs. No names were asked to promote honest answers, only age, gender height and weight to calculate BMI. Tool: Martin H.J. (1984) scale: approval motivation and its relationship to social desirability. This 5 point Likert scale has 20 items Higher scores show more need of Approval .Average score is 53.6 SD 9.02.

RESULTS: Higher scores in both boys and girls .In the total sample -older Group II children had higher scores but the differences were not statistically significant, when we compared normal weight children with other BMI categories. On comparing the age groups within the same BMI category – Normal weight older children Gr I >Gr II: 59.71 vs 56.67 (p=0.019) Comparing schools: Underweight older GR1-School >school 2: 60.72 vs 55.71 (p=0.009).

CONCLUSIONS/NEXT STEPS: It appears that the parents and teachers of our sample use appreciation as a means to motivate them as the scores were high in both boys and girls especially in older Group II. There was no statistically significant difference in scores of various BMI categories .Surprisingly obese overweight children did not have higher scores .So much need for appreciation in this sample can make them vulnerable for peer pressure and high risk behavior. AACCI plans customized workshops in these schools helping students learn the importance of “self-motivation” and not depend on social approval. Workshops need to be held for looking and being healthy.

IAAH170540

Low calorian Food Products use status in students and investigation of effective factors

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BACKGROUND: This study was conducted to investigate the use of low calorie food products and the factors that affect them.

METHODS: Metod: This descriptive study was conducted between February-March 2015. Students who study in the midwifery and nursing departments of the last class who have studied university created the universe of the research. A total of 150 individuals, including 20 boys and 130 girls, were included in the study from the individuals who agreed to participate in the study without going to the sample selection. The questionnaire was prepared by using the literature. Anthropometric measurements (body weight, height) were taken by the researcher. In the analyse of data, descriptive statics, arithmetic mean and chi-squared test have been used.

RESULTS: According to the results of the research, 13.3% of the students were male and 86.7% were girls. When the BMI values of the students are examined, 4.7% is weak, 85.3% is normal, 9.3% is slightly obese and 0.7% is obese. 27.3% of the students think that they are overweight, and 72.7% think that they are in normal weight. 9.8% of students who think that they are overweight use diet products a lot, 22% use moderate, 56,1% use less and 12,2% never use it. No significant relationship was found between those who thought they were overweight and those who used diet products (p>0.05). Students who think they are overweight, There was a significant correlation between exercise (41.3%) and knowledge of low calorie foods (76.7%) and the use of dietary products (p <0.05). According to the responses of the respondents, a significant relationship was found between those who consumed low calorie diet products and those who diet.

CONCLUSIONS/NEXT STEPS: The majority of students are aware of the importance of using low-calorie food products in the development of health and use low-calorie food products. Frequent use of these products by midwives and nursing students is very important. Parents and community awareness studies should be conducted on student trainings on the importance of using these products and especially on the education of adolescents.

IAAH170544

Weight status, dietary factors, and body image perception of Saudi adolescents: Results from Jeeluna, the first adolescent nationally representative study

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BACKGROUND: As in the rest of the world, overweight and obesity among children and adolescents has become a global concern in the Kingdom of Saudi Arabia (KSA). A nationally representative sample of adolescents in KSA, named Jeeluna, was obtained for the first time to investigate many behavioral risk factors including the prevalence and dietary predictors of obesity.

METHODS: The Jeeluna study is a nationally administered, school-based study that was conducted in all 13 regions of the KSA in 2011-12. It was a multistage, stratified, randomized, cluster design with the primary sampling units being the 42 school districts within the country and chosen proportionate to adolescent student population size within each district. A total of 12,542 students from intermediate and secondary schools completed a self-administered survey and had their weights and heights measured by trained professional staff.

RESULTS: Overall, 15.9% (14.9%-17.0%) are obese. Within gender, boys are both more likely to be underweight [17.0 (5.3%-18.8%)] and especially obese [20.2 (18.6%-21.9%)] compared to girls. Regularity in eating breakfast and number of meals per day were significantly different across the weight categories as were consumption frequency of snacks, carbonated beverages, milk, and number of days of eating at fast food restaurants. The frequency of servings of fruits, of vegetables, and energy drinks were not significantly different across the groups. The strongest predictor (although likely not causal) for underweight students was a high frequency of intake of glasses of milk. Among those who think they need to lose weight, 43.0% are of normal weight while 53.7% are overweight or obese. Among those who think they need to gain weight, 44.6% are underweight, 50.0% normal weight, and 5.3% are actually either overweight or obese.

CONCLUSIONS/NEXT STEPS: Results from the first nationally representative adolescent survey in KSA indicate boys as being more likely to be underweight or obese. Among adolescents who think they need to gain weight, less than half are actually underweight. These results call for greater programs for educating and helping adolescents to have healthy and balanced eating habits and a self-affirming but appropriate assessment of their body habitus.

IAAH170564

Developing a scalable model for strengthening weekly iron folic acid supplementation in Punjab: Key learning from Barnala District, Punjab

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¹VRIDDHI: Scaling up RMNCH+A Interventions Project, supported by USAID, ²USAID -India

BACKGROUND: Ever since the institution of millennium development goals, various nutrition interventions were introduced in Low and Middle-Income countries to improve lives of vulnerable population where anaemia is one of the major contributing public health challenges. In India, many programmes such as the Weekly Iron Folic Acid Supplementation (WIFS) have proved to be effective in reducing and controlling anaemia in adolescents. The state of Punjab has been implementing WIFS for adolescents in and out of school since 2013.

DESCRIPTION: A desk review followed by a rapid assessment of WIFS program found several implementation gaps in the program. The current prevalence of anemia among 451 adolescent girls on random sampling method resulted in 88% of anaemic school and out of school going adolescent girls in two out of three blocks of Barnala district. We conducted key informant interviews with different stakeholders of the Education and Integrated Child Development Services departments to understand the key challenges faced during implementation of the program. An annual supply need assessment was undertaken to ensure uninterrupted supply of Iron Folic Acid at the site of delivery which resulted in Zero stock at all 666 Anganwadi Centres. District level workshop to sensitize key officials and share rapid assessment findings about the program and conducting training of service providers is underway.

LESSONS LEARNED: The gap analysis identified poor ownership of WIFS program among implementing Education and ICDS departments, due to poor monitoring, reporting and supportive supervision component in the program. Currently, the key service providers, Anganwadi workers and nodal teachers lack training and have concerns regarding IFA. There are various information gaps between different tiers of the program regarding supply and stock of IFA Tablets which leads to interrupted availability.

CONCLUSIONS/NEXT STEPS: A framework model for effective execution and strengthening of the program is proposed, advocated and implemented in Barnala district, Punjab. This model is an integrated approach that combines weekly supervised IFA supplementation, regular biannual deworming, screening for anemia and nutrition health education through the consented efforts of trained nodal teachers for school going adolescent girls and boys and Anganwadi workers for school dropout adolescent girls.

IAAH170569

The relationship between life quality and eating attitudes of adolescents

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BACKGROUND: Health-Related Quality of Life can be studied in different areas, and its association with various disorders can be considered. One of these areas can be included disturbed attitudes towards eating. The aim of this study is to examine the relationship between life quality and eating attitudes of adolescents. This study was designed as a relational screening model which is one of the general screening models.

METHODS: This descriptive study was conducted using a screening model. A questionnaire was administered as the data collection tool. The study was conducted with 640 voluntarily participating 15-18 years old students studying at public high schools in Ýlkadým, Samsun in Turkey in 2017. Among the participant students, 49.4% were girls and 50.6% were boys; 23.4% were in 9th grade, 25.8% were in 10th grade, 26.3% were 11th grade and 24.5% were

in 12th grade. The study data was collected with the Life Quality Scale for Children which was developed by Varni et al. (1999) and adapted into Turkish by Memik et al. (2008), and the Eating Attitude Test which was developed by Garner and Garfinkel in 1979, and its validity and reliability studies in Turkey were conducted by Savapýr and Erol in 1989.

RESULTS: In the data analysis process, descriptive analysis and Pearson correlation analysis for the relationship between life quality and eating attitudes were used. Simple linear regression analysis was also employed to see whether life quality predicts eating attitude scores. According to the study findings, there was a negative and statistically weak relationship between life quality and eating attitudes. Also, it was revealed that adolescents' life quality scores had a meaningful effect on their eating attitudes.

CONCLUSIONS/NEXT STEPS: Simple linear regression analysis was also employed to see whether life quality predicts eating attitude scores. Also, it was revealed that adolescents' life quality scores had a meaningful effect on their eating attitudes. The study results were discussed in parallel with the literature. The study results were discussed in parallel with the literature.

IAAH170591

Nutritional status of adolescent school boys- A cross sectional study of Aligarh

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BACKGROUND: Adolescent is the period between 10 and 19 years. It comprises a period in the life cycle between childhood and adulthood. Adolescents form the future generation of a country. Adolescents' nutritional needs are critical for the wellbeing of a society. Poor nutritional status during adolescence is an important determinant of health outcome. Investing in nutrition throughout the life cycle will have both short-term and long term benefits of economic and social significance.

METHODS: A cross-sectional study was done covering 500 students between 10-19 years of age from rural & urban schools of district Aligarh. Students were interviewed and anthropometric measurements taken. The data obtained were tested statistically by percentages and Chi-square Test using SPSS.

RESULTS: The overall prevalence of thinness was found to be 20.6%. Overall 10.4% students were found to be suffering from stunting, whereas severe stunting was present in 2.4%.

CONCLUSIONS/NEXT STEPS: Adolescent is vulnerable age group with high prevalence of malnutrition, therefore should be given priority in national health programs.

IAAH170606

Knowledge, perception and use of food and nutrition label among young consumers in East Java, Indonesia

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BACKGROUND: Developing countries is nowadays experienced nutrition transition which characterized by shifting of food consumption pattern to high consumption of fat, sugar, and salts, and increases the risk of nutrition-related non communicable disease, including among young age group. Food and nutrition label on pre-packaged foods can guide the consumers on choosing the healthier foods. This explanatory research was aimed to study knowledge, perception and practices of young consumers on the use of food and nutrition label.

METHODS: The study involved 106 first year students from who were selected randomly from four faculties in Airlangga University, Indonesia in 2013. Data were collected through interview using structured questionnaire and focus group discussion. Factors associated to food label and nutrition label use were analyzed by using chi-square test.

RESULTS: 67.0% respondents have good knowledge on nutrition and health, and 53.8% have good knowledge on food and nutrition label. The prevalence of frequent food label use was 41.1%, and nutrition label use was 30.2%. Factors associated to the use of food label were knowledge on nutrition and health ($p < 0.01$) and perception on the importance of reading food label ($p < 0.005$).

While factors associated to the use of nutrition label were knowledge on nutrition and health ($p < 0.005$), perception on the importance of reading food label ($p < 0.005$), perception on the advantages of food and nutrition label, and perception on the easiness of understanding nutrition information on food label ($p < 0.05$).

CONCLUSIONS/NEXT STEPS: Food and nutrition label use among young consumers in this study were quite low, which might be influenced by knowledge on food and nutrition label. Results of this study recommend the importance of educating consumers on food and nutrition label use, due to relatively low knowledge on food and nutrition label. This research also recommends review of regulation regarding the nutrition information, by considering the use of front-of-pack nutrition labeling on food label in order to help consumers on understanding nutrition information.

IAAH170610

Nutritional Status of adolescents in India: Evidence from Large Scale Surveys

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BACKGROUND: Context: Adolescent is a period of rapid growth of maturation of human development; therefore, significantly affect the future human resources, generations and economic growth of a country. India is home to 243 million adolescents aged 10 to 19 years the most adolescents of any country and where 46.8% adolescents (15-19) suffered from under-nutrition. However, so far due to scarcity of large scale data available for complete age brackets (10-19), no attempt has been made to examine their malnutrition status based on anthropometric measures. Objectives: The study examines the nutritional deficiency status and the factors affecting to this among adolescence in states of India.

METHODS: Data and Methodology: The study uses anthropometric data from District Level Household and facility Survey-4 (2011-2012) and Annual Health Survey(AHS-2014) for 34 states and UTs. In total 7, 02,470 adolescents in India are considered for the study. The study provides state level estimates for stunting and underweight based on z-scores for height-for-age and BMI-for-age below minus two standard deviations (-2 SD) from the median of the 2007 WHO International Reference Population. Logistic regression is fitted to find the several socioeconomic factors determining the nutrition status of adolescents.

RESULTS: Findings: We find nine states have more than half of the adolescent's population stunted. These include EAG states like Bihar, Chhattisgarh and Odisha and north-eastern states like Meghalaya and Arunachal Pradesh. Higher proportion rural and illiterate children are found under malnutrition. The results of the logistic regression show that the females have less chance to be underweight. Adolescents from Schedule tribes (OR-1.41, $p < 0.001$), OBCs and from poor households have higher chance to be underweight than their counterparts. Adolescents residing in households who use improved fuel are 0.11 ($p < 0.001$) times and who live in households who treat drinking water are 0.05 ($p < 0.001$) less likely to underweight than their counterparts.

CONCLUSIONS/NEXT STEPS: Conclusion: Knowing the importance of the development of adolescents in leveraging the future demographic dividend and future health of the country's population, the study findings are crucial and provide the useful indicators of nutritional levels and the determinants of the adolescents growth.

IAAH170629

Association between sleep duration and urban school going obese or overweight adolescents: A cross sectional survey

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BACKGROUND: Obesity in adolescent shown to have more than tripled over the past 4 decades (5.2% to 18.4%). The rise in obesity has been paralleled by decreases in the amount of time that adolescents have spent sleeping. So the rationale behind the study is to analyse the association between sleep duration with obesity or overweight in 14 to 18 years of adolescents.

METHODS: a school based cross sectional study was conducted among adolescents aged 14 to 18 years recruited from urban high schools in Jhansi.

Height and weight were self-reported, and BMIs were calculated (kg/m²). Hours of sleep were self-reported. A predesigned schedule was used as study tool to collect data regarding socio-demographic profile of adolescents. The means and standard deviations are presented for the continuous variables and the frequencies and percentages are provided for the categorical variables. Chi square test was used to determine the association. Epi info software was used for statistical analysis.

RESULTS: BMI increased from age 14 to 18, with the largest increase observed at 18 years of age. Sleep duration was increased from 7.5 hours to 10 hours as the age increases.

CONCLUSIONS/NEXT STEPS: more sleep may be helpful in preventing overweight and obesity in adolescents

IAAH170661

Nutritional status of the tribal adolescents in a district of Western India – a cross sectional study

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BACKGROUND: The 2016 Global Nutrition Report said 44% of countries were now experiencing 'very serious levels' of both under-nutrition and obesity. Being malnourished is 'the new normal' now, the report's authors said. UNICEF SOWC 2011 report revealed 47% of Indian adolescents being under-weight. Considering the scenario, this study is an attempt to document the anthropometric status of tribal adolescents from a tribal district of India.

METHODS: The data was collected as a part of routine activities in the field practice area of Government Medical College, Surat. A total of 242 tribal adolescents of Dang district in South Gujarat were interviewed and their anthropometric parameters were recorded.

RESULTS: The mean age of study participants was 15.14 (SD 2.45), 40.9% male and 59.09% female participants. Majority of the participants were currently studying (88.3%) and staying at hostel (72.1%). Children in this tribal district very commonly stay hostel/residential schools due to the seasonal migration of their parents for employment. Majority (97.4%) had the habit of breakfast in the morning which was some homemade food for majority (89.8%). A total of 42.9% of adolescents consumed carbonated drinks less than once in a month. Almost half of them had to walk around 1-2 kilometers daily for commute and in addition to this 75.1% had the habit of exercising regularly. Considering the BMI, majority (71.5%) were in the underweight category and 25.2% and 1.7% in normal and overweight categories respectively. BMI showed statistically significant relationship with sex ($p < 0.001$, more males being underweight than females, 85.3% and 63% respectively) and their own body image perceptions ($p < 0.000$). Though majority were normotensive, 3.3 % and 1.2% were in pre-hypertensive and stage 2 hypertensive stages considering systolic blood pressure and 7.4% in stage 2 hypertensive stages considering diastolic blood pressure. It was interesting to find that more males were having mild anemia but moderate and severe anemia were found to be more in females, this was statistically significant ($p < 0.02$)

CONCLUSIONS/NEXT STEPS: Despite having good dietary and physical activity habits, under nutrition was quite rampant in the study participants. Faulty body image perceptions need to be addressed.

IAAH170682

Determinants of Ethiopian 'teenagers' meal intake

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BACKGROUND: Many factors influencing children's dietary intakes. Amongst determinants, meal eaten at home contributes to quantity and quality of children's dietary diversity. The main objective of this paper was to explore determinants of teenagers' meal intake (8-15 years of age).

METHODS: Data from Ethiopia School Survey (2012-2013) were used. Different statistical analyses such as, descriptive, bivariate and logistic regression, formed the basis of this paper.

RESULTS: Results showed no significant difference between girls' and boys' meal intake. Further, living without birth mother decreased probability of

teenagers' meal intakes (OR=0.838). Further, frequency of meal intake decreased among teenagers living in low-wealth households (OR=0.369). More importantly, relatively strong association was found between accumulated health problems score and meal intakes. Interestingly, having livestock was negatively associated with teenagers' meal intake (OR=1.237).

CONCLUSIONS/NEXT STEPS: In conclusion, it should be noted that among factors, family wealth, in household levels, and teenagers' health status, in individual level, are considered to be the determinants of meal intake in Ethiopia.

IAAH170691

The eating attitudes of nursing students and affecting factors

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BACKGROUND: During the university period, adolescents live independently of their families and their eating habits change. Nutritional status and behavior of university students are affected by many factors. This research was conducted to determine eating attitudes of nursing students and influencing factors.

METHODS: This study was conducted as a descriptive study between February and March 2015. It has been aimed to reach the entire target population without going through sampling. 240 students who accepted to participate in the research have been taken into scope of the research. Approval has been taken from the institution and participants before the research. The data of the study were collected by the Data Collection Form and the Eating Attitude Scale. In the analysis of the data, number, percentage and chi-square (χ^2) test, t-test and ANOVA were used in SPSS 20.0 package program.

RESULTS: 72.5% of the students who participated in the research were female, 27.5% were male. 58.3% of the students were in the 21-23 age groups, 31.3% of the fathers were high school graduates and 34.2% of the mothers were primary school graduates. However, 50.8% reported eating three meals, 75.8% skipping meals, most skipping breakfast 42.1%, and most of the students consuming junk food 2-3 times a week. The relationship between gender and age and eating attitude scale was found significant ($p < 0.05$). There was a significant relationship between maternal education status and eating attitudes of students ($p < 0.05$). 72.1% of the students were educated about nutrition. The vast majority have received this education from the school. The difference between the number of meals and eating attitude of the students was significant ($p < 0.05$). There was no significant relationship between nutritional education and eating habits and eating attitude ($p > 0.05$). A statistically significant relationship was found between the class that the student read and the nutrition education status ($p < 0.05$).

CONCLUSIONS/NEXT STEPS: As maternal education increases, the correct eating attitudes increase. For this reason, we recommend that students and their families be educated about eating disorders and take protective measures. Key words: Student nurses; eating attitude; nutritional behaviour.

IAAH170709

Introducing the new nutrition guideline to Indonesian overweight/obese adolescents using a short movie: The Impact on nutritional knowledge, eating habit and dietary intake

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BACKGROUND: Overweight and obesity were associated with increased energy intake therefore an effective approach to prevent the excess intake of energy is warranted. The Indonesian Ministry of Health has recently published the new nutrition guideline that aimed to improve dietary practice and to reduce nutrition related problems. The aim of this study was to examine the effect of an educational movie on nutritional knowledge, eating habit and dietary intake in overweight/obese adolescents.

METHODS: A total of 88 overweight/obesity subjects aged 15 to 17 years old participated in this study. Those subjects were divided into two groups: control group (lecture only) and movie group (lecture + movie). Nutritional knowledge, eating habit and dietary intake were measured before and after the intervention.

RESULTS: Both groups had increment in nutritional knowledge after the intervention but movie group had higher increment than those in control group ($p < 0.05$). Dietary intake was reduced in both groups and subjects in movie group had significantly higher reduction in energy intake after the first month

of intervention ($p < 0.05$). Interestingly, subjects in movie group significantly reduced consumption on fried foods ($p < 0.0001$), snacks ($p = 0.037$), sugar ($p = 0.015$) and increased consumption on vegetables ($p = 0.029$). Those effects were not seen in control group.

CONCLUSIONS/NEXT STEPS: In conclusion, we showed that an educational movie on a school based promotion of nutrition guideline was effectively increased nutritional knowledge, improved eating habits, and reduced energy intake of overweight/obese adolescents.

IAAH170712

Hygienic, pricey and effortful: What healthy eating means to Indonesian young urban adults

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BACKGROUND: Many middle-and-low income countries are facing double burden of malnutrition, including Indonesia. To our knowledge, there is not yet a program that specifically addresses healthy eating in young adults in Indonesia. Along with the physical and psychological changes, many Indonesian young adults also face sociological changes as they move away from home for education and/or economic purposes. The needs to address this issue in this fairly neglected age group are heightened by the size of population. Responding to the needs of finding effective measures in addressing nutrition issue, this study aimed to explore how Indonesian young urban adults understand healthy eating in relation to their own-eating habits. The results will inform the development of programs that promote healthy eating in young adults.

METHODS: Semi-structured interviews were conducted remotely with fifteen third-year-students, aged 19-21 years old, from Public Health Faculty Universitas Indonesia. The interviews were audio recorded and then transcribed for analysis. Inductive thematic analysis was performed in 6 phases (Barun and Clarke, 2013): 1) data familiarization, 2) generating initial codes, 3) searching themes, 4) reviewing themes, 5) defining themes, and 6) producing report. All respondents provided either signed written consent form or verbal consent to the study.

RESULTS: The analysis generated following five interrelated themes: a) perception about own-eating habit, b) perception about healthy eating, c) perceived feasibility of healthy eating, d) sense of relevancy towards healthy eating, and e) potential solutions.

CONCLUSIONS/NEXT STEPS: Findings suggested that participants rely on external resources to motivate them practicing healthy eating. Besides, perceptions about health as physical ability to carry on everyday task hampered participants' motivation to change their eating habit. Participants proposed that campaign messages should highlight healthy eating benefits (ideal body weight, less stressful life, productivity) and consequences of unhealthy eating. Participants also noted the importance of having a message/someone to remind and/or to monitor their eating practices. Based on these findings, the authors suggest that future research needs to address young urban adults without health education background to explore barriers and understanding on healthy eating.

IAAH170713

The Basic Sense of Self in Youth at High Risk for Developing Schizophrenia

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BACKGROUND: Phenomenological researchers of schizophrenia argue that it is first and foremost a disorder of the basic sense of self (also known as ipisity, minimal or core self), that is, of the immediate, pre-reflective, embodied sense of being immersed in the world. According to the self-disorder model, impairment of the basic sense of self precedes clinical symptoms and is independent of them. Hence, this study postulated that youth at high psychometric risk for developing schizophrenia would present an impairment in their basic sense of self, as measured by levels of ego strength, basic symptoms, and pronoun usage.

METHODS: Eighty undergraduate students aged 19–22 years ($M = 20.83$ years, $SD = 1.28$ years) completed The Schizotypal Personality Questionnaire (SPQ), Ego Strengths Questionnaire (ESQ), the self-report version of Schizophrenia Proneness Instrument (SPI-A), and four written narratives about personal and fictional experiences. Based on the SPQ scores, participants were allocated to

either control ($Z_{spq} < 1$ on all three subscales) or study group ($Z_{spq} > 1.28$ on at least one subscales). To obtain the linguistic dimension of the pronouns usage in the written narratives the essays were subjected to Linguistic Inquiry and Word Count (LIWC).

RESULTS: The high-risk group presented lower levels of ego strength and higher levels of basic symptoms, as compared with the control group. In terms of pronoun use, the study group used more personal pronouns and the 'they' pronoun in their written narratives. Furthermore, scores from self-report measures (SPI-A, ESQ) correlate significantly with the objective lexical pattern of pronoun use. An increased use of 'they' correlated with lower levels of ego strength. Higher levels of basic symptoms correlated with higher use of overall pronouns, personal pronouns, 'she' and 'they' pronouns. Nevertheless, logistic regression revealed that it is the level of ego strengths that has the most predictive power for group membership.

CONCLUSIONS/NEXT STEPS: In line with the hypothesis, youth at high psychometric risk for schizophrenia, present a somewhat diminished sense of basic self as compared with the non-risk group.

IAAH170718

The effect on the eating attitudes of test anxiety in senior high school students

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BACKGROUND: Background: Eating disorders usually occur during adolescence with the beginning, eating attitudes and behaviours it is formed in earlier periods. In today's young population, besides eating disorders Unhealthy eating behaviors that do not reach the diagnostic level can also be seen. According to studies conducted with different samples, adolescents are at greater risk of eating disorders. In this study, it was aimed to investigate the influence of the test concerns on the eating attitudes of senior high school students.

METHODS: The sample of this study, which was planned in accordance with the cross-sectional research principles, was composed of 184 students who read in the last grade of high school. Survey data were obtained with the questionnaire form "Eating Attitude Scale" and "Test Anxiety Inventory". The obtained data were evaluated by descriptive statistics, t test, Anova, Mann-Whitney U test and Pearson Correlation analysis.

RESULTS: 52.7% of the students who participated in the research were female, 47.3% were male. According to the body mass index, 73.3% of the students are normal and 12.7% of the students are in the overweight category. 61.3% of the students perceived weight as normal while 23.3% were found to be obese. 40% of the students stated that they did not eat healthy and 43,3% stated that they changed the nutritional status during the examination process. In the study, students' eating attitude averages were found to be 15.48 ± 10.21 and test anxieties were found to be 39.31 ± 12.07 . There was a significant positive correlation between eating attitudes and test anxieties of students ($r=0.211$, $p=0.010$).

CONCLUSIONS/NEXT STEPS: There is a relationship between changes in eating attitudes and test concerns during the university entrance examination process for students. Since the eating habits acquired during this period will affect future periods, students should be informed about how they will cope with test anxiety and how they should be fed in this process. Key Words: High school student, Eating attitude, Exam anxiety.

IAAH170725

Association of BMI and waist to hip ratio with the ratio of LDL to HDL and total cholesterol to HDL in urban adolescents without cardiovascular risk factor in Indonesia

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BACKGROUND: Incidence of cardiovascular disease in adulthood could not be separated from the continuous interaction from infancy through adolescence. Some risk factors for cardiovascular disease occurred since his teens. High level of low-density lipoprotein and cholesterol is often indicative of increased risk for cardiovascular disease. The ratio of LDL to HDL and total cholesterol to HDL can be used to reveal the risk of it.

METHODS: An ETA correlation study using primary data which are gathered

prospectively among random adolescents in Jambi whose BMI is underweight, normal, overweight, and obese. Data on 12 potential factors including daily intake, physical activity, and family history were collected three days. We administered a questionnaire and measured BMI and waist to hip ratio to assess statistical relation with the level of LDL to HDL and total cholesterol to HDL ratio. Category of them was stratified from high risk and low risk. Examination of lipid profiles was done at the clinical laboratory of Abdul Manap Regional Public Hospital in Jambi. Duration of research was about 3 months.

RESULTS: The study included 50 people with age span of 16 to 20 years old with all of them had low level of LDL to HDL and total cholesterol to HDL ratio. Most of samples were underweight 42% resulting low risk for cardiovascular disease as well as normal 24%, overweight 26%, and obese 8% people. BMI was likely to influence the low level of LDL to HDL ($\chi^2=0.705$) and total cholesterol to HDL ratio ($\chi^2=0.765$), confirmed statistically significant. 94% samples with low risk category of waist to hip ratio were likely to have low risk for cardiovascular disease. Waist to hip ratio influenced the low level of LDL to HDL ($\chi^2=0.003$) and total cholesterol to HDL ratio ($\chi^2=0.021$). Other factors that associated with the level of LDL to HDL and total cholesterol to HDL ratio were frequency of daily intake including fruit, vegetables, and snacking consumption, physical activity, and family history of non-communicable disease.

CONCLUSIONS/NEXT STEPS: The strongest association was a relation of the level of LDL to HDL and total cholesterol to HDL ratio with Body Mass Index. By knowing the risk factors, cardiovascular disease can be prevented at earlier age.

IAAH170733

Evaluation of relationship between smoking and nutrition habits in university students

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BACKGROUND: The researches on the frequency of food consumption on smokers' adults and adolescents revealed that they cause differences in cigarette eating habits. Smokers are less appetite than non-smokers. This affects the choice of adequate and balanced nutrients. Objective: The study was conducted to evaluate the relationship between smoking status and eating habits of male students living in Ondokuz Mayıs University.

METHODS: This study was conducted as a descriptive study between February and March 2014. The universe created male students living in the country. It is aimed to reach the whole of the universe without going to the sampling selection. 250 male students who agreed to participate in the survey were included in the study. The data of the research were collected with the help of a questionnaire consisting of 30 questions prepared by the researcher. Approval was obtained from pre-research institutions and participants. The results obtained from the study were evaluated in the SPSS 20.0 statistical package program. In the analysis of the data, numbers, percentage and chi-square test were used.

RESULTS: It was determined that the smokers 26.8% were weaker than the non-smokers 6.7% in the BMI evaluation of the individuals included in the study ($BMI < 20$). There was a statistically significant difference between the smokers 48.8% and the non-smokers 36.7%. Smokers had lower daily fluid consumption than non-smokers ($p < 0.05$). Non-smokers are significantly more likely to exercise than smokers. Smoking, daily tea and coffee consumption were found to be higher than non-smokers ($p < 0.05$). The relationship between smoking status and consumed food group was statistically significant ($p < 0.05$).

CONCLUSIONS/NEXT STEPS: As a result, smoking has negative effects on nutrition and food consumption. Suggestions on adequate and balanced nutrition were made. Keywords: Cigarette, Nutrition, Effect of cigarette feeding, Body mass index (BMI).

IAAH170797

Consumptions of Sugary soft drinks by urban young adults in Colombo Sri Lanka

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BACKGROUND: Sugary soft drinks (carbonated drinks) are considered a significant source of sugar influx in to communities, thus making them more prone to developing Diabetes and Cardiovascular Non communicable Diseases

(NCDs). Regulations made by the Minister of Health, Nutrition and Indigenous Medicine of Sri Lanka in May 2016, under Section 32 of the Food Act, No. 26 of 1980, in consultation with the Food Advisory Committee made it mandatory to display the sugar level of the product numerically on the label as well as to display a colored circle according to the sugar level of the drink. The color codes were red, yellow and green for high, medium and low sugar content respectively. Though these regulations have been in place over a year, it is not well known the current status of the consumption of sugary drinks. With the current global and local emphasis of targeting the youth to prevent future NCDs, this study was conducted with the aim of describing the amounts, patterns and related factors associated with sugary drinks consumption among urban youth.

METHODS: 275 conveniently selected youth between the ages 18 and 35 from Colombo Sri Lanka were given a self-administered questionnaire to assess amounts and associative factors around consumption of some popular sugary drinks in the Sri Lankan market.

RESULTS: Out of received 257 responses, 142 were males and 115 were females. The mean age was 23.9 years (SD 4.3). 67 were drinking 2 or more bottles per day. 52.1% have started regular consumption since their late teens. The average monthly consumption was 10.9 bottles (SD 12.4). The mean total monthly sugar intake through sugary drinks was 260.2 g (SD 296.7g). 72% agreed that advertisements tempt them and 74 individuals claimed that social media has an influence as well.

CONCLUSIONS/NEXT STEPS: The consumption of sugary drinks was high among the young adults and the factors that led to that were initiated in the late adolescent years and were reinforced by social factors around the same age; which indicates a point to intervene through a large scale community campaign targeting adolescents.

IAAH170803

Nutritional status and perceived body image issues of adolescents: findings from a cross sectional study in a rural area of South Delhi

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BACKGROUND: Body image is a multidimensional aspect that involves biological and psychological factors along with the cultural and social determinants. It is an important part in shaping the identity of an individual especially during the adolescent phase. Adolescents who have body image disorders or dissatisfaction are prone to develop depression and other mental disorders in the due course of time. As a part of a study among the school going adolescents, we assessed the nutritional status and their perceived body image, findings of which are reported here.

METHODS: A school based cross sectional study was conducted among students of class 11th in 3 government schools of a rural area of South Delhi. A pre-tested semi structured questionnaire was used to illicit information on body image issues. Standard Secca weighing scale and Stadiometer were used to measure weight in kilogram (kg) and height in meter (m) respectively. Body Mass Index (BMI) was calculated as weight in kg divided by height in m². Standard WHO gender-specific BMI-for-age growth curves were used to categorize the nutrition status of adolescents. Data was entered in MS Excel and results were expressed as proportions.

RESULTS: Of the 543 study participants, only 11 (3.9%) of the 286 boys, and 10 (3.9%) of the 257 girls considered themselves to have a normal body image. Most of the boys (68.5%) and girls (49%) considered themselves too thin; while 16% of the participants felt they were too ugly. The BMI of the study participants ranged from 13.6 kg/m² to 30.2 kg/m² with a mean BMI of 19.6 ± 2.7 kg/m² (95% CI, 19.37-19.83). A total of 436 (80.3%) of the study participants had normal BMI, while 68 (12.5%) were thin, 3 (0.6%) were severely thin, 34 (6.2%) were overweight and 2 (0.4%) were obese.

CONCLUSIONS/NEXT STEPS: Body image as perceived by most adolescents is not in proportion to their nutritional status, and hence adolescents should be counselled regarding the same. As almost 1 in 5 adolescents is either under or over-nourished, they need to be made aware of proper nutrition and dietary habits.

IAAH170824

Relationships between parents' academic background and income and building children's healthy eating habit

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BACKGROUND: Building healthy eating habit is essential for all people. School and family are the prime institutions to instill this habit during early age. This study aimed at understanding the impact of family such as parents' education and income on building students' healthy eating habit.

METHODS: In order to achieve the aim quantitative method was used and thus close ended questionnaire was the tool of data collection. Primary school students of grade 4 (11 years) and 5 (12 years) from Kulim district, Malaysia were the target population of the study. Data from 318 respondents were analysed. Descriptive statistics were used to find the present scenario of their knowledge, attitude and practices towards their eating habit while inferential statistics such as one-way ANOVA and independent sample t-test were used to find the differences of their practices based on students' gender, parents' education and income.

RESULTS: The study found that the students have a good knowledge on types of healthy food but yet their preferences are towards the unhealthy food. Though the students' gender and parents' education were not found significantly related to students' knowledge, attitude and practices towards healthy eating habit, Parents' income had significant influence on promoting the healthy eating habit.

CONCLUSIONS/NEXT STEPS: Findings of this study can be useful to guide the parents in healthy food choices and suggest them to be model to their children in building healthy eating habit.

Safety and Violence

IAAH170069

Adolescent female migrants and employment brokers in Ethiopia: A study of risks and support to migrant girls

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BACKGROUND: The majority of internal migrants in Ethiopia (55%) are female, with young females dominating the population of migrating adolescents (Ezra 2001). In Ethiopia, many migrating females rely on employment brokers to find them jobs, when they arrive in urban areas. Employment brokers may be licensed or unlicensed and typically find girls work as domestic workers, bar and restaurant workers and commercial sex workers.

METHODS: This is a study of internal female migrants in Ethiopia, as well as brokers who support girls in employment. Initial in-depth interviews were held with migrating girls and brokers in six regions. A quantitative study was subsequently undertaken. Domestic workers and other migrant girls were sampled through household listings in low income urban areas. Commercial sex workers and brokers were identified through purposeful sampling. In all, 4,179 migrant girls and 270 brokers were interviewed.

RESULTS: Nearly one third 29% of migrating girls had had contact with a broker. Commercial sex workers were significantly more likely to have had contact 52% compared to domestic workers 27% and other migrant girls 22%. Among those having contact with brokers, 30% reported that the broker helped them in other ways including advice and counseling and help to find accommodation. At the same time, 9% reported that the broker tried to have sex with them, while 22% of brokers reported to having sex with girls they place into jobs. One broker described: "Girls who migrate pique your interest. She may be a virgin. Something about her makes you interested. There is a saying that goes, 'Brokers don't let go of girls without sampling them first.' It is true. You invite her for coffee or tea ... while you are having coffee or tea, the time goes. You tell her that you are going to get a room for her and that she is going to sleep there. She will say OK because has no other option ... I have done this to 60 girls..." - Unlicensed Broker, Age 32.

CONCLUSIONS/NEXT STEPS: Programmatic attention needs to address the risks facing migrating girls and additional regulation of employment brokers is warranted.

IAAH170106

The link between female genital mutilation and women's justification of intimate partner violence (IPV) in Egypt and Sudan

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BACKGROUND: Female Genital Mutilation (FGM) and Intimate Partner Violence (IPV) are two forms of Gender-Based Violence (GBV). Whereas many studies have focused on FGM, only a few have examined its association with women's own justification of IPV. This study focused on Egypt and Sudan and assessed the association between women's perception of whether FGM should continue and their justification towards IPV. As FGM carried out on young girls under 15, we want to know how exposure to FGM is associated with justifying IPV.

METHODS: A secondary data on 15-49 years ever-married women was obtained from two national surveys: The Egyptian Demographic Health Survey (EDHS 2014; N=6,693) and the Sudanese Multiple Indicator Cluster Survey (MICS2014; N=12,942). Our outcome variable measures whether a respondent justifies IPV in five different situations. We included two main FGM variables as predictors: 1) the respondent underwent FGM and 2) she supports the continuation of the practice. Model 1 examined the association between the respondent's FGM status and IPV justification. Model 2 examined the association between the respondent's support for the continuation of FGM and IPV justification. In both models, we controlled for socio-demographic variables known in the literature to associate with IPV.

RESULTS: FGM is highly prevalent in Egypt and Sudan. In 2014, 92% and 86.6% of 15-49 years old ever-married Egyptian and Sudanese women underwent FGM respectively. Furthermore, 36% and 38.6% of ever-married women in Egypt and Sudan, respectively justified wife beating. Our findings

reveal that Egyptian women who have undergone FGM were more likely to justify IPV (OR = 1.3, 95% CI 1.026-1.665); while in Sudan, it is not significant. Moreover, the association between the perception that FGM should continue and IPV justification was stronger in Egypt than in Sudan. Egyptian women who believe FGM should continue were 1.61 times more likely to justify IPV (95% CI 1.398-1.861).

CONCLUSIONS/NEXT STEPS: FGM itself was significantly associated with IPV justification in Egypt but not in Sudan. However, the perception that FGM should continue is significantly associated with justifying IPV among ever-married women in both Egypt and Sudan. In Egypt, supporting the continuation of FGM is a strong predictor of IPV justification.

IAAH170146

A comparative study on aggression among school going adolescents of rural and urban area of Jhansi, Uttar Pradesh

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BACKGROUND: Adolescence is a period of immense physical, mental and social changes. Aggression is very common feature in this period in the present day world. The present study was an effort to conduct an empirical investigation on aggression in school going adolescents in rural and urban area. Keeping this in mind following objectives were evaluated to assess the prevalence of aggression among school going adolescents in rural and urban area and to analyse the predisposing causes of aggression among school going adolescents.

METHODS: It was a community based cross sectional study conducted from October 2014 to January 2015 among adolescents aged between 14 to 19 years in two schools (one from rural and one from urban area) of Jhansi. Direct and Indirect scale (DIAS) was used for data collection and to assess aggression. SPSS version 16.0 was used for the analysis of data.

RESULTS: On the basis of DIAS analysis, the adolescent boys of age group of (17 to 19 years) of rural school scored very high on DIAS scale as compared to boys of similar age group in urban school. Poor economic condition was found to be most common predisposing cause among rural children.

CONCLUSIONS/NEXT STEPS: The present study able to give a meaningful explanation and understanding of aggression prevailing among rural and urban school going adolescents in their ecological context. There must be the need of counselling and teachers must play an important role to handle children to counter there aggression.

IAAH170252

Emergency department experiences of youth presenting with self-injurious behaviour

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BACKGROUND: Self-injurious behavior (SIB) in young is an increasingly growing concern worldwide. These include a range of behaviors that cause direct and deliberate harm to self, including non-suicidal self-injury (NSSI) and suicidal behaviors (SBs). Empirical research indicates that as much as 40% of those who engage in self-injury have thoughts about suicide while inflicting the injury and approximately 50% to 85% of people who injure themselves have attempted suicide at least once during their lifetime. Adolescents and young people represent over a quarter of India's population (indeed, India is home to the largest number of young people in the world) and suicide, which is the tip of the iceberg of SIBs, is a leading cause of death in this age group. It is a challenging experience for the youth and their family members when they have to present to the emergency department (ED) to get treatment for SIB. The treatment provided in the ED could sometimes hold the key to the future response of the youth and their family members to SIB and could be decisive in if they would want to get the medical treatment during subsequent episodes of SIB. This experience could play a role in triggering and maintaining these behaviors.

METHODS: This is a qualitative study. 15 youth (14-24 year old) and their primary care-givers are interviewed to investigate their experience of treatment in the ED; explore the treatments sought and provided for SIB; and understand the treatment expectations and desired outcomes. The in-depth clinical interviews with youth and their parents/ care-givers will help in elucidating their experience

of treatment in the ED and the areas where they would want an improvement.

RESULTS: The themes of the interview and the identifiable areas of service improvement will be discussed in detail.

CONCLUSIONS/NEXT STEPS: The treatment provided in the ED could have an impact over the long-term outcome in SIBs and may play an important role in the suicide prevention programme. This study provides us with some suggestions related to service delivery in youth presenting to the emergency department subsequent to SIB.

IAAH170345

Attitudinal and normative associations with intimate partner violence: a cross-sectional study using dyadic couples data from Niger

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BACKGROUND: Prior cross-sectional research suggests that both men's and women's attitudes towards intimate partner violence (IPV) are predictive of women's IPV experience, although this can vary greatly by context. In general, women who have experienced IPV are likely to report attitudes accepting of it. Men who perpetrate IPV may also report attitudes accepting of it, although some research has found that there is not always an association. Studies that investigate these dynamics often conflates attitudes with social norms, or may use attitudes as a proxy for social norms, given that valid measures on social norms are usually lacking.

METHODS: Here we have unique data from Niger, in which we have comprehensive dyadic level couple's data from couples in which the wife is an adolescent. Survey questions include husbands' and wives' reports of attitudes towards IPV, and a unique set of questions on husbands' and wives' social beliefs around gender roles, including the acceptability of IPV.

RESULTS: We find that, consistent with other research, wives who have reported IPV are more likely to report attitudes in support of IPV, while for husbands that relationship is not significant. On the other hand, husbands who report that people in their community believe that there are times when a woman deserves to be beaten are more likely to have perpetrated IPV, while for wives there is no association between the community norm and IPV reporting. Finally, wives who report that people in their community hold inequitable gender norms in general are more likely to be those who have experienced IPV, while for husbands community gender norms are not predictive of whether their wives have reported.

CONCLUSIONS/NEXT STEPS: Our results are evidence that IPV prevention interventions focused on solely individual attitudes may be insufficient.

IAAH170471

Young people advocating to address gender-based violence and social drivers of adolescent health

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BACKGROUND: Globally, 28% of adolescent girls have experienced gender-based violence. Each year, 15 million girls are married under the age of 18. Adolescent girls face diverse social and cultural barriers to fulfilling their health and rights to living to their full potential. Adolescents and young people are also often not the part of policies and programs that affect their lives.

DESCRIPTION: From July 2016 – January 2017, youth advocates were given seed grants of \$5,000 USD over a period of six months to implement advocacy projects. These youth advocates also participated in coursework that increased their skills and knowledge in advocacy and project management, while benefiting from technical advice during the implementation of their project. Through his project, Williot was able to work with a coalition of religious and community leaders to implement laws to eliminate child marriage in Ntcheu District, Malawi, and used community awareness to reduce socio-cultural barriers to keeping young girls in school. In Nigeria, Olaoluwa's Safe Kicks Initiative teaches young girls self-defense techniques in schools. In Vietnam, Trang used digital media to raise awareness about discrimination against LGBTQ and trans youth.

LESSONS LEARNED: To date, these advocacy efforts directly benefitted a total of 9,149 adolescents ages 10-19 (5,893 female, 3,256 male) in the communities where projects were implemented. Issues of young people were also placed on policy agendas and gained support from community members: overall, six local legislators placed these issues on their political agenda, and 25 community influencers expressed public support for youth SRHR issues. In addition, partnerships with local governments and partner organizations are being sustained past the project's duration, enabling the continuation of advocacy efforts.

CONCLUSIONS/NEXT STEPS: The direct funding and technical support enables young people to be effective advocates in their own right. The immediate and ongoing results from these seed grant projects demonstrate that young people themselves are strong, effective advocates to advance adolescent health and wellbeing, and are contributing to making programs and policies more effective and responsive to the needs of adolescents and young people.

IAAH170482

A multisectoral intervention to prevent sexual violence and early pregnancy in Amazonian girls and adolescents from a poor village of Loreto

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BACKGROUND: Loreto concentrates the highest proportion of adolescent mothers in Peru (30.4%). The Village Pueblo Libre is very poor and is a flood zone from December to April, so the homes are floating ponds that makes health interventions more complex. The context of social violence and delinquency and naturalization of violence in family relationships constitute risk situations for the development of adolescents. There has been no implementation of multisectoral programs that allow adolescents, especially those who are vulnerable, to access comprehensive services to prevent these serious problems.

DESCRIPTION: Targets of the intervention were girls and adolescents aged 7 to 15, caregivers, health providers and local authorities. The objective was to design, implement and validate a multisectoral intervention aimed at preventing sexual violence and early pregnancy with the leadership of local government, community leaders and local health centre. The intervention had 4 components: strengthening protective factors against early pregnancies and gender violence; strengthening safe parenting strategies; strengthening the community environment, making it safe (health, education, social protection services); a capacity building plan for government officials and operators including the implementation of a Friendly Health Service for Adolescents.

LESSONS LEARNED: To design more effective interventions it is essential to understand in depth the context of vulnerability in which girls and adolescents live and the socio-cultural factors that influence community attitudes and practices. The articulated work between diverse sectors is key to address issues such as sexual violence and early pregnancy that involve complex social determinants.

CONCLUSIONS/NEXT STEPS: A model of multisectoral intervention was validated in a situation of high vulnerability. Leaders, health providers and caregivers have improved their performance and the community is able to identify strategies and methodologies and to active participate in the prevention of gender violence as well as early pregnancy. It is planned to replicate the strategy within the framework of a public program to prevent gender violence in 4 Amazonian regions led by the Ministry of Education with participation of health and social protection sectors, in which a main focus will be to promote access and use of health services and social protection services offered in the community.

IAAH170483

Sex trafficking of adolescents in Haiti: Population-based prevalence and increased risk based on sexual violence in childhood

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BACKGROUND: Sex trafficking is a major human rights and public health concern globally. However, general population-based estimates of the problem

have not been available and very little is known regarding the factors in childhood that affect the vulnerability of young people to sex trafficking. This research aims to assess the prevalence of sex trafficking (i.e. involvement in the sex trade as a minor), and sexual violence as a risk factor for this experience among a representative, population-based sample of youth in Haiti.

METHODS: As part of the global Violence against Children Studies (VACS) initiative, data were collected from a multi-stage sample of the general population of youth ages 13-24 years (n=1459 males, n=1457 females) across Haiti. The prevalence of exchanging sex for money or goods under the age of 18 years (i.e., sex trafficking) was calculated for both male and female youth, as their was risk for sex trafficking based on sexual violence in childhood.

RESULTS: Among the general population of youth in Haiti, 6.1% of males and 4.3% of females reported experiencing sex trafficking; over 1 in 5 adolescent males 21.1% and females 24.9% reported childhood sexual violence. Childhood sexual violence was associated with approximately 5 times greater odds of sex trafficking among boys (AOR 5.2) and 6 times greater odds among girls (AOR 5.9). Models limited to cases in which childhood sexual violence occurred previous to or coincident with sex trafficking were constructed to better understand whether sexual violence may be a risk factor for this victimization. For each additional year younger that a boy first experienced sexual violence, the odds of his being sex trafficked increased 1.6 times. Among girls, each year younger that they experienced sexual violence increased their odds of being subsequently trafficked by 1.2 times.

CONCLUSIONS/NEXT STEPS: Approximately 1 in 20 children among the general population in Haiti may be considered victims of sex trafficking. The more than 1 in 5 children victimized via childhood sexual abuse were far more likely than other children to have also been trafficked, with those children experiencing sexual abuse at younger ages at the greatest risk.

IAAH170489

A description of young adult female perpetrators of sexual violence in the United States

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BACKGROUND: Historically, methodological designs have largely focused sexual violence perpetration questions toward males and victimization queries to females. There is a paucity of research dedicated to female offenders. Effective prevention efforts begin with knowing who is perpetrating and the circumstances around it.

METHODS: As part of a longitudinal study of children and adolescents called "Growing up with Media", 779 youth 17-25 years of age were surveyed online from across the United States in 2016. Half 53% of respondents were female. Sexual violence questions were behaviorally- rather than label-based (e.g., "forced someone to have sex when they did not want to" versus "raped someone").

RESULTS: Eight percent (n=49) of all youth reported sexual assault, 3% coercive sex (27), and <1% (n=8), forced sex (rape). Among those who reported perpetration, 34% were females who reported engaging in behaviors constituting sexual assault, 38% acknowledged rape, and 37% reported engaging in coercive sex. Among females who perpetrated coercive sex or rape, 69% said the victim was older than them by at least a year. Almost all 99% victims were male, a current or x-boyfriend 77%, and someone they met at school 70%. Female perpetrators commonly said they forced or coerced the other person into sex by getting angry and pressuring the person 45% and making the person feel guilty 46%. Using alcohol or drugs 1%, physical force 0%, or threats 1% were much less common tactics. Reasons endorsed by female perpetrators for the aggression included "feeling really horny" 74%, feeling bad about oneself 30%, feeling angry 23% and being drunk or high 25%. The vast majority 98% said that no one found out about the perpetration. When attributing blame, 73% said that the other person was somewhat responsible and 75% said they themselves were somewhat responsible for what happened. None said that the other person was completely responsible whereas 25% said they themselves were. Most 62% said they felt guilty afterwards.

CONCLUSIONS/NEXT STEPS: Slightly over a third of sexual violence perpetration behaviors were reported by women. Findings provide important information about how, why, and with whom female perpetrators engaged. Comparisons with male perpetrators will be presented.

IAAH170490

A comparison of perpetrators of sexual violence who target romantic partners versus those who target non-romantic partners

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BACKGROUND: Sexual violence can be perpetrated against people known well, including dating partners, and people not known well. Little is known about the different profiles of people who perpetrate sexual violence against their romantic partners versus those who perpetrate against other types of victims.

METHODS: As part of a longitudinal study of children and adolescents called "Growing up with Media", 779 youth 17-25 years of age were surveyed online from across the U.S. in 2016. Half (53%) of respondents were female. Extensive questions about sexual violence perpetration questions were queried.

RESULTS: Eight percent of all youth reported perpetrating sexual assault, 3% coercive sex, and <1%, forced sex (rape). Among perpetrators, 24% of those who reported assault, 63% of those who reported rape and 70% of those who reported coercive sex said at least one of their victims was a current or former romantic partner (RP). Tactics differed by victim type: Those who perpetrated against RPs did so by making the other person feel guilty 56% and getting angry 37%. Although perpetrators of non-romantic partner victims used guilt 75%, none used anger. Instead, they sometimes used alcohol as a facilitator 16%. Reported reasons for the aggression also varied: The most common reasons for perpetrators of RPs was feeling horny 79%, bad about oneself 33% and/or angry 15%. On the other hand, 90% of perpetrators of non-RPs said they aggressed because they were horny and 21% because they were feeling good; 72% said it was because they were drunk or high. Blame attribution also differentiated perpetrators: Youth who aggressed against RPs were more likely 20% than those who aggressed against non-RPs 3% to say that the other person was completely responsible. Feeling guilty was the most common reaction after the event for both types of perpetrators (RPs: 57%, non-RPs: 67%).

CONCLUSIONS/NEXT STEPS: Important differences about the sexual violence event are noted for those who perpetrate again their RPs versus those who perpetrate against non-RPs. Future research should focus on identifying characteristics of those who are more likely to aggress upon RPs versus non-RPs to further facilitate prevention targeting.

IAAH170526

Injury features and relevant individual factors of adolescent in China

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BACKGROUND: This study tries to describe and analyze the incidence, characteristics and individual influencing factors of adolescent injuries in China for developing relevant preventive strategy.

METHODS: In this study, the Social Ecology Model was applied as a theoretical framework for questionnaire development. Influencing factors including basic demography information, personal beliefs, behaviors, and psychological factors were identified. A cross-sectional survey was conducted with a stratified random cluster sampling, students from 8 junior high schools and 8 senior high schools in two cities in China were invited to participate in the study.

RESULTS: 4309 valid questionnaires (2195 junior high students, and 2114 senior students) were collected. The ratio of male to female was 1:1.04. The age of the subjects was from 10 to 20 years old, with an average of 14.86±1.80. The incidences of adolescent injury by people and by people time were 15.53% and 22.49% respectively. 89.89% of injury cases were unintentional. Falling was the type of injury with the highest frequency, accounting for 60.35% of injury cases. 37.99% of injury cases were happened during physical activities. The injury incidence by people was different from sex, school level and region, with significant statistical differences. Adolescents who got injures have a higher score of aggression beliefs, negative tendency and a lower score of self-control. After controlling for other factors, protecting factors for adolescent injury included female (OR=0.753, 95% CI: 0.632~0.898), senior high school

(OR=0.682, 95% CI: 0.572~0.813), stronger beliefs of alternative (OR=0.970, 95% CI: 0.025~0.988), and stronger self-control (OR=0.881, 95% CI: 0.758~0.928), while the risk factor is health-risk behaviors (OR=1.034, 95% CI: 1.020~1.048). Among those who got injured in the past year, or those who experienced multiple times of injuries had all a higher score in health risk behaviors and health risk behaviors (OR=1.037, 95% CI: 1.009~1.066) was a risk factors of multiple injuries.

CONCLUSIONS/NEXT STEPS: Adolescents in China are at a higher risk of injury. Adolescent injury was influenced by many factors at individual level. Effective strategy to prevent adolescents from injury should consider reducing their health-risk behaviors and improving relevant psycho-social ability.

IAAH170531

Resilience among adolescents in South-Western Nigeria, effect of abuse and neglect

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BACKGROUND: Resilience which aids coping and adjustments prevents the development of mental health issues for individuals exposed to adversities. Abuse and neglect as adversities affects the mental health of adolescents. This study examined the relationship between abuse, neglect and resilience of adolescents.

METHODS: The study adopted cross-sectional design among 522 adolescents using questionnaires. Information on socio-demographics, abuse, neglect and resilience were elicited. Associations were tested with significance set at 5%.

RESULTS: The mean age was 15.9 ± 1.5 of which 301 (57.7%) were females, 469 (90%) had married parents and 27.6% were from polygamous homes. 243 (46.4%) were found to be resilient while 53.6% were not. Psychological, physical and sexual abuse were reported among 238 (45.7%), 168 (32.1%) and 45 (8.6%) adolescents respectively while 71 (13.6%) and 134 (25.8%) experienced psychological and physical neglect respectively. Adolescents who experienced physical abuse and sexual abuse were about 2 and 2.5 times less likely to be resilient than those who did not respectively.

CONCLUSIONS/NEXT STEPS: Abuse and neglect negatively influence resilience of adolescents thereby affecting their mental health some other family-related factors could enhance resilience. Interventions at enhancing resilience should be incorporated in mental health protocols.

IAAH170581

Knowledge and compliance with traffic rules among students of a tertiary institution, Nigeria

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BACKGROUND: Injuries and deaths from road traffic injuries contribute significantly to the global burden of disease. Existing data reveals that young people are at risk for road crashes and ensuing injuries because many are novice drivers. In addition, they frequently engage in risk-taking behaviours when driving. This study was conducted to assess knowledge and compliance to road traffic rules among undergraduate students of Ladoko Akintola University of technology, Ogbomoso, Oyo state.

METHODS: In this cross sectional survey, a two stage random sampling technique was used to enroll 560 undergraduates from the university. An interviewer-administered semi-structured questionnaire was used to elicit information on the students' socio-demographic characteristics and their knowledge and compliance to road traffic rules. Aggregate scores were computed for each outcome and knowledge scores ranged from 0 - 20 and compliance scores ranged from 0 - 13 points. The chi-square test was used to assess the association between the students' knowledge and compliance to road safety regulations. The level of significance was p < 0.05.

RESULTS: The mean age of the participants was 21.9 ± 1.9 years and 34.5% were female. About 48.3% of the participants stated that they could drive. The respondents' mean knowledge score was 11.8 ± 2.3 out of a maximum of 20 points. About 95% had more than an average knowledge score. The average compliance score was 7.8 ± 3.8 out of a maximum of 13 points. About 12% of the students had been involved in a road traffic crash. A higher proportion of

students with less than average knowledge of traffic rules 46.2% had poor compliance scores compared to 20.2% with above average knowledge scores (p < 0.05).

CONCLUSIONS/NEXT STEPS: The study showed that although many of the undergraduate students had above average knowledge of road traffic rules, fewer of them complied with these rules. The study recommends that road safety education interventions that emphasize the importance of compliance with traffic rules be implemented for undergraduate students. This could improve their compliance and ultimately reduce traffic injuries they are involved in.

IAAH170588

Healthcare response to terrorism: A longitudinal study of posttraumatic distress, perceived healthcare needs and health service utilization in survivors of the 2011 Utøya youth camp attack

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BACKGROUND: Adolescents and young adults are frequently targeted in mass trauma such as terrorist attacks and school shootings. Such events represent a major public health challenge, and unmet mental healthcare needs have been documented in the aftermath. Youth are especially vulnerable, as posttraumatic distress might influence their psychosocial development. It is therefore crucial to gain knowledge about health service needs and utilization in youth exposed to trauma to strengthen the public health preparedness. Our objective was to examine the relationship between the posttraumatic stress reactions, self-perceived healthcare needs and health service utilization in survivors of the Utøya 2011 youth camp attack in Norway.

METHODS: Three waves of face-to-face interviews were performed 4-5, 14-15 and 31-32 months after the attack and combined with register-based data on the survivors' health service utilization from 3.5 years before to 3.5 years after the attack. Altogether 261 (53%) survivors participated in the third survey wave and were included in the current analysis.

RESULTS: Overall, 67% used specialized psychiatric services the first year, 48% the second year and 36% the third year after the attack, compared to 9% the preceding year. Still, an important minority of survivors with clinical levels of PTSD did not receive such services. Overall 127 (49%) survivors reported very high/high help needs for psychological reactions, and one in five survivors disclosed unmet mental healthcare needs. The presentation will provide further results on the relationship between posttraumatic distress, self-perceived healthcare needs, and utilization of health services.

CONCLUSIONS/NEXT STEPS: Most survivors received specialized psychiatric services in the aftermath of the attack; yet a significant minority of survivors with clinical levels of PTSD did not receive specialized psychiatric services. Further improvement in post-trauma healthcare to youth is required, and will be discussed during the presentation.

IAAH170595

Risk taking among indian adolescents: A multiperspective study

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BACKGROUND: Adolescence is a life phase that is accompanied by intense changes in the biological, social and psychological makeup of individuals. These changes greatly augment their tendency to indulge in life threatening and health compromising behaviours, often termed as risk behaviours. Few common risk behaviours among adolescents include tobacco and substance use, drinking, unsafe sexual activity, stealing, speeding and physical violence. Risk behaviours are widely considered as major but preventable contributors to adolescent mortality and morbidity. Adolescent risk taking has been extensively researched in the western and European countries, however, multi-perspective studies are still rare. One aim of the current study is, therefore, to explore adolescent risk taking from a multi-perspective. Therefore, factors from cognitive (risk perception, decision mode- intuition vs. deliberation), affective (positive and negative affect), social (parental warmth, knowledge, peer affiliation and

influence) and biologically based constitutional domains (sensation seeking and impulsivity) were included in this study. Another aim of this study is to specifically focus on Indian adolescent population. Although, adolescents constitute around twenty percent (243 million) of Indian population, still no systematic and comprehensive study does exist on risk taking among Indian adolescents.

METHODS: A total of 90 adolescents completed Adolescent Risk Behaviour Questionnaire (ARBQ; Gullone, Moore, Moss & Boyd, 2000) for assessing their involvement in risk behaviours. They also completed questionnaires assessing factors across multiple domains as mentioned above. Data were analyzed by stepwise multiple regression technique.

RESULTS: Although correlations of risk involvement were significant with most of the independent variables, but only peer influence, deliberation and parental knowledge emerged as strongest predictors of risk involvement

CONCLUSIONS/NEXT STEPS: Risk taking among Indian adolescents is primarily influenced by ones peer group and the decision making style of an adolescent. However, it is also meaningfully influenced by knowledge that the parents possess regarding the whereabouts and peer relations of their adolescents.

IAAH170596

Effect of violence experienced in school on mental health of young adolescents: Evidence from Jharkhand, India

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BACKGROUND: Violence against children is accepted form of disciplining in certain culture including most part of India with little recognition of its short- and long-term consequences. This paper presents evidence on effect of violence experienced in school on mental health among young adolescents; and advocate for initiatives to strengthen violence response mechanism and positive disciplining.

METHODS: We use survey data gathered at three time points from 3065 girls and boys of grades 6th and 7th studying in 80 schools located in Ranchi and Khunti districts of Jharkhand, India. The surveys were carried out as part of the GEMS program, which is a school-based primary violence prevention program. The surveys included questions to capture experience of violence, response and mental health, along with background characteristics and other indicators. We run bivariate and multivariate analysis to assess prevalence of violence and examine its effect on the mental health of young adolescents.

RESULTS: Around half of the students reported experiencing physical (48%) and emotional (53%) violence, and a-third sexual violence from teachers and/or peers in school. A fourth of the students experienced all forms of violence. Significantly higher proportion of boys reported experiencing violence than girls. On mental health - 7% students reported that they always or often feel lonely, while 25% sometimes; and 9% reported being often worried and 20% sometime. Adjusting for background characteristics, students who experienced 4 or more acts of physical violence were 2.9 times more likely to have poor mental health than those who did not experience. Similarly, those who experienced sexual violence were 2.4 times more likely to have poor mental health.

CONCLUSIONS/NEXT STEPS: Violence is taking place in school with adverse consequences on mental health. Despite policies banning corporal punishment and framing school as a place for leaning without discrimination and violence, school is failing children and nation. Unless policies are backed with strong program to build perspective and skills of teachers to promote equality and positive disciplining; and strengthen violence response mechanism, violence will continue to be part of childhood.

IAAH170615

The relationship between spousal violence, non-use of contraception and unwanted pregnancies among adolescent and young ever-married women in south Asia

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BACKGROUND: The present study examines the relationship between unwanted pregnancy, contraception use and spousal violence in three south Asian countries, i.e. India, Bangladesh, Pakistan and Nepal. Spousal Violence

is one of the most pervasive form of violence throughout world. In south Asia the prevalence is quite high than many other countries. One of the consequences of spousal violence is unwanted pregnancies among women, which can increase the children ever born of women unwontedly, and can deteriorate their health equally.

METHODS: The data source used here is couple's file from DHS, i.e. Demographic and health survey of India, Bangladesh, Nepal and Pakistan. The study population is young ever married women ages 15-24 who completed the domestic violence module and who had a pregnancy in last 5 years. Bi-variate and multi variate analysis is performed. Multinomial Step wise regression is employed to study the effects of spousal violence and contraception use, Spousal violence and unwanted births and in the third step, spousal violence, contraception use and unwanted births.

RESULTS: Women who faced violence, physically or sexually were at higher risk of reporting of unwanted pregnancies. Poverty conjunction with violence intensifies the risk of unwanted births among women. The use of contraception is detrimental upto higher extent by spousal violence and husband's decision. Women who intend to use contraception but are not able to use have higher risk of unwanted births. Unwanted births are much higher among women who experienced any severe physical violence or sexual violence.

CONCLUSIONS/NEXT STEPS: There is a greater need to recognize the sexual and reproductive health rights of married young women who are prone to unwanted or forced sex due to persistent disadvantaged gender equity norms in South Asia. A strong involvement of health sector in the lives of distressed women is very essential.

IAAH170637

Violence against girls aged 10-19 in Jharkhand, India: Findings from a qualitative study and cross-sectional survey

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BACKGROUND: Little is known about violence against girls aged 10-19 in India, the world's largest adolescent girl cohort. As part of formative research to design a community intervention for adolescent health in rural Jharkhand, eastern India, we carried out a mixed methods study to understand adolescents' lives, including girls' exposure to violence.

METHODS: We did a cross-sectional survey of girls aged 10-19 living in 50 purposively sampled villages of Khuntpani block, West Singhbhum district, Jharkhand. We also conducted 15 semi-structured interviews and 13 focus group discussions with adolescent boys and girls, young men and women aged 15-24 years, teachers, parents and health workers. We collected data on emotional, physical and sexual violence from adolescents using questions adapted from the Child Abuse and Neglect Screening Tool – Child Version (ICAST-C). Qualitative topic guides included questions about school, livelihoods, marriage, health, and violence. We analysed qualitative data using the framework approach.

RESULTS: We surveyed 3324 (81.7%) of an estimated 4068 girls aged 10-19 years in 50 villages of West Singhbhum, Jharkhand. 82.2% of girls belonged to Scheduled Tribes. 39.8% of girls reported facing emotional violence in the past year, 13.9% reported physical violence, and 0.7% sexual violence. Younger girls faced more emotional and physical violence than older girls. Parents were the most common perpetrators, followed by siblings and other relatives. In qualitative discussions, parents reported problems communicating with adolescents and said that they got angry when they disobeyed them or missed school but did not help with housework and expected to be fed. Parents and teachers worried about girls' safety, and girls discussed being the subject of eve-teasing and harassment. Unmarried and married girls described the period following marriage as risky, with tension relating to expectations about children and housework escalating between spouses and in-laws. In the survey, half of married girls who had been exposed to violence in the past year had experienced it from husbands.

CONCLUSIONS/NEXT STEPS: Experiences of violence were common among girls in rural Jharkhand. Parenting interventions and those promoting equitable gender norms among adolescents could help reduce levels of violence against girls and women in natal and marital homes.

IAAH170694

Perception of undergraduate female students in rims on eve teasing

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BACKGROUND: Eve teasing restricts women's mobility thereby diminishing participation in outdoor activities. The indifference shown by the society to eve teasing nurtures the sexual harassment tendency among the eve teasers. Hence this study is conducted to explore the perception of eve teasing as regards to its awareness, response pattern, and cause for increase trend as well as suggestive measures to curb eve teasing.

METHODS: To explore the perception of eve teasing among the female students in RIMS. A cross-sectional study was conducted among all the female students (M.B.B.S, interns, B.D.S, B.Sc. Nursing) studying in RIMS from 27th October to 21th November 2016. Data was collected through self administered questionnaire and analysed by SPSS version-21 (IBM). Descriptive statistics like mean, standard deviation and percentages were used.

RESULTS: Out of 448 respondents mean age being 21.3 ±1.9, 320 (71.7%) understands that eve teasing is any behavior that is unwanted by a woman and makes her uncomfortable. 338 (76.5) feels that men tease woman for fun. 363 (81%) of the girls reported to have been eve teased before. Of those who are eve teased only 95 (27%) had confronted and 89 (40.6%) gave reason for confronting as they are afraid of the harasser and that the situation might get worse. More than 246 (55.3%) felt that it is a matter of great concern. Only 29.5 (7%) of the girls were aware of the laws on eve teasing.

CONCLUSIONS/NEXT STEPS: 3/4th of the girls opined that eve teasing is any behavior that is unwanted by a woman and makes her uncomfortable. 4/5th of the girls reported to have been eve teased before. More than half felt that it is a matter of great concern. Less than 1/5th of the girls were aware of the laws on eve teasing. 2/5th of the girls recommended that strict laws against the eve teasers can curb eve teasing.

IAAH170699

Violence victimisation and aspirations–expectations disjunction among adolescent girls in urban Kenya

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BACKGROUND: Violence victimisation is one of the key threats to adolescents' immediate and future well-being in urban informal settlements (slums) in sub-Saharan Africa. In this paper, we examine the association between violence victimisation and aspiration–expectation disjunctions—a measure of the difference between aspirations and expectations for achieving them—among very young adolescent girls in a slum settlement in Nairobi, Kenya's capital city.

METHODS: This study draws on quantitative data collected from 2,360 girls aged 11-15 years who participated in the baseline survey for the Adolescent Girls Initiative–Kenya, a randomised control trial being implemented in two marginalised settings in Kenya. Data were collected electronically using structured instruments administered by trained interviewers. We conducted bivariate and multivariate analyses to assess the association between violence victimisation and aspirations–expectations disjunction.

RESULTS: One-third (n=798) of girls had experienced at least one form of male-perpetrated violence. At bivariate and multivariate level, violence victimisation was significantly associated with higher aspirations–expectations disjunction but not with aspirations, suggesting that girls who had experienced violence had similar aspirations to those of peers who had not experienced violence, but had lower expectations for achieving these aspirations. The association between violence victimisation and the aspirations–expectations disjunction measure remained significant when we controlled for general self-efficacy, attitudes towards gender based violence, locus of control, gender attitudes, wealth tertile and age.

CONCLUSIONS/NEXT STEPS: Study findings suggest that girls who experience violence may lose hope in their future. Previous studies have found that high levels of aspirations–expectations disjunctions can increase the likelihood of risk behaviours. Our findings suggest that screening girls for violence victimisation and helping them cope positively may be important considerations for those working with adolescent populations in urban slums.

IAAH170793

Descriptive study to assess the level of awareness of school children regarding child sexual abuse in selected schools of Moradabad, Uttar Pradesh, India

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BACKGROUND: Child sexual abuse (CSA) is a universal problem with grave life-long outcomes. It is defined as the involvement of a child in sexual activity that he/she does not fully comprehend and is unable to give informed consent to, or for which the child is not developmentally prepared (WHO, 2014). A survey by United Nations International Children Education Fund (UNICEF) on demographic and health was conducted in India from 2005 to 2013, which reported that ten per cent of Indian girls might have experienced sexual violence when they were 10–14 years of age and 30% during 15–19 years of age. Children in most sections of Indian society are traditionally and conventionally not consulted about matters and decisions affecting their lives. Children's views are mostly not given much importance (Ministry of women and child development, 2007). In the school-based programs plays an important role in instructing children about CSA prevention knowledge and self-protection skills (Baker et al., 2012; Kong & Chen, 2012). The objective of this study is to assess the level of awareness of school children regarding child sexual abuse.

METHODS: This was a cross sectional descriptive study conducted among school students in Moradabad district. Purposive sampling technique was employed to obtain study participants of eighty eight. Permission has been obtained from concern authority of school. A quantitative technique using structured questionnaire was used to assess the level of awareness of school students about child sexual abuse and POSCO Act.

RESULTS: As far as awareness is concerned equal percentage of the school students 44.3% were having average and high awareness on sexual abuse whereas 53.4% were having average knowledge about POSCO Act followed by 29.5% with low knowledge.

CONCLUSIONS/NEXT STEPS: Awareness of school children on sexual abuse was average. Therefore a school education programme is needed for the students with the ultimate aim to protect future India.

IAAH170801

Gender norms and intimate partners violence among unmarried Nepali adolescents: A case study through a male lens

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BACKGROUND: Intimate Partner Violence (IPV) despite being a major public health and human rights issue for adolescent is still one of the most understudied areas in Nepal. Research so far either use the DHS data to understand the trends and scope (Atteraya et al, 2015; Dalal et al., 2014) or focus on sexual violence (such as Adhikari and Tamang, 2010). There is a lack of evidence on drivers, most importantly the underlying social norms that shape adolescent boys and girl's attitudes towards IPV. Similarly, studies so far generally neglect the different perspectives of men and women on IPV. This paper aims fill the gaps as well as shedding light on the impact of gender sensitive training to boys in perpetration of IPV on their partners

METHODS: The paper is based on two rounds of qualitative fieldwork in two district of Nepal. Participatory tools were used to engage with program beneficiary and non-beneficiary adolescent boys and girls as well as program implementer, religious leaders and other key local people.

RESULTS: The paper focuses on three findings; Firstly, it shows the trend of IPV among Nepali adolescents and discusses how stigmatization of intimate relationship between unmarried girls and boys leads to detrimental outcomes such as suicide. Secondly, it discusses the underlying gender norms that shape IPV behavior and attitudes and presents the multi-level risk factors that influence perpetration and acceptance of IPV. It also discusses the impact of training in shaping IPV-related attitudes of adolescent boys. Thirdly, it analyses how intervention programs leave out adolescents because program themselves are caught in the fraud of social and gender norms.

CONCLUSIONS/NEXT STEPS: The paper concludes that migration and

increasing use of ICT have contributed to new forms of IPV among adolescents. While discriminatory gender norms themselves are underlying drivers of IPV, they play substantial role in suppressing IPV. Practices particular to some ethnic groups also foster IPV in Nepal. Lastly, due to fear of stigmatization, programs focus on married partners hence neglecting that as intimate relationships start forming during adolescence, it is an important window for intervention.

IAAH170806

Unpacking the psychosocial drivers to gender based violence against female adolescents through a capability lens in Rwanda, the land of a thousand hills

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BACKGROUND: Adolescence is increasingly recognised as being pivotal in the life course (Viner et al. 2015; Steinberg 2015; Patton et al. 2012; UNICEF 2011). The changes that occur during this stage simultaneously facilitate the complex thinking required for adulthood but also render adolescents in need of support to avoid risky behaviours and to make decisions that will set them on a positive life trajectory (Crone and Dahl 2012). Despite remarkable progress over the past two decades – evidenced by, for instance, the narrowing gender gap in education – the transition from childhood to adulthood remains especially fraught for girls in low- and middle-income countries, who continue to experience a range of discriminatory gendered social norms and practices, and arguably particularly with regard to bodily integrity and freedom from violence.

METHODS: The data collection is part of the new DFID-funded multi-country Gender and Adolescence: Global Evidence longitudinal policy research programme which aims to better understand what works to enhance adolescent development trajectories, including the most marginalised cohorts. Approximately 150 adolescents boys and girls, aged 10 to 19, their caregivers and other relevant actors, were interviewed using sensitive, innovative and interactive methods as issues discussed were sensitive.

RESULTS: The paper's conceptual framing centres around the threats and opportunities to adolescents' realisation of intersecting and overlapping individual and collective capability sets (Sen 1999, Nussbaum 2003). Findings highlight that while the MDG era saw significant advances in basic education and health outcomes for millions of young people in East Africa, adolescent girls in particular but also boys (especially early adolescents) in Rwanda continue to face high levels of risk of sexual and gender-based violence at multiple levels. The paper also explores the negative gender norms that face female adolescents regarding access to education, SRH and voice and agency which, later on, affects health outcomes. Increasing engagement in child protection of the Government of Rwanda and NGOs as well as subsequent limitations are also considered.

CONCLUSIONS/NEXT STEPS: The paper concludes by calling for the employment of a multi-capability approach to tackling adolescent vulnerabilities to gender-based violence.

IAAH170826

Culture of Bullying in Indian schools: Is it different in government and private settings?

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BACKGROUND: Bullying is a form of school violence which is considered a serious problem among adolescents worldwide. It is harmful physically and psychologically for students who witness it and hence affects their academic

achievements. School environment plays an important role in preventing bullying. The objective of the study was to assess whether there is a culture of bullying in government and private schools in Chandigarh.

METHODS: A cross sectional survey was done among 667 students from classes 6th to 10th in schools in Chandigarh using self-administered Olweus Bully-victim questionnaire.

RESULTS: Overall 33% students in private schools and 19% students in government schools were involved in any kind of bullying behavior [p<0.001]. A key component in culture of bullying is whether students or teachers try to stop bullying. About two-third of the students in each government and private schools reported that other students rarely tried to stop bullying. Majority 63% students reported in private schools that their class teacher did relatively little to counteract bullying whereas majority 52% students in government schools reported that their class teacher exert efforts to prevent bullying [p<0.001]. Another aspect of culture is whether students lack empathy for victimized students. Majority of students in both the schools endorsed empathetic response "I feel sorry or him or her and want to help him or her". On the contrary only 18% students in government school and 31% students in private schools tried to help the bullied student in one way or the other [p<0.001].

CONCLUSIONS/NEXT STEPS: Students in private schools are significantly more involved in any kind of bullying behavior than government schools but bullying culture is present in both kinds of school settings. Students have empathy towards victimized students but require the right skills as bystanders to help the bullied student.

Socially Shaped Behaviour

IAAH170032

Obstetric morbidity and treatment seeking behavior among married teenage women in Uttar Pradesh, India: an analysis of the influences of socio-economic factors

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BACKGROUND: Many women do not die of causes related to pregnancy but suffer severe morbidities. In developing country like India, pregnancy related complications are the leading cause of disability among women of reproductive age group.

METHODS: A total of 440 teenaged women were selected by systematic random sampling. The impact of selected socio-demographic factors on reported obstetric morbidity during ante partum and postpartum periods among married teenaged women was studied through a cross-sectional retrospective survey carried out in rural areas of Budaun district of Uttar Pradesh, India. Details were obtained regarding their health care seeking behavior for their morbidities.

RESULTS: During their most recent live births, 58% of mothers reported at least one morbid condition. Mothers with higher levels of education reported fewer overall problems. Factors such as religion, women autonomy index and standard of living index affect obstetric morbidity differently in married women of 15-19 age groups. More mothers reported ante partum than postpartum problems and among them (62%) sought treatment. The present study provides an insight into various factors affecting obstetric morbidity in a developing country.

CONCLUSIONS/NEXT STEPS: The present study revealed that obstetric morbidity (pregnancy, and post delivery complications) is very high in the state of Uttar Pradesh. Majority of women reported pregnancy complication than post delivery and delivery complications. It has been found in the analysis that several socio-economic and demographic variables have significant influence on obstetric morbidity as well as treatment seeking behaviour. Women who belong to Muslim religion, higher educated women earlier are more likely to experience pregnancy complication. In addition, women with high standard of living and mass media exposure are relatively more likely to seek care for pregnancy complication.

IAAH170040

Risk behaviours during adolescence: A short-term longitudinal study of youth-oriented indicators of social and economic status

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BACKGROUND: Risk behaviors are often assumed to be more common among lower socioeconomic status groups. However, youth may begin to establish their own status positions during adolescence. Therefore, this study examined inequalities in risk behaviours according to youth-oriented measures of social and economic resources.

METHODS: Using a representative sample of Swedish adolescents (n = 3,392; 51% females), the cross-sectional and longitudinal associations that youth's own economy, peer status and family socioeconomic status shared with smoking, drinking and conduct problems were examined. Data was based on population register, sociometric and self-report information when participants were in grades 8 (T1 aged 14-15) and 9 (T2 aged 15-16).

RESULTS: Aspects of youth's own economy and peer status, as well as family socioeconomic status each showed concurrent associations with risk behaviours. However, different types of resources were related to risk behaviours in opposite directions. Missing activities due to economic constraints predicted a higher likelihood of conduct problems in grade 9, while greater popularity in grade 8 predicted an increased likelihood of all risk behaviours one year later.

CONCLUSIONS/NEXT STEPS: The findings demonstrate that youth-oriented conceptualisations of social and economic resources identify gradients in risky behaviours that are distinct from family socioeconomic background. Thus, non-familial processes relating to social participation and peer approval

are of key relevance to engagement in risk behaviours. In addition, higher social positioning may either promote or protect against risk behaviour, depending on the dimension tested. Prevention policies and theoretical frameworks would benefit by considering the multidimensionality of youth's social and economic positioning.

IAAH170170

Does community stakeholder's involvement strengthen adolescent friendly health services? Evidence from rural India

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BACKGROUND: Even though, many programs and policies directed towards improvement of adolescent reproductive health exist, there is a dearth of evidence reflecting community involvement (community leaders, health functionaries and teachers) for effectiveness and efficiency of strengthening adolescent friendly health services in India. The intervention "Strengthening Youth Friendly Health Services through Community-Based Interventions in Rural India" aimed to improve the reproductive health status of adolescents in rural areas in the state of Uttar Pradesh (Allahabad, Varanasi) and Karnataka (Bangalore), India. The objective of this analysis is to describe how effective community involvement mechanism can support health services provides in improving Adolescent Reproductive and Sexual Health (ARSH) programme in India.

METHODS: We have used baseline and endline data collected during 2013-2015, using structured quantitative and semi-structured qualitative method covering PRI members, teachers, ASHA and 746 young people in the age group of 15-24 years. Considering the sexual and reproductive health component of adolescent and young people the questionnaires were ethical approved.

RESULTS: Mean age of youth were 17.6 + 1.5 and 18 + 1.8 in baseline and endline survey respectively. At baseline 89.3% of youth and at end line 96.6% youth thought that they need sexual reproductive health (SRH) services. Besides, 40% and 53% of youth reported that they visited Youth Information Centers (YIC) at baseline and end line study respectively. Between baseline and end line studies, youth access to information about SRH services are also improved significantly (57% vs. 87%). On the other hand, availability and provision of Youth Friendly Health Services (YFHS) increased significantly at the end line evaluation (30% vs. 51%).

CONCLUSIONS/NEXT STEPS: The intervention reflects the need of reproductive and sexual health services for adolescents and young people. However, there is need is to convert the expressed need into actual outreach. The intervention has very categorically demonstrated importance of application of community centric adolescent friendly methodology to convert desired need into access of health seeking behaviour.

IAAH170206

Impacts of personality traits on academic stress and adjustment styles among adolescent nursing students

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BACKGROUND: Adolescent nursing students especially in the first year of their academic life are under extreme stress and use variety of adjustment styles. Impact of personality traits on academic stress and adjustment styles is still not much explored in this group. Therefore, present study was designed to look after the impact of personality traits on academic stress and adjustment styles among adolescent nursing students.

METHODS: Study was conducted on 124 systematic randomly selected BSc (Hons.) Nursing students at All India Institute of Medical Sciences, (AIIMS), Rishikesh, Uttarakhand. The Academic Stress Scale, Adjustment Styles Inventory and Eysenck Personality Questionnaire Revised-Short Form (EPQR-S) was used to ascertained academic stress, adjustment styles and personality traits. The data was analyzed with t-test, one way ANOVA, and Pearson's correlation.

RESULTS: Majority students are under stress and used positive adjustment

styles to adjust in environment. The academic stress score showed negative relationship with adjustment styles among nursing students ($p=0.012$). Students with a high score on neuroticism dimension reported significantly more stress ($p=0.05$) as compared to their counterparts.

CONCLUSIONS/NEXT STEPS: Adolescent nursing students were in different types of stress and using positive adjustment styles to adjust in environment. Some of the personality traits had direct impacts on academic stress and adjustment styles among nursing students.

IAAH170241

'Hey! What is that on your mobile?' Exploring parent reactions to finding sexual health information from mHealth intervention on their adolescent's/young adult's phones

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BACKGROUND: Mobile phone technology offers an exciting modality with which to engage with young people (aged 15-24) on their sexual and reproductive health (SRH), as "mHealth" programs can discreetly deliver validated, tailored SRH content without judgment. However, a source of concern within the mHealth community is the perceived risk to young recipients if this discretion is compromised, especially by a parent. What happens if a parent finds SRH intervention content on the recipient's phone without his/her consent? As part of the formative phase for a larger intervention study, we explored expected reactions by parents in Mtwapa, Kenya upon finding SRH information on their child's phone.

METHODS: 12 Focus Group Discussions (FGDs) were held with a total of 97 young people, aged 15-24. Four additional FGDs were conducted with a total of 33 parents/caregivers of young people aged 15-24. Vignettes were used to stimulate discussion around how participants assumed parents would react if they were to find SRH-informational messages on their child's phone.

RESULTS: Young people were uncertain as to how parents would react in scenarios where they found messages on their child's phone, with perceived reactions ranging from anger and abuse, to support and relief that their child was being proactive about their health. Youth perceived parental reactions to be especially unpredictable if the scenario youth was <18, while in scenarios where the youth was over 18, participants believed parents would be more supportive. However, when parents were asked to react to similar scenarios, they were nearly uniform in their positive responses, expressing support for youth accessing and sharing messages, relief that their children could access information that was difficult to convey personally, and viewing messages as a conversation-starter between parents and children. Parent and youth participants acknowledged that parent-child conversations on SRH issues were difficult for both parties.

CONCLUSIONS/NEXT STEPS: Privacy is a critical benefit to SRH mHealth interventions that must be protected. However, this research provides evidence that demonstrates that – in some contexts – mHealth interventions for youth are not viewed as potential sources of discord but rather welcomed as a surrogate source for counselling or an icebreaker for parent-child communication.

IAAH170285

Pranikah Movement: Improving adolescence health and wellbeing through better family development

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BACKGROUND: Family is embedded in all aspects of adolescence's life and serves as both a protective support and a limiting factor. Lower family cohesion is associated with adolescent internalizing and externalizing problems which will compromise mental and physical health across the lifespan. However, until currently, insufficient effort has been put to make sure that every family is functioning well to raise adolescence. Marriage is the basic foundation of most families. In Indonesia, people have more concern for its sociocultural and

religious aspects compare to the technical issues that needed to work out the family's function. Social pressure is far more for someone to get marriage soon and not for someone to well prepare the marriage. Divorce rate has been increasing up to 70% within the last 5 years or it is about 10% of marriage each year and most of the causes are actually can be prevented with good marriage preparedness such as: financial issue, conflict management and infidelity.

DESCRIPTION: Pranikah was initiated in 2013. It is a movement of multidisciplinary education for marriage preparedness which consists of 4 area of work: psychology, financial literacy, health, and law. We started by developing a web site and social media platforms. Following these we also have some talk shows on air and off air in collaboration with some other communities. In 2014 we were part of effort to increase the minimum age of marriage by the law and involved in the development of marriage preparedness book with the Ministry of Religion Republic of Indonesia. This year we are about to launch our marriage preparedness books for adolescence and couples who already plan to get marriage.

LESSONS LEARNED: Our society has lack of awareness of marital problems. We receive a huge enthusiasm from our on line and off line audience. We also have met social movements encouraging early marriage which gave us more challenges to improve our good marriage preparedness campaign.

CONCLUSIONS/NEXT STEPS: Multidiscipline marriage preparedness is essential yet a neglected area of work. Intersectoral collaboration and adolescence engagement is needed to expand the program as well as to maintain its sustainability.

IAAH170288

Do community and family influence school dropout of adolescent girls? A predictive inference from Madhya Pradesh and Rajasthan states of India

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BACKGROUND: Neighbourhoods and families are key social contexts instilled with advantages and disadvantages for social development over the early life course. Substantial evidence reveals that these forces also are important determinants of individual development. Individuals living in more disadvantaged neighbourhoods are worse with respect to earnings, education, health and other life outcomes. Several paybacks of female education become imperative to study the components of school-dropouts. A minimal amount of research in India examines community conditions matters for girls' education. This study explores if community and familial affluence concurrently had associations with girls school attainment during adolescence.

METHODS: The study uses data from a cross-sectional baseline survey among adolescent girls aged 14-18 years (N=1446) in villages of two highly focused states MP and Rajasthan. 26% were married in the sampled data and remaining was unmarried. Bivariate and multivariate statistical method was adopted to infer association (Pearson-Chi2), goodness-of-fit (Hosmer-Lemeshow-Chi2) and predictive results (logit model).

RESULTS: On an average girl discontinued their study before attaining 13 years of age. Married girls staying with in-laws were 5 times more likely to dropouts (OR=5.52, CI=3.52-8.66). Result estimated 30% more drop-outs among girls belonging to economically backward family (BPL) and 50% more when both parents were not educated (OR=0.50, CI=0.37-0.67). Girls who scored between moderate to high on Gender Equitable Scale, were 60%-85% less likely to report drop out. The result suggests that communities, particularly those with high concentrations of poverty, illiteracy and lower age at marriage, are disadvantage with low gender perception and high levels of school dropouts. Girls living in poor communities are about three times more likely (OR=2.57, CI=1.57-6.67) to have dropouts and it also increases significantly (70%) by increase in proportion of female illiteracy in village after controlling individual characteristics.

CONCLUSIONS/NEXT STEPS: Study concludes to associations between the female literacy of community and improved adolescents schooling. Additionally, better community level indicators of mean age at marriage for girls and mean level of BPL status were the strong predictors for school dropout. The paper clearly reflects on how the community level factors effects girl's educational attainment, which could be important to consider for the policy makers.

IAAH170302

The relationship between community unemployment and teenage pregnancy: Evidence from South Africa

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BACKGROUND: South Africa's youth policy advocates for aggressive support of 15-35 year olds to harness youth driven economic development also known as the demographic dividend. However, poor health outcomes related to sexual and reproductive health and high levels of unemployment hinder this vulnerable group from ever flourishing. In particular early unwanted pregnancy associated with elevated school dropout rates continues to plague females below 20 nationally. This study investigated the possible relationship between the risk of teenage pregnancy and community unemployment.

METHODS: The study included 300858 females (12-19 year) from the South African 2011 census and applied descriptive statistics as well as multilevel binary logistic regression.

RESULTS: Community unemployment was significantly independently associated with the odds of teenage pregnancy. Contrary to our assumptions, as levels of community unemployment increased, the odds of teenage pregnancy decreased by 7-18% rendering it protective against teenage pregnancy. In explaining these findings, we propose that unemployed males are unable to entice young females into relationships due to possessing less power and incentive for girls. On the other hand, unemployed females remain present in communities providing a type of social protection for teenage females through availing higher monitoring and supervision upon children returning from school.

CONCLUSIONS/NEXT STEPS: The employment environment should be revised urgently to accommodate family responsibilities of employees. Industry should rethink working hours and become cognizant that their employees may be parents. Alternative models of work could include places of work allowing employees to work from home on certain days, flexi hours of work to ensure employee's time at work coincides with schooling, allowing children to wait for parents to knock off at the work place and allowing employees to have longer lunch times to be able to fetch children from school. Further to this, we recommend that after-school programs with academic and extramural activities be introduced in all schools to ensure positive stimulation of young minds as well as prevention of teenage pregnancy and other adverse sexual and reproductive health outcomes among young females.

IAAH170338

Assessing the role of parents/guardians in providing sexual and reproductive health education to adolescents attending an urban Clinic in Kampala Uganda

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BACKGROUND: Adolescence is a period in human growth and development after childhood and before adulthood; 10-19years (WHO). This group has attracted concern globally because it is relatively neglected as regards provision of health education and services, yet it is a period of biological, psychological and physical transition, with so many uncertainties and mysteries. Limited research has been done to assess the challenges faced by this group. The objective was to assess the role of parents/ guardians in providing sexual and reproductive health education to adolescents.

METHODS: The Study design was cross sectional. Qualitative and quantitative methods were used. Participants were males and females, between 10-19 years The Site was Kitebi Teenage Centre We obtained informed consent. Data was collected using a questionnaire with both closed and open ended questions. The data was entered using Epi data and analyzed using SPSS

RESULTS: 47 participants were involved; 24(51%) males and 23(49%) females. Before onset of puberty, 7(15%) adolescents did not know about puberty. Of the 40 who knew, 26(65%) obtained the information from school, 6(15%) from home, 3(7.5%) from social media, and 3(7.5%) from peers, 1(2.5%) from a teenage center and 1(2.5%) from a health center. After starting puberty, 23(49%) received guidance and support from their relatives, 13(28%) from school, 5(11%) from peers and 6(13%) got no support/ guidance. 23(49%) openly discuss sexual and reproductive health with their parents/ guardians, 24(51%) do not. The reasons for this were parents not being approachable, unavailable, fear, shyness, tough parents.

CONCLUSIONS/NEXT STEPS: There is inadequate parental guidance/ support to Ugandan adolescents at a very critical point in their life. Parents/ guardians have transferred their responsibility to teachers and social media. Improved interpersonal relationships between adolescents and their parents/ guardians will go a long way in supporting these young people to grow into healthy, responsible and independent adults.

IAAH170363

Individual and village-level demographic characteristics as predictors of early age at marriage and at first birth amongst married adolescents in rural Niger: A spatial analysis

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BACKGROUND: Niger has the highest prevalence of child marriage in the world, with 76% of women aged 20-24 married by the age of 18; nearly 40% of these marriages occur before the girl reaches 15 years of age. These child brides quickly become child mothers, with 74% of women aged 20-24 years having given birth as adolescents. As a result, Niger has the highest adolescent fertility rate in the world with 201 births per 1000 adolescents aged 15-19. and the highest overall fertility rate in the world, with an average of 7.6 children born to each woman, a level of childbearing which has remained largely unchanged for the last 40 years. Despite these statistics, median age at marriage ranges broadly from 15.4 to 19.5 years across Niger's different regions, and similar variations are seen in other key health and equity measures. This group of factors, and their relationships with one another, vary across contexts, suggesting social normative influences that transcend simple demographic associations.

METHODS: In this study, we look at the individual and village level demographic predictors of age of marriage amongst married adolescents in rural Niger using multi-level modeling. We also look at whether and how the association between village level predictors and age of marriage vary geographically, using spatial analyses.

RESULTS: Our results suggest that the greater the age difference between husband and wife, the earlier the woman is likely to have married. Women are also more likely to have married at a younger age when they do agricultural work outside the home, and are in polygamous relationships. We found significant village level differences in age at marriage, with the mean age per village ranging from 12.42 year of age to 15.93 years of age. Demographic characteristics associated with age at marriage also varied significantly by village. At the village level, the most significant predictors of younger age at marriage are the proportion of women in the village who do agricultural work, and the mean age difference between spouses within the village. These relationships vary geographically, suggesting that there are social norms at the village level that transcend simple individual demographic associations.

IAAH170373

Redefining peer counseling in Indonesia: A sustainable adolescent counseling program on reproductive health

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BACKGROUND: Adolescence is a crucial developmental process of becoming a young adult. Adolescents face various emotional, behavioral, and social difficulties. These problems might become insurmountable to be handled alone. However, adolescents tend to refuse to express themselves to their families. One factor which influences this could be an age gap. Research suggests that adolescents prefer to socialize more with peers than with their families. As a result, adolescents are more likely to modify their behaviors and attitudes if they obtain health information from their peers and hence it is important for peer counselors to be well-trained.

DESCRIPTION: The aim of this program is to create a sustainable system for producing peer counselors to support adolescents in many aspects of their lives. Reproductive health and drug abuse was chosen as the main theme for its relevance and urgency in Indonesia. This program trains medical students to become peer counselors. It comprises of specific topics such as drug abuse, puberty, and sexual risks taught by professionals in their respective fields; and

counseling skills adapted from World Health Organization modules combined with HEADSSS assessment approach and role play demonstration. Participants were then divided into small groups, and were given case illustrations where each participant exchange role as counselor and adolescent. Finally, participants demonstrate their counseling skills directly to adolescents in a Junior High School and adolescents with sexual problems in our hospital. Every counseling was documented and kept confidential.

LESSONS LEARNED: We have received positive feedbacks from participants. The counseling training was found to be the most impactful. Its contents were regarded as informative and exciting. The hands-on approach was especially praised, since it offered opportunity for applying and practicing their knowledge. The session on drug abuse was also lauded since it was given directly by the National Center for Drug Abuse.

CONCLUSIONS/NEXT STEPS: We will finalize the training module for future training that will be held annually to train new batches of counselors. Then, to sustain the growing number of counselors, an organization will be made within the university. Besides sexual health, this program will also expand in other aspects of adolescent health.

IAAH170401

Let's open the doors: Engaging with parents about talking to young people about sexuality

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BACKGROUND: While many adults agree that sexuality education is important, several are reluctant to take up the responsibility of providing this to young people due to embarrassment/lack of knowledge. There aren't many conversations around parents' experiences about this. It can be challenging for parents to help young people process the variety of messages they get around sexuality. TARSHI with its over 21-year experience on working on affirmative sexuality, opens up forums to help parents access information on how to initiate talks and strategise approachable environment for children.

DESCRIPTION: This paper will discuss TARSHI's engagement in having open and comprehensive sexuality related discussions with adults including parents. TARSHI's publication, The Yellow Book, a parent's guide to sexuality education, as well as open discussions in public spaces and interaction on social media has helped us reach out to parents. Additionally, our eMagazine is a space to share their ongoing challenges and strategies while talking to children and young people about sexuality. Our print and online publications give tips, tools and information to help parents talk to children about sexuality at every stage of their early lives.

LESSONS LEARNED: There aren't many resources to guide the parents and TARSHI's resources capacitate them to feel comfortable and competent to talk about sexuality-related issues with their children. Having discussions and hearing stories from other adults clarifies their own understanding and helps them shed their inhibitions. Access to age appropriate accurate information equips adults with an affirmative language in a safe setting. It is important to build on these networks and resources. Having a non-prescriptive approach leaves space to inculcate and reinforce their own family values while keeping the conversations positive.

CONCLUSIONS/NEXT STEPS: Given the confusing messages that children are bombarded with, they need accurate information provided in clear, simple, matter-of-fact terms by responsible and informed adults where they get consistent messages within a supportive framework. To further this, steps are needed to strengthen the networks to build information and create a safe space, as it is the right of all young people to have information and the responsibility of adults to provide them access.

IAAH170409

Implementation of Pelayanan Kesehatan Peduli Remaja (Youth Care Health Service) of public health service in Indonesia, is it relevant to be implemented in the hospital? A literature review

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BACKGROUND: Health of youth as one of its critical success factors improving the quality of human resources in a country. To support the

phenomenon of demographic bonus in Indonesia, it would require an intervention to facilitate youth to continue improving their health degree. Youth care health service (PKPR) is a health care program for adolescents aimed in the health centers, which are expected to provide services specifically for create healthy adolescents. PKPR have complex networks ranging from districts to the provincial level. Hospital is one of PKPR networks that are needed in the successful implementation PKPR.

METHODS: This study uses a systematic literature review of the implementation of PKPR in Indonesia using MEDLINE, EMBASE, the Cochrane databases, hand searching of relevant journals and review of reference lists.

RESULTS: Based on the results of the reviews from 15 journal about implementation of PKPR: PKPR implementation was limited to the adolescent patients who arrive at public health center; Human resources involved are health workers in public health centers such as doctors, nurses, midwives (no training of specialists for PKPR); no special model of planning-monitoring and evaluation on adolescent health program; still find a lot of challenges in its implementation, like limited human resources, budget constraints, the additional workload of health workers, adolescents do not know that there is PKPR because there is no socialization. Based on the handbook of PKPR, many stakeholders support PKPR. Hospital is one of the network partners of PKPR. The results of the reviews can be seen that there has been no journal that discusses the implementation of PKPR networking, specifically hospital.

CONCLUSIONS/NEXT STEPS: PKPR is an adolescent health program which is complex and involving many stakeholders, ranging from youth as a user to the decision makers. Hospitals can be used as partners in the implementation of PKPR. Hospitals also have health promotion programs. Therefore, future researchers and teams will develop a model of youth care center at the hospital as a form of network optimization of PKPR. Previous phases of assessment will be conducted related to network analysis PKPR in hospital.

IAAH170416

Using community based monitoring tool (CBMT) to address adolescent sexual reproductive health issues

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BACKGROUND: Odisha is a matrix of vulnerabilities battling a peculiar demographic regime which is characterized by a declining birth rate (2.1) along with a high death rate (8.4). VHAI worked in 2 districts (Ganjam & Jagaathsingpur) to address the sexual reproductive health needs of the communities to ensure that SRHR becomes a part of the ongoing health services. The baseline conducted in 2012 revealed the poor adolescent health indicators that highlighted high gender discrimination among girls pursuing higher studies, poor menstrual hygiene practices, high prevalence of early marriage, poor awareness on family planning methods and reproductive health.

DESCRIPTION: VHAI developed a community based monitoring tool with an intention on enhancing social accountability of health services and for advocating issues of adolescent reproductive health. The tool is designed in a manner that monitors the implementation of national adolescent schemes and also look after the implementation of village health nutrition day, weekly iron folic scheme, menstrual hygiene scheme, and incidence of child marriage along with quality of antenatal care, institutional deliveries and supplementary nutrition. The tool is used either by the Mother Support Groups and members of the Village Health Sanitation Nutrition Committees. Complete records of the meetings are maintained and key concerns are shared with the concerned authority.

LESSONS LEARNED: The efficacy of the tool has been emerging and some of the major impact was visible through an enhanced availability and uptake of usage of sanitary napkins among 90% of adolescents along with an increased consumption of IFA tablets. The attendance and participation of adolescents in the VHNDs increased to 80%. There were 58 child marriage averted in the course of 11 months. Adolescents visiting the adolescent friendly health clinics witnessed an increase.

CONCLUSIONS/NEXT STEPS: VHAI shall continue working on adolescent health inclusive of child marriage. In addition, focus shall be on strengthening the CBMT by including aspects such as school drop outs and re-enrolment. Efforts would be directed towards advocating it as a state accountability tool which is sustainable and inexpensive. The tool is one which has emerged from the community structures and engages with local reality and continues to be monitored by the MSGs in different villages.

IAAH170427

Creation of an enabling environment as a pre-requisite for any sustainable social change

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BACKGROUND: Odisha is a matrix of vulnerabilities battling a peculiar demographic regime which is characterised by a declining birth rate (3.77 in 1990 to 2.1) along with a high death rate (8.4). VHAI has been working to address the sexual reproductive health needs of the communities to ensure that SRHR becomes a part of the ongoing health services. The baseline revealed poor adolescent and maternal health indicators that highlighted high gender discrimination among girls pursuing higher studies, poor menstrual hygiene practises, and high prevalence of early marriage, poor awareness on family planning methods and reproductive health and big incidence of RTI/STIs.

DESCRIPTION: The current programme aims at enhancing the sexual reproductive health among adolescents and increasing their wellbeing and available opportunities. The gender transformative approach looks at creating a space where young adolescents are able to decide who & when to marry. This requires creation of an enabling environment where all stakeholders work in tandem and for adolescent wellbeing. This requires collective action among different government departments, civil society organisations, community, media and the private sector. VHAI works with community groups (youth clubs, self-help groups, mother support groups, adolescent groups, frontline health workers, caste panchayats, village health sanitation committees, school management committees) advocating for issues of adolescent health and child marriage. The method adopted has been comprehensive and some of the tools used include sensitization talks, street plays, individual sharing, campaigns, rallies, wall art, movie screenings, focussed group discussions and formal trainings.

LESSONS LEARNED: The caste panchayats passed a resolution where they would verify the age certificate before announcement of any marriage. Enhanced awareness among service providers (ASHA & ANMs) is important. There were 58 child marriages averted. Youth club members took led in conducting village rallies. Anganwadi centres became 'information hubs'. Adolescent participation at the VHND increased by 80%, availability and usage of sanitary napkins increased by 90%. Adolescents visiting the adolescent friendly health clinics at the CHC witnessed an increase.

CONCLUSIONS/NEXT STEPS: Enabling environment leads to sustainable health and social impact on adolescents.

IAAH170443

Adolescent parenting in a slum urban community in Jakarta, Indonesia

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BACKGROUND: Many study findings show the powerful effects of parenting practices among families that over time serve a protective role in reducing youth's risk behaviors. Yet, in Indonesia parenting quality is still understudied. Moreover, community situation also has some role in the family parenting style. Slum urban context tends to give more risk factor to adolescent due to low education and social economic status of the community. Studies also a significant indirect effect from neighborhood quality to youth sexual risk via parenting. This study reviews the quality of adolescent parenting in a slum urban community

METHODS: A focus group discussion with 17 mothers whose children in adolescence period and in depth interview with 6 of them using a written guidance. Sexual and reproductive health, drug abuse and smoking, eating habit and motor biking were chosen as specific topics to be discussed. The discussion and interview were recorded followed by verbatim writing. Thematic analysis was used to review the result.

RESULTS: Most mothers were secondary school graduate and having teenager age 12-18 years old. Mothers tend to say that friend's influence is the biggest part that responsible in most of the topics except for eating habit. For eating habit, they put them self as the main actor of not serving the correct menu so their teen prefer to have junk food. The second thing that was mentioned as the cause of problems was lack of care from parents. In contrary, none of them ever talk about sex to their teen and said that they will understand it somehow from other sources. Mothers felt that they do not have the capacity to talk about sex and reproductive health. They only talk something about menstruation to their

daughter and none to their son. Moreover, they said that smoking and bad motor biking habit were firstly because of friend's influence, although most of their husband are active smoker and some of them gave their underage teen a motor bike.

CONCLUSIONS/NEXT STEPS: A grass root program to improve parent's awareness, knowledge and skill to give adequate guidance and support to their youth is very much needed.

IAAH170457

Increasing aspirations, challenging restrictive norms: Results from Parivartan, a sports-based Kabaddi program with adolescent girls in a slum community in Mumbai, India

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BACKGROUND: Like in most communities in India, girls in the urban slum of Shivajinagar are expected to adhere to embedded gender norms. Normative expectations shape their daily lives in terms of mobility and visibility in public spaces, and decisions regarding education and marriage. It leaves little scope for girls to have and act on developmental aspirations. The Parivartan sports based program engaged with adolescent girls and their parents and this paper explores how sports helps girls reflect beyond normative expectations to aspire and negotiate continued education.

METHODS: Data consists of 42 in-depth interviews (IDIs) collected over a period of 20 months. Fifteen girls aged 12-16 years who participated in Parivartan were interviewed at three points in time: twice during and once 08 month after the end of the program. A short self-administered tool was used before and after the program to monitor change in capabilities, attitudes and norms among 103 girls who were available to respond to it.

RESULTS: We show how participation in Kabaddi sports sessions and reflection groups on gender enabled adolescent girls to expand their freedom and basic capabilities. Sports became a training ground for nurturing aspirations and giving them the opportunity or potential to achieve through play. The increase in self-confidence and negotiation skills helped them in their educational aspirations beyond the program. Notably their agency (or ability to pursue aspiration they valued) increased. Girls who continue their education reported how their mothers support helped them negotiate their aspirations with other members in the family and people in their neighbourhood.

CONCLUSIONS/NEXT STEPS: Our research findings demonstrate that through the medium of sports, a structured gender program can raise aspirations and individual agency among young girls to challenge gender norms and enlist parental support for continued education. Family finances were perceived to constrain the achievement of educational and

IAAH170536

The impact of youth centers for advocacy and in improving adolescent health in Rwanda

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BACKGROUND: Adolescents is crucial in all aspects because they are the future, their health should be well controlled and they have to be well educated to have true information so they can participate in protecting their health, and this the issue that have not taken into consideration for years but adolescents need a comfort place for their health education a part from home and school for having more mentorship and have peer education involved in their education. Rwanda has addressed this by building Youth Centres all over the country to equip adolescents with knowledge about their health and development.

DESCRIPTION: Building Youth Centres is the programme of the government to put together adolescents and youth in their respective districts for easing the way of educating them on protecting and improving their health with scientific recommendations but also with other skills like entrepreneurship and cultural exchange. The main health education programmes are on Sexual and Reproductive Health, Tuberculosis, fight against smoking, accident, violence and others education on site and different world health event are used to be

celebrated there in collaboration with Rwanda Biomedical Centre, National Council, ministries and civil organizations for health.

LESSONS LEARNED: The youth centres programme has given great harvest in terms of protecting and developing adolescents' health because helped in decreasing a big number of premature pregnancy, use of alcohol and drugs, reduction of violence in families, adolescents show developed understanding about their health, today adolescents and parents are partners in protecting their health, also many adolescents are ambassadors for health and they involve in teaching session and these Centres helped adolescent to develop some clubs to fight against different diseases in their communities.

CONCLUSIONS/NEXT STEPS: Adolescents Health have to be well protected and the way to make them be part of this is to educate them and give responsibilities to get more knowledge and Youth Centres is a tremendous solution that can be copied in different societies to help adolescents be educated by examples and with peer education. The next steps to be done are copying this by many nations and empower adolescents to ambassadors in their communities for public health.

IAAH170537

Strong Families Love and Limits

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BACKGROUND: Strengthening Families Program (SFP) was adapted to the social and cultural reality of Latin America, in recognition of the role of the family in the health of adolescents. In 1996 and 1997 he was recognized in the US by the Office of Juvenile Justice and Delinquency Prevention, the National Institute of Drug Abuse and by the Department of Education as an effective evidence-based intervention. 2005 was adapted by PAHO to a short version in Costa Rica, El Salvador, Chile and Peru called: Strong Families: Love and Limits. This program was incorporated as a Strategy in the Technical Standard of Health Care for the Adolescent Life Stage formalized in that year and also in version 2, which was formalized in 2011 in the Ministry of Health of Peru.

DESCRIPTION: In Peru, MINSA, PAHO / GTZ and DEVIDA (2008) agree to strengthen families by promoting protection factors, avoiding the appearance of risk factors associated with drug use and other socially unsafe behaviors. In 2011, 19 Regions and Lima metropolitan (5,555 families), 2012 to 21 Regions (28,135 families), 2013 to 12 Regions (15,877 families), 2014 to 12 Regions (10,850 families), 2015 to 20 regions (20,950 families), The 2016 program is updated through DEVIDA. The Budgetary Program for Prevention and Treatment of Drug Use increased progressively from 2012 to 2015, earmarking 183,737.

LESSONS LEARNED: The result allowed to know the tool with Peruvian families. The learning guided the preparation of materials adapted to the Peruvian characteristics in the coast, Andean and Amazonic regions, to support the training of facilitators and the management route for a successful implementation. Cross-sectoral cross-sectional financing. The Peruvian version was used in Mexico.

CONCLUSIONS/NEXT STEPS: Progressive increase, satisfactory in the scales related to support and closeness between parents and children in a total of 81,367 families. Requirement of compliance with family rules, clear rules and promotion of good behavior. Adequate relationships of the adolescent with the members of his family. Family attitudes of rejection to the use of cigarettes, alcohol and drugs. In terms of sustainability, the Program is inserted in the Public Budget structure with a results approach. Program must reach all Peruvian families.

IAAH170560

Influence of family social factors on adolescent sexual behaviours: A comparison between male and female adolescents in Urban Nigeria

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BACKGROUND: The family is an important social determinant of adolescents' health and development. Availability of social support from parents and other family social factors have been reported to be associated with risky behaviours among adolescents. There have been indications of gender differences in availability of social support and participation in sexual risky behaviours among

adolescents. This paper sought to understand the differences in the availability of family social support to male and female adolescents and the relationship with their sexual behaviours.

METHODS: A mixed methods approach using an explanatory sequential design was used in conducting this study. 1178 adolescents participated in the quantitative, while 16 adolescents were purposively selected for the qualitative aspect of the study. Interviewer administered questionnaires and interview guides were used to obtain information. Family social factors included social support, family type, perception of wealth and care, availability of both parents, number of adults adolescents related with and time adolescents spend with adults within the home. Risky sexual behaviours measured were early sexual intercourse, transactional sex, multiple sexual partner and use of condoms. Frequencies, Chi-square, and logistic regression were used in analyzing the data and significant at $p < 0.05$.

RESULTS: Male adolescents reported spending more time discussing with adults within their homes ($p < 0.05$). Females reported a significantly higher family social support than males ($p < 0.05$). Male participants were four times more likely to have ever initiated sexual intercourse as compared to females (OR=4.85; CI=3.53-6.67) while females were two-times more likely to have ever traded sex for a gift, money or other items (OR=2.04; CI=0.26-0.91). Males and females with low levels of social support were twice and four-times more likely to have been involved in a risky sexual behaviour respectively. Male and female qualitative participants reported parental monitoring as an important deterrent factor for involvement in risky sexual behaviours, although females were more likely to be monitored than males.

CONCLUSIONS/NEXT STEPS: Granted that family social support was protective of risky-sexual behaviours among male and female adolescents, interventions that can further build the bonds between adolescents especially males and their parents other adults within the family should be encouraged.

IAAH170568

Formative research for communication strategy - Understanding the protective and risk factors for lifestyle behaviours in school going adolescents in Haryana, India

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BACKGROUND: Adolescence is a period of experimentation and risk taking behaviour. Infact lifestyle acquired during adolescence determines risk for multiple lifestyle diseases in later age. Haryana state plans to develop a comprehensive communication strategy for adolescents. Hence, wanted to do a formative study on adolescent behaviours related to lifestyle diseases.

METHODS: A cross sectional school based student health study was done in 6 districts in Haryana, India. Gender stratified multistage cluster sampling technique was used. A self-administered questionnaire adapted from WHO Global school student health survey 2013 core questionnaire module was used. A total of 3138 students (685 boys and 739 girls aged 12-14 years and 941 boys and 777 girls to 15-19 years) from classes VII to XII in 97 schools were included in the study.

RESULTS: 12% early adolescent boys and 16% late adolescent boys had ever had alcohol. For girls in early adolescence, the percentage reporting ever had alcohol was higher 10% in comparison to girls in late adolescence 7.5%. Similar trend is observed with higher percentage of early adolescent girls reporting ever smoked and ever had drugs. Nearly 12% boys in late adolescence reported ever smoking and 11% reported ever taking drugs. Odds of students using any form of tobacco were statistically significantly higher in students whose parents used any form of tobacco particularly for students of lower classes. 20% of boys and 6% of girls reported ever having sexual intercourse. The consumption of fast food is high with nearly 70% of adolescents reporting consumption of fast food in last one week. Three fourths of adolescents are consuming fruits daily and nearly 90% of them are consuming vegetables daily. Approximately one fourth of the adolescents reported adequate physical activity. Over 90% of adolescents reported washing hands with soap after using toilet.

CONCLUSIONS/NEXT STEPS: Though there are laws prohibiting tobacco and liquor use by adolescents, these are easily accessible. The rates of cigarette smoking are higher than estimated values in Global School Health Survey 2007. Though talking about reproductive and sexual health is a cultural taboo, it is important to involve the gatekeepers for adolescents as they influence their decisions.

IAAH170616

Promoting youth and community

Victor Mulenga¹

¹Community Youth and Empowerment

BACKGROUND: Assess the state of evidence regarding impacts of youth empowerment programs (YEPs) on adolescents' (ages 10–19) self-efficacy and self-esteem, as well as other social, emotional, and behavioral outcomes.

METHODS: Systematic searches of databases combined with an international outreach to identify experimental or quasi-experimental trials of community interventions that regularly involved youths in decision making.

RESULTS: Of the 8,789 citations identified, 3 studies met the inclusion criteria. None reported significant effects on the review's primary outcomes. Data from only two studies on self-efficacy could be meta-analyzed (combined N = 167). Results found no significant intervention effect on self-efficacy ($z = 1.21$; 95% confidence interval [CI]: [-0.12, 0.49]). Significant effects were found for some secondary outcomes, but these were inconsistent across studies.

CONCLUSIONS/NEXT STEPS: The review reveals insufficient evidence of YEPs' impacts. Further research is needed using well-implemented models with clear theories of change, larger samples, and rigorous impact study designs complemented by mixed-methods process evaluation.

IAAH170631

Consequences of departing from social norms: How does social expectation of girlhood affect girls' agency?

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BACKGROUND: From earlier times till today, women have been associated with and even restricted to the private space. More often the physical vulnerability in the public spaces is been used as a frequent discourse towards restrictive mobility specially when they try to enter the space unaccompanied by men. This research investigates some of those existing norms, and the anticipated consequences that girls' face when they start challenging those norms to claiming those public spaces.

METHODS: The study uses qualitative and quantitative data from a cohort of girls aged 12-16 years and their parents from low-income communities in Mumbai who participated in a sport based gender program.

RESULTS: A key factor for increasing restrictions for girls is due to the existing norms around who controls the public space, how these public spaces can put families in stake related to honour and chastity. The girl's data shows that there is a tussle that doesn't sanction girls to be part of the sport based program and if they get positive sanction it's a matter of everyday discourse to adjust and justify. Along with that is the critical factor of anticipated consequences of departing from norms that girls have reported in the survey. A very high proportion of girls thought that there could be major negative consequences if girls displayed such deviance from the norms. Girls freedom and visibility were feared to increase sexual harassment 65% and arguments/conflicts 52% with their parents or being considered as disobedient 57% and a problem for their parents to get them married.

CONCLUSIONS/NEXT STEPS: Social norms are the beliefs and practices that define what is normal in the group, how people should behave in the group, and actions people believe to be typical or appropriate or both of specific genders. This research found that, rules that have confined girls' freedom mainly to their homes are widely accepted by the local communities as normal, typical or appropriate. The culture of victim blaming, in fact, is one of the sanctions that the neighbourhood tries to impose on those who do not comply with the social expectations of girlhood.

IAAH170640

Peer-facilitated community-based interventions for adolescent health in low and middle-income countries: a systematic review

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BACKGROUND: Adolescents aged 10-19 represent a fifth of the world's population and have a high burden of morbidity, particularly in low-resource settings. Community-based peer facilitators could be a cost-effective way to increase access to interventions to improve adolescent health in such contexts. To assess their potential, we did a systematic review of peer-facilitated community-based interventions for adolescent health in low- and middle-income countries.

METHODS: We searched databases for randomised controlled trials of interventions facilitated by persons aged 10-24 recruited from the target population, with outcomes for the following key areas of adolescent health need: infectious and vaccine preventable diseases, undernutrition, HIV and AIDS, sexual and reproductive health, unintentional injuries, violence, physical disorders, mental disorders and substance abuse disorders. We narratively summarised intervention characteristics (e.g. non-peer facilitated complementary intervention activities, setting, type of facilitator and participant age) and described intervention effects in terms of these characteristics.

RESULTS: Nineteen studies (55,923 adolescents) were included. Among four studies reporting outcomes for HIV and AIDS, none indicated a positive intervention effect. With the exception of one study, peer facilitated interventions had no effect on clinical sexual and reproductive health outcomes and two studies reported significant negative effects. Fourteen studies evaluated interventions linked to schools or a college. We found some evidence that these interventions were beneficial for improving mental health and reducing violence and substance use, though the diversity of outcomes assessed prevent us from making definitive statements about effectiveness. Eleven interventions had other non-peer facilitated components, including health worker and teacher training and dissemination of educational materials. We found benefits of interventions with and without these additional components.

CONCLUSIONS/NEXT STEPS: Peer-facilitated community-based interventions in low- and middle-income countries can be beneficial across a range of adolescent health areas, particularly mental health.

SRH/ School Intervention

IAAH170035

Peer Communication on Sex and Sexual Health among Youths: A Case of Debre Berhan University, Ethiopia

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BACKGROUND: Friends are considered an important source of advice and information about sex. Conversations about sex among young people tend to generate norms that influence positive or negative pressure on individuals to conform to group standards. The aim of the study was to explore peer communication on sex and sexual health.

METHODS: Grounded theory qualitative study design was employed using focus group discussions and participant observation. Participants were selected using criterion purposive sampling. Semi-structured guides and checklists were used as data collection tools. Information was audio-recorded and transcribed verbatim and uploaded to ATLAS.ti 7 software for coding. Data collection and analysis were undertaken simultaneously using constant comparative analysis.

RESULTS: Students talked with peers and sexual partners about sex more than sexual health issues. Common places of talk included dormitory, begtera (near dorm where students meet), and space (reading rooms). Whereas, time of talk, either in a group or with just their close friends or sex partners, included during training, evening and weekend time, during walking together, and break time. Students used verbal and non-verbal and formal and informal communication styles.

CONCLUSIONS/NEXT STEPS: The content, place, and time for discussions about sex were influenced by gender, social-cultural norms (e.g. religion), rural vs urban living, and the occurrence of sexual health issues (e.g., sexually-transmitted infections or unwanted pregnancies). Priority should be given to designing audience-specific strategies and messages to promote discussions about sex and to encourage safe sexual practices. Primary target groups should include female and rural students, who are predisposed to risky sexual behaviour.

IAAH170037

Oral Hygiene Status and Knowledge and Practice regarding Oral Health among the School Going Adolescents in Rural Area of Sylhet, Bangladesh

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BACKGROUND: This study investigates knowledge, attitude and practices (KAP) of oral health, and oral hygiene status among the school going adolescents in rural area of Sylhet, Bangladesh. The school oral health education program is believed to be a cost-effective method for promoting oral health. The KAP (knowledge attitude practice) model of oral health education is often the foundation of most health education programs. The objective of the study is to assess the knowledge and practice of oral health among the school going adolescents in rural area of Sylhet, along with the prevalence of caries and oral hygiene status.

METHODS: It is a cross sectional study, the school and the respondents were selected by simple random sampling and Children (n = 90) between the age group of 12 to 16, studying in class eight, nine and ten who attended the school in Zakiganj upazilla, Sylhet on the day of screening were recruited into the study. The subjects completed an interview Schedule that aimed to evaluate young children's, knowledge and practice. The questionnaire consisted of 2 major domains, knowledge domain with 10 questions and practice domain with 7 questions. Oral hygiene status was measured by simplified oral hygiene index (developed By Greenfield and Vermilion) and caries were measured using the oral DMFT index (recommended by WHO).

RESULTS: The mean knowledge score was 6.86. A total of 86% respondents knew brushing can prevent tooth decay, 76% knew too much sweet food causes tooth decay, but only 20% knew about the use of fluoride. Importance of protecting natural teeth was known to 52.2%. Also, 72.2% used tooth brush and 65.6% toothpaste to clean teeth, 61% brush teeth twice a day. An increase in knowledge showed increase in practice score. Caries prevalence was 64.4% with male being more affected 72.2%. Oral hygiene status was mostly fair 59%, good 31% and poor 10%.

CONCLUSIONS/NEXT STEPS: The results of this study indicate that children's, knowledge on dental health is poor, prevalence of dental caries is high. Children's, parents and teachers attitudes toward oral health and dental care need to be improved. Oral health educational packages for rural school children, their parents and school teachers are recommended.

IAAH170043

Promoting adolescent oral health in colleges: Creative strategies and the ICT approach

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BACKGROUND: Adolescence is an essential stage in human development, and it is a crucial time to lay the foundations for good health for adult life. The promotion of oral health is part of a holistic approach to adolescent health that focuses on addressing common health determinants. Today, the adolescent oral health program in the Val de Marne French department (Mordre la vie à pleines dents) is included in the adolescent health program of the departmental educational project for the colleges. This is in line with WHO recommendations for an expanded and educative approach to adolescent health.

DESCRIPTION: Adolescence is the framework of transformations; it is the transition from childhood to adulthood. It is necessary to develop animations, tools that enable the adolescent to reinforce his psychosocial skills. The ICT (Imagination, Conceptualization, Training) approach inspired by Design Thinking has helped to create a rethinking of oral health promotion interventions for adolescents. Thus, given the profile of the adolescent public and the trends observed (especially the digital progression), the chosen focus has turned towards an interactive, playful approach based on the use of NICTs. Now, the project is part of the college curriculum and is recognized as an axis of prevention of adolescent health in its own right.

LESSONS LEARNED: The ICT approach inspired by Design Thinking has helped to create a rethinking of oral health promotion interventions for adolescents. Thus, since 2003, various surveys and studies have been carried out among adolescents, in particular at 12 years, the key age of the establishment of young teeth. Various indicators of oral health have helped to follow an overall trend in oral health for young Val de Marnais since 2000 despite a slight decline in 2015.

CONCLUSIONS/NEXT STEPS: For several years now, the program has been recognized and included in health prevention activities in a majority of the Val de Marne priority schools. The evolution of oral health indicators and taking into account the changes and constraints (institutional, budgetary, etc.) are questioning today the repositioning of the orientations of the promotion activities of the Oral health for the teenage public. It's time to define a new cycle ICT.

IAAH170070

Becoming a mother: Perspectives and experiences of young women in a South African Township

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BACKGROUND: There has been growing interest in the high levels of pregnancy among young women in South Africa. This study aims to explore the range of perspectives and experiences of early motherhood among young women in a township in KwaZulu-Natal, South Africa.

METHODS: This study draws on detailed narratives collected from in-depth interviews from a small sample (10) of young mothers aged 18-24 years.

RESULTS: All the young mothers reported that they had their first child while still at school. This study found that all the young women that participated in this study had not intended or planned to have children, and were therefore not ready for motherhood. Limited information on pregnancy prevention methods plays a key role in influencing early childbearing. Young mothers in the study wanted to assume financial responsibility for their children but they were finding it difficult. The women faced numerous obstacles. The women were no longer

in a relationship with the father of their child and were still living with their own parents and therefore depended on them for support. The young mothers explained the difficulties they face in their daily lives and their new roles as mothers impacted negatively on their education and career aspirations.

CONCLUSIONS/NEXT STEPS: The study recommends greater involvement of schools and community in addressing the challenges of early motherhood in South Africa.

IAAH170085

Investing in young people is investing in the future: Scaling up access to Sexual and Reproductive and Rights of adolescents and young people

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BACKGROUND: There are almost 3.3 million people in Zimbabwe believed to be Apostolic faith followers. Anecdotal evidence shows that these religious sects were synonymous with resistance to the use of health care services. In a study commissioned in December 2010 by the Collaborating Center for Operational Research and Evaluation focusing on determinants of healthcare seeking behaviour among Apostolic Faith community, it was noted that some religious beliefs, tenets and adherence to practices of the ultra-conservative Apostolic groups have negatively affected members' decisions about their healthcare by objecting to uptake of modern healthcare services and encouraging practices that increase risk to HIV and AIDS through polygamy, wife inheritance and pledging young girls to marriage.

DESCRIPTION: SAYWHAT has been implementing the Young4Real FRESHCom project in 3 Districts of Manicaland province (Mutare Rural, Mutare Urban and Mutasa). The project seeks to scale up access to Sexual and Reproductive Health and Rights by young people in Zimbabwe targeting the mining, farming and religious sectors. The primary focus of SAYWHAT is to reach out and penetrate the Marange Apostolic Sect in Mutare Rural District specifically with sexual and reproductive health information including HIV and AIDS. Major activities being done under this project are sensitisation meetings, establishment and facilitation of radio listening club sessions in 12 schools and 8 colleges, music and street bashes, intergenerational dialogues, mobile taxi hop on and off dialogues, YPISA rights platforms, and one on one dialogues on SRHR.

LESSONS LEARNED: SRH commodities are not always as accessible and available as expected with condoms being an illustration in some institutions of higher learning. Referrals for SRH services by YPISA Champions work because they motivate young people to access services. Substance abuse particularly alcohol and drugs is high among pupils and even teachers lecturers which affects their ability to make responsible SRHR decisions.

CONCLUSIONS/NEXT STEPS: The project continues to reach widely to the target group among whom changes are observable as the young people are utilising SRH services. SAYWHAT is setting up sustainability measures for the beneficiaries to encourage fellow adolescents to access and utilise SRH services beyond the lifespan of the project.

IAAH170087

Trends and Determinants of Adolescent Motherhood in Bangladesh

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BACKGROUND: While studies on fertility and contraceptives issues are available, until recently adolescent childbearing has received enough attention among policy makers to understand adolescent childbearing in Bangladesh. We aimed to examine the trends and determinants of adolescent motherhood among women.

METHODS: For trend analysis we used all the 7 waves of Bangladesh Demographic and Health Survey (BDHS) data (1993-2014) but for multivariate analysis 4 waves (2004-2014). Two separate analyses were carried out on ever married women aged 15-49: 1) teenage girls aged 15-19 and 2) adult women aged 20 and above.

RESULTS: The prevalence of adolescent motherhood had declined at a slower

pace from 1993 to 2014 (from 33.0% to 30.8%). Lower spousal age gap and higher education were found to be associated with lower likelihood of adolescent motherhood both among teenage girls and adult women. There were substantial differences in the risk of adolescent motherhood by place of residence and division. Teenage girls in the poorest wealth quintile were more likely to experience adolescent motherhood than the richest wealth quintile.

CONCLUSIONS/NEXT STEPS: Adolescent motherhood in Bangladesh is concentrated among teenage women with less education, higher spousal age gap, place of rural residence and the poorest wealth quintile. Thus, social policies including addressing poverty, ensuring greater emphasis on education for women; increasing adolescents' access to sexual and reproductive health services, and providing better support to adolescent mothers based on regional variations are needed.

IAAH170094

Knowledge and Perceptions regarding safe-sex practices among adolescent girls

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BACKGROUND: Adolescent period marks the beginning of women's reproductive life. Also early sexual activity exposes them to the risks of sexually transmitted infections (STIs) and teenage pregnancies. Sexually Transmitted Infections (STI's), including HIV (Human Immunodeficiency Virus) mainly affects sexually active young people. Young adults aged 15-29 years, account for 32% of AIDS (Acquired Immunodeficiency Syndrome) cases reported in India and the number of young women living with HIV/AIDS is twice that of young men. Causes of the increased rates of STIs/HIV in young people include biological factors, risky sexual behaviour patterns (early initiation of sex, premarital sex, bisexual orientation and multiple sexual partners), transmission dynamics and treatment-seeking behaviour. There is growing evidence of increased premarital sexual activities among young people. While generalisation is difficult, studies indicate that around 20%-30% of young men and up to 10% of young women have premarital sexual experiences. Women, have a higher incidence of STIs than men because of their greater biological susceptibility. So to evaluate the knowledge and perceptions regarding safe sexual practices among school going adolescent girls, the present study was conducted.

METHODS: A descriptive cross-sectional study was conducted among school going adolescent girls of 15-19 years of age in senior secondary schools of Patiala, India. A pre-structured questionnaire was completed by 100 female students. Their knowledge and perceptions were evaluated towards Sexually transmitted diseases and safe sex practices. Data was compiled & analysed using Epi Info.

RESULTS: Majority of students in this study belonged to urban area. About 85% of students correctly knew about HIV/AIDS being the STI, while majority of the students had little knowledge about other forms of STIs like HepB/C 13%, and syphilis 12%. About 23% of students preferred to have sex before marriage. 50% felt that condoms are the safest method to prevent STIs, while about 34% perceived emergency pills to be safe.

CONCLUSIONS/NEXT STEPS: Considering the evident gap in knowledge, a massive need is felt to implement effective ways of providing sex education to adolescents not only about STIs and contraceptives but also regarding safe sexual practices in Indian schools.

IAAH170100

The Effectiveness of School Health Program (SHP) in Palestine

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BACKGROUND: Children are a major portion of the Palestinian society as the Palestinian population pyramid of age distribution shows that 42.5 % of Palestinians are under 15 years of age. These children belong to age group in which a good, healthy life style could be learned. The School health program is considered as one of the most cost-effective ways to reach school age children, adolescents and the broader community.

METHODS: The study was carried out at AL-Quds University in collaboration with Ministry of education. Two self-reported questionnaires which were distributed to 114 teachers and 429 students of the 10th grade from five randomly selected schools in the southern parts of Palestine (Hebron city).

RESULTS: The results revealed that there were strengths of SHP such as using the school radio in broadcasting health information and having health committee in all the schools. However, there were still some serious weaknesses that need to be addressed particularly at males' schools. For example, there was a lack of dissemination of health publications at schools in addition to the lack in the awareness about the importance of checking the expired dates of the food items. Moreover, the results indicated a lack of healthy food at the canteen and that food items at the canteens were not kept in clean and covered containers, there was a lack of dental and eyesight tests, and the unavailability of clinics with doctors or nurses in schools. Also, nearly half the participants reported that the taste of the drinking water was not fine and that it was smelly. Moreover, the hygiene of the school toilets was not appropriate and there was a lack of green gardens at the male schools.

CONCLUSIONS/NEXT STEPS: The results of this study clearly indicated the need for proper and appropriate implementation of the SHP in the governmental schools. This might be achieved by increasing the number of school health committee members to ensure a wider participation and input for a more comprehensive approach, and to enhance the role of the school health coordinators by allocating more time to be invested in designing and implementing the SHP.

IAAH170104

Familial Characteristics and Abstinence among Young Adults in sub-Saharan Africa

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BACKGROUND: Sexual pressures come from desire to satisfy sexual urge, subtle coercion, peer pressure, and transitory loss of self-control which are common among adolescents. Early sexual activity is associated with poor reproductive and other health outcomes, which include early and unwanted pregnancies, majority of which are terminated by abortion, sexually transmitted infections (STIs) including HIV and human papilloma virus. However, some adolescent despite growing up in challenging circumstances as their peers, nonetheless display the idealised behaviour. This has been termed resilience and there are not enough studies that have documented the determinants of resilience among young adolescents aged 11-16 years in sub-Saharan Africa. Using the compensatory model, this study investigates the influence of parental monitoring on adolescent sexual behaviour in six countries representative of the East (Kenya and Ethiopia), West (Senegal and Nigeria) and Southern (Malawi and Namibia) regions in sub-Saharan Africa.

METHODS: Data for this analysis was from the global school-based student health survey and binary logistic regression was used to examine the influence of parental monitoring on abstinence.

RESULTS: Preliminary results show that parental monitoring among adolescents in West and East Africa compensated the risk of early sexual while simultaneously living in a neighbourhood with higher number of delinquent young adults.

CONCLUSIONS/NEXT STEPS: It is important that interventions focus on strength based approaches for the reduction of risky sexual behaviour among youth people in sub-Saharan Africa.

IAAH170109

Addressing Abortion Stigma as it affects Young People in South Asia and West Africa

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¹IPPF

BACKGROUND: Complications during pregnancy and childbirth are the second cause of death for 15-19 year-old adolescent girls globally. One key factor is unsafe abortion – which disproportionately impacts girls and young women, in part due to the compounded stigma they experience for being sexually active outside of formal unions, having become pregnant and for seeking abortion services.

METHODS: IPPF adapted the stigmatizing attitudes, beliefs and actions scale (SABAS) originally developed by Ipas (Shellenberg, 2014) to measure

community levels of abortion stigma in South Asia (India and Pakistan) and West Africa (Benin and Burkina Faso). IPPF added a 'subscales', specifically on attitudes to young women who have abortions. Respondents were asked to review statements relating to abortion using a 1 – 5 Likert scale of 'Strongly Agree' to 'Strongly Disagree'. The scale was implemented at the beginning and end of a project intervention. In 2014, 770 people were surveyed in four countries, in 2016, 697 people were surveyed in the same project locations.

RESULTS: The SABAS results show that while stigma is generally moderate among the groups surveyed in each country, there were also groups that responded with higher levels of stigma, particularly around negative stereotypes towards women who have abortions. The results also show variations in abortion stigma across age and gender. In all four countries, one of the statements which received the highest agreement was: "Instead of having an abortion, a young woman should marry the man who made her pregnant and continue the pregnancy."

CONCLUSIONS/NEXT STEPS: These findings on the specific stigmatizing beliefs can identify target messages for interventions that address community attitudes and debunk myths about women who have abortions. This programme sheds light on the types of attitudes and beliefs held about abortion by community members in Benin, Burkina Faso, India and Pakistan, and can help inform efforts to identify future interventions that will reduce stigma within these contexts.

IAAH170116

Menstrual Health and School Absenteeism among In-School Adolescent Girls in Peri-Urban Uganda: Challenges and Opportunities

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BACKGROUND: Management of menstrual hygiene can present substantial challenges for girls in low-income settings. We conducted a feasibility study exploring how to design a suitable menstrual hygiene intervention to reduce school absenteeism among female secondary school students in the peri-urban Entebbe sub-district of Uganda (MENISCUS).

METHODS: Consenting/assenting girls in years 2 and 3 from 4 secondary schools completed a questionnaire on menstruation, menstrual management, school attendance and sexual behaviour. Group and in-depth interviews (IDIs) were conducted with selected girls, IDIs with girls' parents, and key informant interviews with stakeholders. Forty students completed daily menstrual and school attendance diaries for 6 months. Logistic regression was used to estimate the Odds Ratio (OR) and 95% confidence interval (95% CI) for factors associated with school attendance.

RESULTS: The 352 girls with questionnaire data had a median age of 16 [IQR=15-16] years. Median age at menarche was 13 (IQR=13-14) years and 21% reported missing school during the previous menstrual period. Missing school during the most recent period was associated with physical symptoms (reporting headache (OR=2.1; 95%CI:1.2-3.6), cramps/back pain (OR=11.2; 95%CI:1.5-83.2), weakness (OR=8.3, 95%CI:2.0-34.2), and also with use of poor sanitary absorbents (e.g. newspapers, old clothes) (OR=1.6; 95% CI:0.95-2.8). 6 (19%) of the 25 (7%) sexually experienced girls reported having transactional sex to buy sanitary absorbents. Additionally, 59 (19%) said they used sanitary absorbents bought by boyfriends. The qualitative research showed substantial embarrassment and fear of teasing in case of a menstrual accident. They suggested that this, together with pain and lack of effective absorbents for menstrual management, led to school absenteeism. All policy makers reported poverty and menstruation as key factors associated with school attendance. In the diary sub-study, girls reported school absence on 104/366 (28%) of period-days, compared with 147/2271 (7%) of non-period days (adjusted OR=5.99; 95%CI:4.4-8.2, p<0.001).

CONCLUSIONS/NEXT STEPS: Among these students, menstruation was strongly associated with school absence. A substantial proportion of sexually experienced girls reported obtaining sanitary absorbents from boyfriends in exchange for sex. In-school interventions which address knowledge, psychosocial (self-confidence, attitudes) and physical aspects of menstruation (pain management, use of appropriate sanitary absorbents to eliminate blood leakage, improved WASH facilities) may reduce school absenteeism among girls.

IAAH170130

Reaching First-Time Parents Contraceptive Needs

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BACKGROUND: Sexual and reproductive health (SRH) programs for youth have largely overlooked first-time parents (FTPs)—women younger than 25 who are pregnant or have one child, and their partners. Pathfinder-led Evidence to Action (E2A) project's FTP interventions in Akwa Ibom State (AKS), Nigeria, and Shinyanga District (SD), Tanzania, sought to reduce FTPs' unintended pregnancies by increasing access to broader contraceptive choice.

DESCRIPTION: Intervention strategies included: training first-time mothers (FTMs) to facilitate small peer groups (SPGs) and discuss healthy timing and spacing of pregnancies (HTSP), family planning (FP), SRH, HIV, maternal newborn and child health, and problem-solving skills, including: negotiating pressures to have children; engaging communities to encourage FTMs' access SRH services and key household influencers to support FTPs' contraceptive use.

LESSONS LEARNED: In AKS, 315 women less than 25 years participated in SPGs. Community health workers (CHWs) reached 202 young women at home with HTSP messages, and 881 with contraceptive services. They sensitized 371 household members who influence young women's SRH decisions. In SD, of 2,615 women counselled, 987 were FTMs. Of 630 new contraceptive users, 254 were FTMs, and of 280 referred for clinical methods to a facility, 110 were FTMs. CHWs sensitized 1,281 key influencers. Lessons learned include: Strategies for reaching married vs. unmarried FTMs with HTSP and SRH services, and engaging key influencers, must be different; Reaching mothers of unmarried FTMs is important as they can be resistant to their daughters accessing contraceptives; Partners and husbands can be interested in participating in the SPGs, so approaches to engage them should be expanded; FTM peer leaders are important influencers of FTMs referred to contraceptive services; Interventions should go beyond contraception, providing health and social services that promote positive youth development. FTMs should be linked to skills acquisition and income-generating programs for empowerment.

CONCLUSIONS/NEXT STEPS: FTP interventions can reduce young women's social isolation and increase knowledge of and access to SRH services. Mainstreaming SRH services for FTPs to broaden access, including addressing male SRH needs, is key. The FTP approach helped providers and CHWs understand and respond to gender issues of young women and men, fostering a more enabling environment for SRH.

IAAH170131

Improving SRH services in sub-Saharan African University settings with Young Leaders

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BACKGROUND: Highly educated and achieved university students (UST) have an opportunity to be leaders in their societies. Simultaneously, USTs often have little understanding of their sexual reproductive health (SRH) and rights, face barriers to accessing SRH information and services, and are at risk of negative SRH outcomes that limit their potential. For their continued success, universities must provide youth-friendly services (YFS) that safeguard students' SRH, foster healthy behaviours, and cultivate students as change agents on campus and beyond.

DESCRIPTION: The Evidence to Action (E2A) Project worked with Kenyatta University in Kenya and Abdou Moumouni University in Niger to strengthen YFS and draw attention to students' SRH needs and leadership capacities. In Niger, E2A implemented a comprehensive behavior-change SRH program to reach UST and youth in communities. In Kenya, E2A assessed KU's 30-year YFS program to generate fresh evidence on students' SRH situation and identify opportunities for responding to their needs. Both efforts examined university YFS programs' capacity to engage students as leaders.

LESSONS LEARNED: Although the two YFS programs are at different stages, E2A found cross-cutting lessons to apply when designing YFS for UST: Services alone are not enough. YFS must include behaviour-change and IEC interventions to increase demand for SRH services, reduce provider bias, address gender barriers, and decrease community resistance to youth SRH and rights; Adapt

YFS to meet the unique needs of students, including encouraging providers to offer UST respectful treatment, privacy, and confidentiality, convenient hours, and a range of contraceptives; Make efforts to identify and prioritize access for the most vulnerable students with greatest SRH risks; Design YFS with scale-up in mind given growing populations of UST; Engage youth as peer leaders to provide information, counselling, and support, and generate demand for YFS; Ensure strong linkages between university health and public health system to improve data collection and reporting, training, and supportive supervision.

CONCLUSIONS/NEXT STEPS: It's important to engage university administration, students, public health and education systems, and private sector to meet AYSRH needs. Cultivating young leaders in universities can help engage youth in healthier behaviours and include them as decision-makers who choose effective YFS models.

IAAH170141

The Effectiveness of a School-based Health Promotion Intervention on Multiple Health Behaviours in Adolescent Females

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BACKGROUND: Female adolescents in Kuwait have a considerable prevalence of physical inactivity and unhealthy dietary practices contributing to the national obesity epidemic. Rates of tobacco smoking and substance abuse are also increasing in this population. School-based health promotion interventions have been proven to be effective in eliciting positive behavioural changes in adolescents and therefore was implemented and investigated in this population.

METHODS: The study included 128 adolescent females between the ages of 14 and 18. They were randomly selected and allocated to an intervention group (n=64) and a control group (n=64). The intervention consisted of six educational sessions for each of the following: physical activity (PA), healthy nutrition, prevention of tobacco smoking, prevention of substance abuse, bone health, and sun protection. Both groups were assessed before and after the intervention in weight measurements, physical fitness, PA by accelerometer in a subsample, and self-reported behaviours. The self-reported behaviours included PA, dietary behaviours, tobacco smoking, substance abuse, and sun exposure and protection. In addition, the knowledge of each health topic was assessed immediately before the session and a week after. A mixed model repeated measures analysis of variance (ANOVA) was used for analysis following an intention-to-treat approach.

RESULTS: Physical fitness including flexibility, abdominal muscles strength, body balance and cardiorespiratory endurance (VO₂max) were significantly improved in the intervention group compared to the control group. The intervention group also had significantly increased energy expenditure, light PA, walking time, moderate PA, and moderate-to-vigorous PA, while had decreased sedentary time and elevator use. They also had improved a range of dietary practices by increasing consumption of breakfast, dairy, and water. Furthermore, their health knowledge of each topic was significantly increased. Weight measurements did not show any significant change. Tobacco smoking and substance abuse were scarcely reported which could be due to cultural sensitivity.

CONCLUSIONS/NEXT STEPS: A school-based health educational intervention was successful in increasing physical activity and physical fitness, and improving dietary practices in adolescent females in Kuwait. Thus, such interventions are promising and should be invested in and expanded in this population. Future studies should also assess different educational strategies and have long-term follow-up to determine their sustainability.

IAAH170137

Training to establish Adolescent-Friendly Post-abortion Care Services in Togo

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BACKGROUND: Sixty-one percent of Togo's population is under 25 years. Poverty, biological and sociocultural factors contribute to high unmet need for family planning (FP) among youth; over 40% of 15-24-year-olds express an unmet need for FP. World Health Organization's Medical Eligibility Criteria

(MEC) confirm that age alone cannot be a medical reason for denying contraceptives, including long-acting methods. FP counselling and providing a range of contraceptives to youth during post-abortion care (PAC) at point of treatment for abortion complications increases contraceptive use and prevents unintended pregnancies, reducing maternal morbidities and mortalities. However, youth, particularly unmarried youth, face barriers to accessing contraceptives during PAC, including provider bias, parental consent policies, stigma, and pressure on those in union to have children.

DESCRIPTION: With assistance from the Evidence to Action (E2A) Project, Togo's Division for Maternal and Infant Health and Family Planning (DMI/PF) systematically applied IntraHealth's Optimizing Performance and Quality (OPQ) approach to improve quality of PAC services at five health facilities. OPQ established solutions to shortcomings hindering youth's access to contraception during PAC including: Contraceptive technology update using MEC to remove age as justification for denying contraceptives; Adaptation of PAC Consortium's training materials to train providers on adolescent-friendly PAC (AFPAC), addressing provider bias and improving attitudes, encouraging providers to consider gender, and increasing youth access to contraceptives; Disaggregating data by age, method, and parity for data-driven planning and delivery of AFPAC.

LESSONS LEARNED: After the training, providers reported improved attitudes and empathy towards young PAC clients, and increased efforts to screen for exposure to sexual violence, explore reproductive health needs, and provide methods of choice. Previously, no youth PAC client received a contraceptive. Of the 351 out of 775 PAC clients who accepted a modern contraceptive, 142 were 14-24 years old.

CONCLUSIONS/NEXT STEPS: Training providers to offer AFPAC and application of OPQ to improve quality of PAC has potential to increase contraceptive uptake among youth. The training can be adapted to similar contexts where providers struggle to offer safe, quality, accessible PAC services to youth. Togo's DMI/PF will include AFPAC in policies, norms, and protocols and PAC training.

IAAH170145

University Leadership for Change in Sexual and Reproductive Health in Niger

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BACKGROUND: Niger has the highest rates of fertility and child marriage in the world. These statistics are exacerbated by an under-resourced health system and social conservatism, which impede youth from accessing sexual and reproductive health (SRH) information and services. University students in Niger are uniquely positioned to advance SRH as current-day leaders among their peers, and high-level leaders of tomorrow. They play a role in meeting their own SRH needs, and laying the foundation for behaviour change (BC) and increased uptake of SRH services throughout Niger.

DESCRIPTION: From March 2014–June 2016, the Evidence to Action (E2A) Project implemented University Leadership for Change (ULC) in Niger, promoting youth leadership to drive social change and strengthening health systems to reduce unintended pregnancies. ULC applied a comprehensive approach to BC and entailed: (1) Youth leadership and demand generation; (2) Expanded access and improved quality of SRH services; and (3) Participatory stakeholder engagement for sustainability. E2A worked with youth as vectors of change. ULC reached around 8,000 youth through BC and sensitization that increased openness, dialogue, and awareness about youth SRH, STIs/HIV, and contraception. Through ULC, contraceptive services were introduced through university health services and providers were trained to offer youth-friendly services. This resulted in increased uptake of SRH services by students. New social and BC tools were developed and applied, including three films and Pathfinder's "Pathways to Change Dashboard", for better understanding of behavioural factors affecting SRH.

LESSONS LEARNED: Using non-didactic narratives in BC is a powerful means of addressing complex behavioural needs of diverse youth. Supporting youth as leaders adds value and contributes to sustainability. Addressing gender barriers is important to increase young women's access to SRH information and services. Mechanisms for participatory coordination among multi-sectoral stakeholders, including young leaders, are key for accountability and sustainability. Testing health innovations and adapting them to routine operating conditions in diverse settings increase likelihood of successful scale-up.

CONCLUSIONS/NEXT STEPS: ULC's results motivated Niger's Ministries of Higher Education and Public Health and partners to plan for scale-up of ULC's approach. Opportunities exist to support scale-up and further improve AYSRH in Niger and other West African countries.

IAAH170157

Menstrual Hygiene Management and School Absenteeism during Menstruation amongst Adolescent Girls of Delhi, India

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BACKGROUND: Even in today's era menstruation is considered as a social stigma and talking about its management openly has not been embraced by the society. School absenteeism during menstruation is still an issue of challenge and concern for developing countries. The study was done to assess the determinants of menstrual hygiene management, to assess the prevalence of school absenteeism during menstruation and to determine other factors associated with absenteeism.

METHODS: This Cross Sectional study was conducted on 600 adolescent girls in 6 government schools of Delhi. The sample size was calculated using the prevalence of school-absenteeism due to menstruation at 43% assuming a 95% confidence level and allowable error at 10%. A questionnaire based survey and focus group discussion was carried out. Informed written consent and ethical clearance was obtained.

RESULTS: The mean age of menarche of the study population was 13 years. 19% of the girls were using cloth. Disposal of sanitary pads was done in open field by 13% of adolescent girls. Our study revealed that 41% missed school during menstruation. There were multiple reasons cited for absenteeism in which 187(76.32%) complained of pain (dysmenorrhoea), 78(31.83%) due to excessive bleeding and 9(3.67%) are not allowed by their parents to attend school during menstruation. On regression analysis factors found to be significantly associated with school absenteeism were use of cloths, illiterate mothers and perceived lack of privacy in schools.

CONCLUSIONS/NEXT STEPS: To prevent school absenteeism among these girls, interventions focusing on school menstrual management facilities and reproductive health education sessions ARE needed.

IAAH170168

Does Family Centric Approach on Pre Conception Care Improves Health Outcomes among Youth in Rural India? Design, Implementation and Baseline Findings

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BACKGROUND: Though Maternal and child health indicators have improved considerably over the last few decades in India there are still substantial inequalities in accessing quality medical care within states, rural and urban population. Poor, tribal, and rural populations have noticeable high maternal and child mortality than national averages. In an effort to address these health inequalities especially amongst resource poor community, family centric approach was designed to prioritize pre-conception care to improve young people's maternal and child health outcomes in rural Rajasthan.

METHODS: Comprehensive community based intervention targeting young married couples, their families and the frontline functionaries were designed for two blocks of Barmer district in the state of Rajasthan in India. Project outcomes and related indicators were set to evaluate project effectiveness. To establish a baseline, we completed quantitative interviews with 745 recently delivered women and their husbands and 166 young married couples

RESULTS: Our results revealed that only 10% of women have received four or more antenatal care visits (ANC) during their last pregnancy. Out of all who have visited 73% were accompanied with husband and 77% of pregnancies were registered before 16 weeks. However, quality ANC was received by 7% women during the recent pregnancy. Though, respondent's knowledge about contraceptive was 98%; current use of contraception was 65%; 88% discusses family planning methods with their husband/wife and moreover 64% of couples intent to use any family planning method in the next 12 months, only 19% of women had received counselling about pregnancy complications and 2.4% of women were counselled about delivery, postpartum and newborn care.

CONCLUSIONS/NEXT STEPS: These data provide a baseline on information and action mismatch for developing community centric approach effective pre-conception care for improved maternal health indicators of young people. Our baseline estimates reflect large disparities in health indicators and will facilitate the evaluation of interventions planned under this project.

IAAH170174

Creating Space for Conversations about Sexuality on Indian College Campuses

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¹TARSHI (Talking About Reproductive and Sexual Health Issues)

BACKGROUND: TARSHI is an NGO that has been working on sexuality-related issues in South and Southeast Asia for 21 years. In this region, talking about sexuality is considered taboo, and many young people do not receive comprehensive sexuality education. As they grow older they then turn to unreliable sources for crucial information. TARSHI's activities on college campuses aim to create safe spaces for youth to contemplate the role of sexuality and SRHR in their lives. By addressing sexuality in a broad context, we normalize it and integrate sexuality-related topics into young people's day-to-day conversations.

DESCRIPTION: TARSHI hosts interactive information sessions at colleges and puts up stalls at college events. During our sessions, we introduce students to basic sexuality concepts. We have also conducted in-depth sessions that enable young people to start discussions about sexuality with their peers. Our stalls at college festivals encourage students to learn about sexuality through activities like opinion polls and games. Both our sessions and stalls also connect young people to other SRHR resources for more information.

LESSONS LEARNED: Students who engage with our activities gain new information and insights. Feedback from our college sessions shows that students typically come in with little to no knowledge about contraception and basic sexuality concepts, but they leave our sessions with renewed interest in these topics and a different, pleasure-based perspective of sexuality to contemplate (as opposed to the more common fear-based messaging). Even if some students do not engage with our stalls or actively participate in our sessions, TARSHI's presence at college campuses serves to underscore the idea that talking about sexuality is both normal and important.

CONCLUSIONS/NEXT STEPS: To support young people's agency with regards to SRHR we must encourage open discussions about sexuality and related topics. These discussions lead to insights and clarify questions as young people learn how to express their sexuality in a safer manner. In order to maximize the impact of college outreach, it would be useful to design a series of sessions that build upon one another. Festival outreach can also be improved if local SRHR organisations create an on-going presence at college events.

IAAH170180

Menstrual hygiene among Adolescent girls of Muzaffarpur

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BACKGROUND: Menstruation is a physiological process, it is important part of any women's life. But when it comes to menstrual hygiene, most of women tend to neglect it. It results in infection which can lead to infertility and other problem. The study was carried out to determine the level of menstrual hygiene among girls and to determine knowledge about menstruation.

METHODS: A descriptive cross sectional study was conducted among 700 girls of Class IX and X of Government High School, Muzaffarpur, Bihar with help of pre designed, pre tested and structured questionnaire from October 2016 to December 2016. Sample size was calculated considering menstrual hygiene of girls to be 40%, 95% confidence level, 10% permissible error and non-response rate to be 10%. The sample size came out to be 660, which was rounded off to 700. Data was entered in Microsoft excel spreadsheet and was analysed by through percentage. Ethical approval was taken from Sri Krishna Medical College. And informed written consent was taken from all the respondents for voluntary participation in local language.

RESULTS: 673 girls gave consent for the study. The age of menarche ranged from 10 -16 years with average age being 12.6 years. Out of 673 girls interviewed 584(86.8%) knew about menstruation before menarche. Majority (94.7%) of

them knew menstruation is a physiological process. 608 (90.3%) girls agreed that sanitary napkin was better than cloth but only 153 (22.7%) girls used sanitary napkin. Only 57 (8.5%) of girls bathed daily during menstruation and 321 (47.7%) didn't take bath even once during periods. 643 (95.5%) girls didn't know ideally when should be sanitary napkin be changed.

CONCLUSIONS/NEXT STEPS: Majority of girls had optimum knowledge about menstrual hygiene, but they lack proper practice. Unhygienic practices leads to reproductive and urinary tract infection, which majority of women suffer minimum once in their life time. Inculcating good menstrual hygiene practices from beginning and proper knowledge can prevent reproductive and urinary tract morbidity.

IAAH170184

Screening and management of rural children and young adults for four D's birth Defects, Disease, Deficiency, and Developmental Delay and Disability: the SPIRAL approach of Divine Child Health Program

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BACKGROUND: "The health of a child and young adult is the true wealth of the nation". Government of India launched two major health screening programs-Rashtriya Bal Swasthya Karyakram (RBSK) program, and Rashtriya Kishore Swasthya Karyakram (RKSK) for school-children and young-adults, respectively, which adopt the 4 Ds model of screening-Defects at birth, Disease, Deficiency and Developmental Delay & Disability. It is critical to step back and analyze key contributing factors of a sustainable and scalable screening program and evolve a model for global policy makers.

DESCRIPTION: Sri Sathya Sai Sanjeevani hospital (SSSSH), Naya Raipur, Chhattisgarh is the only dedicated Centre for Pediatric Cardiac Care in the country providing Total Free of Cost services to the poor. In 2013, the Hospital launched the "Divine Child Health Program" (DCHP), a comprehensive child health screening program for early detection and timely referrals, based on RBSK and RKSK, for rural and tribal children of Chhattisgarh. 33 conditions are covered under the program that also aims to make accessible affordable curative care where possible through a strong referral linkage mechanism. The systematic analysis of the DCHP program's experience-success factors, opportunities, and challenges, has helped evolve the SPIRAL approach, an effective and efficient model towards achieving targets of child and adolescent health in rural areas. - Stakeholder Relationship -People and Processes -Information Dissemination - Referral Networks -Active Management -Learning and Research

LESSONS LEARNED : 1) 4,433 school-children and young adults in rural Chhattisgarh were screened under DCHP in 2 years. A high prevalence of dental conditions 40% followed by ophthalmic and skin conditions 7-10% among young adults were observed. Another area of concern was found to be the usage of Gutkha and Supari among school-children. 2) Health education, Community participation, strengthened referral networks and active involvement of and advocacy to all stakeholders including parents, community influencers, field workers & policy makers emerged as the most critical components of the DCHP Program.

CONCLUSIONS/NEXT STEPS : Since health programs aimed at early detection and linkages to intervention centers are still in the nascent stage, the SPIRAL approach could be an efficient model, derived out of the collective experience of government and non-governmental implementation institutions for global policy-makers sharing the common vision of a Healthy World.

IAAH170185

School intervention – Impacting Adolescent's Behaviour

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BACKGROUND: Adolescence is defined as a period of formative biological and social transition, which reflects a sensitive period influencing a number of adolescent behaviours. At this stage the physical appearance changes and hence, he becomes more conscious of the changes. The present study will carefully analyze the current systems prevailing at the school by studying their pedagogy, curriculum, extra-curricular participation of the schools and most importantly, their hand-holding practices from middle school to high school. The main objective is to

compare these practices of different schools on public-private front, rural-urban front and then devise a model that can be adopted by schools to manage the behavioural changes that occur during adolescence before getting converted into negative outcome. It can also study the measures that can be adopted by schools to change the existing negative behaviour into positive behaviour.

METHODS: Exploratory and Descriptive Research design will be used in this study. The survey will be carried out in the region of Delhi NCR. The target respondents for this research work will include: school students, teachers and head of the institution. Proportionate Quota sampling technique will be done.

RESULTS: A pilot study on 150 students from different schools of Delhi NCR was conducted to understand the current practices adopted by these schools to mould the behaviour of adolescents towards positive side. The following practices were identified: Value Education, Yoga Sessions, Full-time counsellors, engagement in extra-curricular activities, entertainment, etc. In spite of these practices, the students show negative behaviour.

CONCLUSIONS/NEXT STEPS: During adolescence many changes occurs, and even various concepts of life change in terms of family belonging, social terms, discipline and recognizing the world in completely different way. Behavioural changes can be observed by parents in their child. Behavioural problems are to be taken care at an early stage otherwise it can have serious and repel effect in the future of child's life. Research till now is conducted on specific aspects impacted by school environment focusing on high level of teacher-student conflicts, which intensifies the aggressive behaviour of adolescents. But not many studies have been found.

IAAH170188

Promoting Uninterrupted Use of Contraceptives among Adolescent/ Young Married Women (15-24 Years) in India: Effectiveness of a Multi-Sectoral Approach Model

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BACKGROUND: Early marriage and early pregnancy is still high in some states of India and leading to high burden of fertility; and maternal & child mortality. A multi-sectoral approach intervention model was adopted by engaging health systems, community stakeholders and family members to improve contraceptive demand among young married women in the States of Uttar Pradesh and Rajasthan which are high fertility states along with low contraceptive use. The present study aims to understand the effect of a multi-sectoral approach model towards increasing demand for contraceptives and consistent use of temporary methods among adolescent/ young married women to delay pregnancy in rural settings.

METHODS: Quasi-experimental study design was followed with a sample of 840 young married women at base-line and end-line. Further, a cohort of 405 young married women (from intervention and control area) were followed for two years to assess the concurrent use of temporary methods of contraceptives to delay pregnancy in one district each from Rajasthan and Uttar Pradesh. Bivariate and multivariate analyses have been carried out to analyze the data.

RESULTS: Engagement of husband, mother-in-law, community health workers & local governance member helped to create more demand for contraceptive use among adolescent/young married women. The cohort tracking data showed multi-sectoral intervention has significant effect on improving consistent use of contraceptives among young married women. 31% of young married women were using contraceptives consistently for two years in the intervention area whereas it is only 14% in the control areas. Moreover, the cross sectional baseline and end-line data reflected that, use of contraceptives has increased significantly in the intervention area {by 27% from Base-line-32% to End-line-59%} as compared to control area (by 5% from Base-line-35% to End-line-40%). After controlling background factors, the effect of multi-sectoral intervention showed that women in the intervention area were more likely to use contraception (OR: 2.12; $p < 0.01$) as compared to control area.

CONCLUSIONS/NEXT STEPS: Multi-sectoral intervention by engaging husband, mother-in-laws, community health workers, community leaders and health systems has led to consistent use of contraceptives to delay pregnancy among adolescent/ young married women (15-24 years) in rural settings.

IAAH170217

Project YUVA – An Innovative Peer-education Program for Adolescents

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BACKGROUND: The State Crime Records Bureau 2014, reported the highest rates of child sexual abuse (CSA) in Vellore, Tamil Nadu, India. Project YUVA conceptualized by a young teenager has become a boon to Vellore. YUVA is an acronym for 'Youngsters Understanding & Verbalizing Adolescence'. A 15-year-old girl was a victim of sexual harassment. After fighting the aggressors, she then decided to teach her classmates about adolescence and safety. Her efforts and observations led to the start of 'Project YUVA' (PY).

DESCRIPTION: PY has two components, the school-based component, and community-based components. It is a district-wide program. The school component (July to December): In this component, a social worker visits the target schools to educate students using "4P" principle. 1) Prevention – Topics include pubertal changes, reproductive health. 2) Protection – (sexual activity and contraception) 3) Prosecution – (recognizing abuse and reporting), and 4) Peer education with Audio-visual aids is used to imparting education. Printed material is also distributed, containing all that is portrayed by the audio-visual aide. Each student who attends the session is expected to read and pass on the knowledge to ten students. Pre and post tests are conducted and a comprehensive report is given to the school. The school will address the areas of concern from the report. Till date, we have conducted health education in 15 schools and reached out to 3300 students. Community component (January to June): During this period, social workers visits the communities to facilitate, and strengthen village level child protection committees, conduct 'Adolescent Health Day', and train community-based volunteers who work for adolescent health and safety in their regions.

LESSONS LEARNED: An obstacle has been a negative perception by adults who consider this a form of "Pornography". The reason is discussing sexual health is still impermissible in some communities. Adolescents themselves are eager to learn and educate peers.

CONCLUSIONS/NEXT STEPS: Project YUVA is a practical solution to adolescent sexual health problems. It is scalable and replicable. It can be implemented in this country utilizing one tenth of the available annual CSR (Corporate Social Responsibility) funds.

IAAH170248

Health Promotion and Preventive Care in Schools: A Success Story behind PISA Scores

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BACKGROUND: Finland has gained international attention through the successful performance of its young people on the Programme for International Student Assessment (PISA) tests. Experts have marvelled at the possibility of consistently reaching such high academic achievement levels when Finnish children commence compulsory education later (at age 7) and attend school for shorter days (only 4 hours in first grade, gradually building up to an average of 6 hours in ninth grade) than their international peers. Well deserved credit has been given to the highly qualified teachers but that is only part of the story.

DESCRIPTION: Compulsory education in Finland lasts for 9 years, followed by three years of high school or vocational college. Mandatory elements of health promotion and prevention in schools include a free school lunch, school health and well-being services and health education as a part of the national curriculum. In addition, several evidence-based programs are implemented that aim to reduce the rates of bullying and obesity and promote positive social skills and mental health. Currently school health and well-being services are strictly regulated by law and comprise nurses, physicians, psychologists and social workers. Every school has special education teachers and guidance counsellors are available to students from seventh grade.

LESSONS LEARNED: Rates of bullying in Finland are among the lowest in the world: 10% in boys and 6% in girls. Dropout rates from the 9-year comprehensive school, high school and vocational education are 0.29%, 3.1% and 7.6%, respectively. Teenage abortion and birth rates are 8.4/1000 and 6.3/1000 among the population of 15-19-year-old girls, respectively. Consistency in policies drives success.

CONCLUSIONS/NEXT STEPS: The continuance of these results requires constant attention and alertness to local factors such as school ethos but also national policies that may affect adolescents' lives. New initiatives should target gender inequity in secondary education and ascertain that the current level of equity between advantaged and disadvantaged children is sustained. New networks should be built between families, child welfare services and preventive health and well-being services.

IAAH170254

Perceived Self-Control in School Children: Do They Believe They Can Say "NO"?

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BACKGROUND: In this decade where temptations are rampant, in the form of substance and non-substance addictions, sexuality, online behaviour and relationships, it becomes of prime importance to gauge if children have good self-control. This study was done to see how children perceived their self-control. It is important to help children develop self-control to prevent impulsive high risk behaviour. Through customized school based interventions

METHODS: Sample: 712 school children (8th, 9th STD) – two schools in Delhi, India, English medium, HSE group, were surveyed. They were divided into – Younger Group I of 10-14 years and Older Group II of 15-18 years. No names were asked to promote honest answers, only age, gender and no of siblings. Tool: Perceived Self-Control test by Humprey (1982) – an 11 item scale with a Yes/ No format. Higher the score more is the self-control. The reliability coefficient is 0.71. It has high reliability and good psychometric properties.

RESULTS: Age and gender: Total sample: Higher values in Gr II – Girls 4.79 vs 4.24 (p=0.005); Boys: 4.61 vs 4.05 (p=0.043). Comparison of schools: higher scores in School -2 Gr II – Girls 4.87 vs 4.25 (p=0.043); boys 5.42 vs 4.25 (p=0.004). No of siblings: GR II had statistically significantly higher scores >GI in both single child and >1 sibling – p<0.05 and p=0.007 respectively. Comparison of Schools – School 1- GR II had statistically significantly higher scores > GI – both for no siblings and 1 sibling P=0.007 and p= 0.010 respectively.

CONCLUSIONS/NEXT STEPS: In our study older children are seen to have higher perceived self-control which can be explained by developmental increasing cortical maturity. Life skill training additionally ensure that they actually exert this self-control. Older Children who were single and with 1 or more sibling has AACCI will do customized workshops for younger children, especially in school – 1 which has lower scores to train children to exert self-control so that they can act as their own censors and protect themselves from harm.

IAAH170255

Screening of School Students: Appreciation – Motivation

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BACKGROUND: Most parents and teachers learn early that by differentially rewarding good behaviour and discouraging unpleasant behaviour one can encourage young persons to behave in ways that are appreciated by society. But what may happen if the child gets overly dependent on appreciation and the motivation that stems from it? AACCI assesses the degree of Appreciation - motivation by using a standardized scale to plan behavioural intervention in schools.

METHODS: Tool used: Martin H.J. (1984) approval motivation scale. This 5 point Likert type scale has 20 items-. (6 items- reverse scoring). Average score is 53.6 (S.D. 9.02). Higher score shows more need for social approval. Reliability index (Cronbach's alpha coefficient) is 0.75, and test-retest reliability coefficient

is 0.72. Sample: 712 school children (8th,9th STD) – two schools English Medium, co-education, HSE from Delhi, Indiadivided – Group I of 10-14 years and Group II of 15-18 years. To encourage honest answers, no names were asked for only age, Gender and no. of siblings.

RESULTS: Age and Gender: Total sample - scores were higher in older Girls i.e. Gr II – 60.49 vs 57.76 (p=0.010). On comparison between schools – School 1 higher scores in younger boys – Gr I 59.14 vs 54.40 (p=0.008). No. of Siblings: Total sample Higher score in Older girls i.e. Gr II 59.67 vs 55.72 (p=0.008).

CONCLUSIONS/NEXT STEPS: In this study, older girls specially who had no siblings, show a very high need for approval which can put them risk for "wanting to fit in or be appreciated a lot", tempting them into high risk behaviour. Single child is becoming a norm in India today in educated families for various reasons. The single girl child becomes "the male scion" in terms of achievements. She gets used to high praise - parents often saying "she is as good as a son". AACCI will conduct customized program to teach these children to learn to follow their own self-motivation rather than be dependent upon or crave approval from others specially the younger boys in School 1.

IAAH170265

Knowledge and Psychological Impact of Acne among School Students in Imphal, Manipur

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BACKGROUND: Acne is the most common dermatological condition encountered in adolescence. Although acne is not associated with severe morbidity or mortality but psychological comorbidities in acne are probably greater than generally assumed. Despite the high prevalence of acne, there are many wrong beliefs and deficiencies in the knowledge about it. Very few studies have been conducted in Manipur to determine the knowledge and psychological effect of acne among the adolescent school students in Imphal, Manipur.

METHODS: A cross-sectional study was conducted among the students studying in classes IX, X, XI and XII from selected schools using a self-administered questionnaire consisting of knowledge and validated children dermatological life quality index questions after taking permission from their respective principals and oral consent from the students. A sample size of 842 and convenience sampling was used for selection of schools and classes. Data were analysed using SPSS 21 and Chi-square test was used for testing the significance between the proportions and independent t-test was used for testing the significance between two means. A probability value of <0.05 was taken as significant.

RESULTS: A total number of 1109 questionnaires were collected. 70.3% of them believed that washing face regularly helped in preventing acne. Pain 53.3% was the most common complaints of pimples. Oily and spicy foods 73.3% were the most common causes of pimples. 80.4% of them did not consult a doctor. About 50% of them said that having acne had small effect in her life.

CONCLUSIONS/NEXT STEPS: Nearly 40% of the students thought acne to be normal condition of the skin. Almost everyone was of the opinion that the common age group of acne is 12-19 years of age. Majority of them (nearly 3/4th) thought that taking oily and spicy food is the common cause of acne and oily skin was more prone for acne. More than 1/2 of the students use face wash to prevent pimples. Nearly 40% of the students seek parents for advice regarding pimples. Nearly 20% of the students have consulted a doctor for treatment of pimples.

IAAH170280

Adolescent Sexual and Reproductive Health in Myanmar: Formative Research to Support the Delivery of Life-Skills Education and Menstrual Hygiene Improvements through Monastic Schools in Rural Magway.

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BACKGROUND: Menstruation and menstrual hygiene management (MHM) remain neglected issues despite growing evidence that MHM practices affect sexual and reproductive health (SRH), education and psychosocial outcomes

for girls. Poor access to menstruation-related information is a challenge faced by girls globally. Comprehensive school-based SRH education has demonstrated positive impacts on SRH knowledge, attitudes and practices, and is an opportunity to ensure girls have the knowledge and skills to manage menstruation effectively and with dignity. In Myanmar, the national life-skills education (LSE) curriculum addresses SRH topics, including menstruation. However, information on LSE quality, and the determinants and impacts of MHM practices is lacking. This study explored MHM practices and impacts, and LSE implementation in Monastic schools in Myanmar.

METHODS: A school-based mixed-methods study was conducted in 16 monastic schools in Myanmar in 2016. Students (11-18 years) were invited to complete a self-administered questionnaire on SRH knowledge and attitudes, including questions on MHM for post-menarcheal girls. Focus groups with adolescent girls and boys and interviews with girls explored SRH information needs, preferences, and determinants of MHM. Interviews with teachers examined factors influencing LSE provision.

RESULTS: 1,427 students (765 girls; 662 boys) completed the questionnaire, including 419 girls that had reached menarche. At menarche, 16% of girls had not heard about menstruation, 70% felt afraid and 44% felt ashamed. Sociocultural beliefs and shame contributed to behavioural restrictions and poor school participation for menstruating girls. 14% of girls reported having missed school due to menstruation. Only 36% of menstruating girls reported changing MHM materials at school and only 30% changed MHM materials in line with global recommendations (at least every 8 hours). 31% of students had received menstruation information during LSE, and similar proportions had received information on other essential topics such as puberty 36% and reproduction and pregnancy 23%. Barriers to LSE provision included insufficient time in school schedules, lack of teacher training, low teacher confidence and lack of teaching materials.

CONCLUSIONS/NEXT STEPS: Adolescents in Monastic schools in Myanmar are not receiving essential SRH information, including menstruation and MHM information. Support for teacher training and LSE delivery may improve MHM and reduce the impact of menstruation on school participation.

IAAH170290

Correlates of Repeated Pregnancy among Adolescents in the Philippines

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BACKGROUND: For two decades, one in every five teenage girls in the Philippines are experiencing a repeat pregnancy (RP). Secondary pregnancy prevention programs are therefore needed to lessen the impact of subsequent and unintended pregnancies on maternal-child health. Despite the evidence in the American and European regions, low- and middle-income countries like the Philippines still have insufficient information on RP predictors to facilitate the development of national programs. This study investigated different RP correlates among adolescents aged 15-24 years old in the Philippines.

METHODS: We used five National Demographic Health Surveys in the Philippines from 1993 to 2013. A total of 4,757 women aged 15-24 years who experienced at least one pregnancy and maximum of two pregnancies were extracted from these cross-sectional data sets. Socio-economic, partner-related, obstetric and family planning factors underwent step wise modelling. Multivariate logistic regression using survey weights was applied with separate analyses by age group for teenage and non-teenage adolescents.

RESULTS: Current use of modern type of contraception strongly decreased the risk of RP by 80% [Adjusted Odds Ratio (AOR) =0.20; 95% Confidence Interval (CI) =0.15-0.26]. On the other hand, all partner-related variables were found to be associated with RP which include residing with the partner (AOR=1.62; CI=1.06-2.45), having a partner who is at least 30 years old (AOR=2.80; CI=1.34-5.87), and changing partner at least twice (AOR=4.39; CI=1.62-11.92). After analysis by age group, prenatal check-up by a health professional during the first pregnancy demonstrated a protective effect among teenagers (AOR=0.51; CI=0.26-0.99). This finding was supported by a descriptive analysis about the last source of family planning services of current users which are clinics and community health centers reflecting lower prevalence of RP compared to pharmacy and shops. Adolescents aged above 19 years showed negligible effect modifications in reference to the first multivariate model.

CONCLUSIONS/NEXT STEPS: Use of modern contraception among adolescents especially among teenagers reduces the occurrence of RP. Strategies through promotion of antenatal care by health professional in health facilities may facilitate provision of family planning services and counselling among adolescents with their partners especially those of older age groups.

IAAH170305

Attitude and Practice towards Aged People among Higher Secondary School Students in Imphal West District

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BACKGROUND: An important problem faced by the today's aged population is the negative attitude and stereotyped perceptions/ prejudices about the elderly by the younger generation and depression of the elderly arising from their feeling of neglect and isolation from the society. On the other hand, positive attitude and practices help in creating a good relationship between the aged and the young. Hence, there comes the need to conduct relevant studies in order to identify the misunderstood facts about the elderly and to create awareness and consciousness among the population at large, in particular the youths of today. Therefore, this study was conducted to assess the attitude and practice towards aged people among higher secondary school students in Imphal west district.

METHODS: A cross-sectional study was done in 2016 using modified validated questionnaire(Kogan). The population comprised of students studying in class 12 in higher secondary school in Imphal west district. Stratified random cluster sampling was done to select the sample of 1547 students. Data analysis was done using SPSS version 21. Descriptive statistics like mean, median, SD and percentages were used. Chi-square test was used for finding an association between proportions. A p-value of <0.05 was considered statistically significant.

RESULTS: A total of 1670 students participated from 6 schools. The mean attitude score was 74.60±7.5.57% were females. Private school students have more favourable attitude than the government school. 30.2% of the students spend their leisure time with old aged people everyday. There was a positive association with mean attitude score and spending time with old aged people. Among those who asked about their grandparents' health every time, 59.2% have favourable attitude. Among those who accompany their grandparents' health check-up, 52% have favourable attitude.

CONCLUSIONS/NEXT STEPS: Most of the students had favourable attitude towards old people. Most of the respondents also had positive practices where they interacted with old people on a regular basis. Those studying in private schools also had better attitude. Interaction with aged people seemed to have a positive effect on the student's attitude towards aged people.

IAAH170307

Impact of Peer-Led Education on Awareness of Early Pregnancy and Family Planning Choices among Young Population: Evaluation from an Intervention-based Program

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BACKGROUND: Research from previous reviews have not adequately captured effective intervention program for young population to address their reproductive choices at younger ages. This study aims to identify and evaluate the interventions based program through peer-education to engage youngsters on gender-equitable session to influence on six-selected outcome indicators of awareness on early-pregnancy and family-planning choices i.e. disadvantages of early pregnancy, preferred age at marriage, expected family size, contraception access from the community (SC/ANM), aware of modern contraception and contraception usefulness.

METHODS: A retrospective-method for evaluation was adopted with pre-post-test-control-group design. Study was carried out in UP and Bihar among the randomly selected young population. A total sample covered 1535 individuals between 15-20 age group equally for males and females (intervention=996, control=539) that contains married (6%) and unmarried population (94%). Study

used one-way Analysis of Variance (ANOVA) to assess change in intermediate outcomes and test-of-difference (Person-Chi2/t-test) between-outcome indicators by study groups. OLS and logit-model examined the intervention effect.

RESULTS: The disadvantages associated with early-pregnancy were pronounced more in intervention sites than their counterparts control area. More youngsters in intervention areas wanted to delay their pregnancy after age of 21 years and were also able to affirm their rights about marriage decision than in control sites. A significantly higher proportion of adolescents in intervention had knowledge about modern contraceptive methods of spacing in intervention area. Adjusted results from regression model showed to have improved awareness ($\beta=3.36$, $p<0.001$) on risk of early pregnancy; and noticeable contraceptive access and choices (2.19).

CONCLUSIONS/NEXT STEPS: Peer-led education initiative in rural-settings successfully influenced participants' attitudes toward early-pregnancy and contraception access. Frequency of program session was key factors for the change in outcome variables and also played a role to shift in their knowledge and attitude on use of preventive maternal-reproductive care. Study recommends for programmers and identifies the peer-led education program lead to increase the awareness that lead to delay in pregnancy at younger ages.

IAAH170312

School Based Tobacco and Areca Nut Cessation Program for Adolescents in Mumbai

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BACKGROUND: According to the Global Youth Tobacco Survey, India (2009), the prevalence of tobacco use among children between 13 to 15 years in India is 14.6% and 15.5% of children who were non-users intended to start smoking in the next year. Among the current smokers, 66% wanted to quit the habit. In addition to this, school going children also consume areca nut "supari", which is a psychoactive substance, easily available and usually acts as a gateway product to tobacco use. Studies in Mumbai have shown high prevalence of tobacco and supari use among them.

DESCRIPTION: LifeFirst program was implemented in 15 schools catering to lower socioeconomic population in slum areas of Mumbai in the academic year (July 2016 to March 2017) for helping students quit their tobacco and supari use. After due permissions from school authorities, orientation sessions about harmful effects of tobacco and areca nut were conducted using audio-visual aids for 2379 students of 7th, 8th and 9th grades. 492 students voluntarily joined the cessation service offered after the orientation and were divided into 34 groups of 10-15 students each. Six theme based group sessions involving videos, games, role plays and activities were conducted over six months. The self-reported status of tobacco use was discussed individually and recorded during each session. At the 6th month follow up, the self-reported 7-day point prevalence abstinence of the registered students was 71%.

LESSONS LEARNED: A comprehensive counselling program which also addresses issues like peer pressure, refusal skills is effective. Group sessions with audio visual aids, games and activities for students during school hours help in increasing student engagement, participation, interaction and also build peer pressure for quitting. In addition to group counselling individual counselling sessions are also required to address issues of coping. Labelling of registered student needs to be addressed and prevented. Proper planning for the logistics, classroom availability and availability of the students is imperative.

CONCLUSIONS/NEXT STEPS: School based tobacco and areca nut cessation programs for adolescents are feasible in India and will help in reducing the current and intended tobacco use burden. LifeFirst will scale up this program in 200 schools in next three years.

IAAH170318

Integration of Adolescent Sexual and Reproductive Health (ASRH) within Education Project for Improving the Learning Outcome

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BACKGROUND: Our ASRH Education project aims to improve the availability and reach of ASRH education and enhance adolescent and youth

engagement to empower them in making informed decisions about their health and wellbeing. In Nepal, the school dropout rate among adolescents is 19%: Boys 16% and Girls 22%. Among girls more than one third dropped out due to early and child marriage (National Adolescent and Youth survey 2012)

DESCRIPTION: VSO Nepal in partnership with local NGOs, implemented the ASRH education project across two districts – Dhading and Surkhet – in 24 schools and the catchment community. The implementation partnership included the district health and education offices. As part of improving education and access to youth friendly SRHR services, VSO Nepal trained national youth volunteers as peer sexual and reproductive health educators, worked with the international ASRH expert volunteer who provided technical support to national volunteers and partners, and trained health teachers in delivery of ASRH education in the school.

LESSONS LEARNED: Effectiveness of ICS in terms of youth engagement in talking about ASRH with adolescents- Less generation gap Need for stronger Policy practice linkage Sensitivity of the issues - need for age-appropriate information Programme Integration ASRH with Education can be challenging "I felt interested to help with ASRH teaching and the content is useful in our daily life"- Male Teacher "I found the content clear and easy and the activities funny and interesting"- Female student.

CONCLUSIONS/NEXT STEPS: Our work has focused on youth engagement as a central element of increasing access to and understanding of SRH. We believe there is need for stronger policy and practice relating to the SRH education. Also, the socio-cultural challenges relating to SRH- ie assumptions among community, parents and teachers that the information related to ASRH may increase permissiveness in sex and sexual activity came up as a barrier. Sexual and reproductive health education in a more creative way can help both students and teacher become more comfortable talking about it. The increase in school attendance among girls and delay in early marriage was a very positive outcome from this type of approach.

IAAH170360

Young Women's Choices: Factors associated with Contraceptive Method Choice in Kenya

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BACKGROUND: Adolescents and youth constitute about a third of Kenya's population. Young women and adolescents are particularly vulnerable to the consequences of unintended pregnancies and abortion in Kenya. Among young sexually active unmarried women, only 30% use modern contraceptives. This study aims to contribute to the knowledge base on youth sexual and reproductive health in Kenya. By understanding the contraceptive methods young people choose, who chooses what kind of methods and what their fertility intentions are, policy makers and program planners will know how to better support or improve contraceptive access and use.

METHODS: This study uses data from the PMA2020 round one survey for Kenya. The PMA2020/Kenya round 1 survey used a two-stage cluster design with urban-rural and counties as strata. Our sample size consisted of young women age 15 to 24 (n=1351). Exploratory data analysis, Chi-square tests, and multivariate analyses were used for statistical analysis. Multinomial logistic regression was used to assess the relative associations of background characteristics, media exposure and fertility preferences with young women's use of long acting reversible, injectable and other methods of contraception.

RESULTS: 50% of Kenyan women 15 to 24 years' report being sexually active and less than half of these sexually active young people 44.7% report currently using contraception. Contraceptive users were more likely to be currently married, had completed primary school only, lived in a household in the lowest wealth quintile and had heard about FP on radio. Young women who used long-acting reversible contraceptives were more often in the higher wealth quintiles, had heard about FP on the radio and had decided on the method to use with their partners.

CONCLUSIONS/NEXT STEPS: Overall, results indicate that there is a difference in the profiles of young women who use contraceptives versus those who do not and among those accessing LARCs or other methods versus injectable contraceptives. Understanding what seems to influence young

women's choices of contraceptive methods is an important step in ensuring that family planning programs meet the goal of providing young women with a range of method options and information so that they can make informed decisions and implement their choices.

IAAH170362

Knowledge, Attitudes and Practices of the Female Condom among Female Students at the Faculty of Medicine and Biomedical Sciences, University of Yaoundé I

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BACKGROUND: In Cameroon, HIV among women is about 5.6% compared to only 2.9% for men. Young women are particularly susceptible to sexually transmissible infections (STI's) following the prevalence trends. The female condom so far is the only female-initiated vaginal barrier and thus can be viewed as a tool for women empowerment in the prevention of STIs including HIV and as a contraceptive method.

METHODS: Knowledge, attitude, practice (KAP) survey among 196 female medical students at the Faculty of Medicine and Biomedical Sciences. Study population consisted the first, fourth and seventh year students. A pre-designed, tested and adapted questionnaire was used to collect data on demographic characteristics, knowledge, attitude and practice regarding the female condom. Data collected was checked then data entry was done using EPI INFO 7. The data was analysed using STATA 10 software. The Pearson Chi-2 test was used for comparison of proportion of students to different responses. The level of statistical significance was set at $p < 0.05$.

RESULTS: Most 93.64% participants were single and a greater percentage were Christians 93.64%. Our study population consisted mainly first years 51.53%, fourth years 31.61% and seventh years 17.86%. The region most represented was the Centre region 25.26%. 80.61% had seen the FC. 47.96% declared knowledge on FC use. Among which 45.74% had learnt from academic settings and only 5.32% from the television. Only 20% of the sexually active students have tried before but only 2.35% are willing to consider using it more often. Most students have a negative attitude towards the FC considering it weird-looking 72.38%, embarrassing 60%, difficult to use 77.14%.

CONCLUSIONS/NEXT STEPS: Knowledge on good use and actual use of the female condom is low despite general awareness. Only 2.35% will readily prefer to use the female condom over the male. Most students have no particular interest in the female condom and would not prefer it to the male condom thus, have not yet understood the advantages that the female condom has over the male condom for them as ladies. Barriers to the adoption of the female condom include: availability, acceptability and accessibility.

IAAH170366

Premenstrual Syndrome and Supporting Factors in Adolescent Girls

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BACKGROUND: Premenstrual syndrome (PMS) includes irritability, anger, mood swings, depression, tension, anxiety, abdominal bloating, breast pain and fatigue. Severe symptoms were impaired interpersonal or workplace functioning. True prevalence of PMS is unknown. PMS starts to be problematic in the adolescent years and can be negative affect on interpersonal relationship, social and educational performance. To right support at this stage is more important to adolescent physical and mental health.

METHODS: Totally, 250 adolescent girls who had menarche and visited hospital for non-menstruation problems, were enrolled at single center with this prospective survey study on March 2016-march 2017. Premenstrual Syndrome scale, Toronto Alexithymia (TA), Family Assessment Scale (FAS) and Multidimensional Scale of Perceived Social Support Scale (MSPSS) were being used to evaluate complaints of pre-menstruation, functions of family and adolescent and supports level of families and environmental.

RESULTS: PMS scale total point was (IQR) 108 (76-137) and of subgroup scores were like that depression 18 (12-24), anxiety 13 (8-19), fatigue 18 (13-23), irritability 15 (10-20), depressive opinions 13 (8-19), pain 7 (5-9), variability of appetite 7 (4-11), variability of sleep 7(4-10), bloating 6 (3-10). 50% of participants have been PMS symptoms and 71.6% have had normal TA score. The MSPSS total point was 59 (47-71). Family 24 (19-28), special person 13 (5-23), friend 23 (18-28) was found subgroups of that. FAS median point was 1,75(1,33-2,17) and subgroups of the scale like that solving problem 2 (1,5-2,5), contact 2 (1,5-2,4), ability of emotional reaction 1,83 (1,5-2,5) and behaviour control 2,11 (1,77-2,33) was detected.

CONCLUSIONS/NEXT STEPS: At that study early analyses are shown that 50% of participants have PMS complaints. And 1/3 of them have pathological TA score and the most support has been taking from friends. For healthy adolescents family and environmental support like friends and relationships is more essential. PMS is more common require to taking medical care and support. To improvement of right supports of family and environmental for adolescents wide groups screening with scales and to develop methods to support adolescent physical and mental health.

IAAH170370

A Study of Menstrual Health Problems of School Going Adolescent Girls in rural and urban area of Jamnagar District of Gujarat

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BACKGROUND: Menstruation is a vital part of the reproductive health of a woman. There is evident neglect of problems related to menstruation especially in young girls. Lack of awareness and non-availability of adolescent friendly health facilities hinder the treatment seeking behaviour of adolescent girls. The objectives were to assess the prevalence and patterns of menstrual problems and treatment seeking behaviour among school-going adolescent girls.

METHODS: Cross sectional study was conducted in 14 school of rural and urban area of Jamnagar district selected by simple random sampling by lottery method. Total 530 participates of standard 9th to 12th, who attain menarche, were studied by using pre-designed, pretested, semi structured questionnaire. Information regarding socio demographic characteristics, awareness and knowledge regarding menstruation, menstrual health profile, health seeking behaviour and awareness, knowledge and utilization of AFHS(adolescent friendly health services)etc. were collected and analyze using appropriate statistics. The study was approved by the Institutional Ethics Committee and permitted by District education officer.

RESULTS: Mean age at menarche was 13.54 years(SD:1.105), overall prevalence of menstrual problems was 70% in rural area and 81.8% in urban area. Prevalence of precocious puberty was 1%, dysmenorrhoea 44.3% and premenstrual syndrome (PMS) 45.8%. There were 66% girls using home-made cloth pads during menstruation and only 2% have proper hygienic practices. 63% girls were aware about menstruation before menarche. Treatment seeking behaviour of the girls was poor and only about 33% of girls having menstrual problems approached for medical advice and treatment. Only 7% girls were aware about AFHS. Statistically significant difference was found among the awareness regarding menstruation and AFHS, prevalence of some menstrual problems and PMS with respect to and rural and urban area.

CONCLUSIONS/NEXT STEPS: Study concludes that menstrual problems among girls are highly prevalent. Practices related to menstrual hygiene are poor and there is urgent need to educate them for the same to prevent reproductive tract infection Adolescent girls should be offered possible treatment options with adolescent friendly approach and through adequate information regarding availability of AFHS services. Mentorship program in the school set-up may result in desired improvements.

IAAH170374

Adolescent Health and School Attendance

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BACKGROUND: Much of literature on nexus between health and education usually examines causation from education to health. This research has indeed given important insights on the impact of education on health. The impact of

health status of children and adolescents on participation and performance in education is seldom examined. The limited evidence however points to significant impact of health of child and adolescent on educational attainments. This paper seeks to examine the influence of child and adolescent health on participation in education and progress through grades. Evidence on factors that influence participation in education and progress through grades assumes importance in making policies to achieve education SDGs that envisions completion of primary and secondary education by 2030.

METHODS: Data from IHDS-I and IHDS-II is used. The dependent variables are participation in schooling, attendance in grade corresponding to age, regularity in attendance. Short and long term morbidity is independent variable. The socio-economic background of adolescents, family income, etc is controlled. Cross tabulation and fixed effects model are adopted.

RESULTS: No significant impact of short term morbidity on participation could be discerned. However, one can find significant impact on regularity of attendance of adolescents is found. It may be that socio-economic variables have very strong impact on participation. Further analysis is in progress.

CONCLUSIONS/NEXT STEPS: Health of child and adolescent significantly impacts the regularity of attendance at school. Improving the efficiency of school health programmes not only improves health of adolescents and also attendance at school.

IAAH170379

A Problem-Solver, a Guide, a Friend, or an App? A Qualitative Study of Stakeholders' Perceptions of School Counselling in India

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BACKGROUND: This study aimed to explore perceptions of school counselling in India, in order to understand stakeholders' preferences and priorities for service development and delivery. The study was undertaken as part of a wider programme of research that aims to establish a trans-diagnostic stepped care intervention for school-going adolescents with common mental health difficulties in India.

METHODS: We explored perspectives of adolescents, teachers, parents and mental health professionals in Goa and Delhi, India, through 34 focus group discussions and 27 in-depth individual interviews. Adolescents, parents and teachers were recruited from 9 schools across Delhi and Goa, and school counsellors and mental health practitioners were selected using purposive sampling. All interviews were conducted either in Hindi, English, Konkani or Marathi using a semi-structured interview guide. Interviews were audio-recorded and transcribed verbatim in the language of the interview. Analysis was undertaken by bilingual researchers in the language of the interview and coded into NVivo.

RESULTS: The framework method was used to analyse qualitative data related to stakeholders' perspectives on putative content, delivery and outcomes of school counselling services. We employed a combination of inductive and deductive approaches to formulate a continuously evolving thematic structure; emergent patterns were analysed in the context of existing literature and emergent data. Key themes related to expectations of a counselling service and of the counsellor; varied modes of delivery; and outcomes of interest. Findings are interpreted with consideration of prevailing social contexts in the study sites.

CONCLUSIONS/NEXT STEPS: Decisions regarding who is referred and by whom, what the intervention constitutes, and how it is delivered and by whom, were guided by the findings of this study. Information about preferences for school counselling was then used to shape the development of a guided self-help tool based on problem-solving techniques that was in line with the perceptions of stakeholders. This intervention will be evaluated through a clinical case series.

IAAH170384

The survey of Sexuality Education for children in China

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BACKGROUND: In children every stage of life will encounter different problems associated with sex, they need to get timely and effective answers

and guidance from parents and teachers. If children can get sexuality education timely, they will have a positive impact on the growth and they will have happiness full of their lifetime.

METHODS: Teaching the correct scientific reproductive knowledge, tell children the concepts of sperm, egg, fertilized, umbilical cord, fetal development process, and adoption, let them know what is the growing during the curriculum and games activities, with their language and the way what they accept. Several teaching practice in a complete unit comprising design teaching objectives, teaching activity design, picture books design, teacher training, teaching activities modify the design, observation, feedback, monitoring interviews, teachers summarize, parent feedback, designers and other summary links.

RESULTS: Monitoring results show: "Every change of the growth", "Development of the foetus in the mother's womb", "How to take care of themselves" is their better master knowledge than other for the children in high level; "Every change of the growth", "Development of the foetus in the mother's womb" also master for middle level, "Umbilical cord" is very impressed, the problem could be answered correctly by them; "Every change of the growth" can talk by the low level, they understand the process of change of grew, and know what is the umbilical cord. Teachers and parents can found the change of their young children in kindergarten or at home.

CONCLUSIONS/NEXT STEPS: After the whole lesson for the children, they awareness of himself, understanding the origin of life, comprehend on the "reproductive" will helps them to understand the concept of a sexual healthy attitude. From the feedback of teachers and parents, teaching activities in this unit are feasible and can make changes for the growing-children, the progress of reproduction, the progress of production can establish the preliminary understanding for children to cultivate a respect for life and the positive attitude for life.

IAAH170385

Visual Auditory Kinesthetic Tactile Technique and CIPP Evaluation Model on Reading Age among Dyslexic Children

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BACKGROUND: The word Dyslexia is derived from the Greek language in which "dys" meaning poor or inadequate and "lexis" meaning words or language. It's characterized by problems in expression or reception, oral or written work that may emerge in reading, speaking, spelling, listening and writing. It also involves in the disturbances of Holistic Dimensions. Globally, 15% of the children suffer from dyslexia of which 4% with severe and 10% with mild dyslexia. In India, it is 3-17.5% among the school goers. Added to that, males are more affected than females (1.6:1) V-A-K-T technique was applied among the Dyslexic Children and the results were obtained after 4 weeks including all the tasks such as reading, spelling, and story writing, therefore student's motivation for reading also increased.

METHODS: Research Approach – Quantitative Evaluative Research Design - A quasi experimental one group pre-test and post-test design. Population - Children with Dyslexia Sample: Mild Dyslexic Children [30 children who fits in the Inclusion Criteria]. Sampling Technique - Non-Probability Purposive sampling technique. Tool - Part-A: Demographic Profile, Part-B: Schonell Graded Word Reading Test by Sir Fred Joyce Schonell (1960). Setting - Helikx open school and learning centre, Salem, Tamil Nadu.

RESULTS: The findings show that, 33% of participants were of 13 years of age. Gender distribution reveals that all were males. None had any previous history of dyslexia among family members. 52% of fathers and 40% of mothers were educated upto higher secondary level. 97% of children were living with both the parents. 3% were single parent child. 90% of fathers were self-employed and 94% of mothers were homemakers. 67% status of family income was less than Rs.20,000. Effectiveness revealed by the level of reading age improved from of 8.1 to 10.0. The mean percentage improved by 12% after the intervention. It shows that VAKT technique is significantly effective among the Dyslexic Children at the level of p<0.05.

CONCLUSIONS/NEXT STEPS: Dyslexia, most recognizable and specific learning disability, typically associated with a child's inability to spell to read and to write. Therefore, VAKT technique was said to be specifically effective in improving the Reading Level. This enhances Light to them.

IAAH170396

Married Adolescent Couples and their Reproductive Health Rights: Learnings from an intervention in Jharkhand, India

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BACKGROUND: While India has a huge population of married adolescents, the general reproductive health interventions are primarily designed to address health needs of unmarried adolescents. Married adolescents are bonded with social and family norms which limit their autonomy to make decisions related to reproductive health (RH) and access to services to regulate their own fertility. Recognizing this fact that married adolescents are a neglected lot, Centre for Catalyzing Change with support from the World Bank undertook intervention to empower married adolescents with information and skills for improving reproductive and sexual health and promote uptake of comprehensive reproductive health /family planning services and information.

DESCRIPTION: A participatory mixed method approach- concurrent design with parallel samples was employed to conduct the impact evaluation through quantitative and qualitative questionnaires. On demand side, out of 1,000 MACs, 100 MACs (MAGs- Married Adolescent Girls; HMAGs-Husband of MAGs) were selected using systematic random sampling under Baseline quantitative survey. On supply side, 30 grassroots service providers comprising of Accredited Social Health Activist (ASHA), Auxiliary Nurse Midwives (ANMs), and Medical Officer (MOs) were interviewed using qualitative questionnaires in Baseline and Endline.

LESSONS LEARNED: The study reports that about 91% MAGs and 97% HMAGs were aware about condoms in endline compared to 26% and 39% in baseline respectively. 58% (MAGs) and 49% (HMAGs) points increase was registered in awareness of copper-T/IUD device. 47% points increase in MAGs being advised by ASHA/ANM to delay the first pregnancy was reported during endline. The study shows sustained RH services were availed by as many as 63% of target couples, besides, uptake of OCPs and other methods. Overall, the project indicated 41% points increase in the usage of family planning methods.

CONCLUSIONS/NEXT STEPS: The project emphasizes on the need to work with MACs. The project showed better linkages with service providers as more MACs reported service providers as their source of information for family planning methods. The result indicates that systematic capacity building of MACs on reproductive health practices and linking and improving access to service providers is required. Special strategies/ efforts need to be designed and implemented to reach to married adolescent couples on contraception methods (despite societal barriers).

IAAH170400

Adolescent Sexual and Reproductive Health (ASRH)

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BACKGROUND: According to the following studies; Study on pregnancy desires, 2013 -In Rwanda showed that HIV- positive women were less likely to report wanting additional children than HIV- negative women (8 vs. 49%) Evidence has shown that 17% of young women (15-24) report to have had sexual intercourse before the age of 18 as well as a high HIV prevalence – 20% of the school drop outs were caused by unwanted pregnancies – A study among youth living with HIV found that more than half believed using a condom was a sign of not trusting a partner or promiscuity.

DESCRIPTION:Sexual and Reproductive health education in Adolescents and young mothers. Capacity building among service providers in handling PMTCT, Mitigation of socio-economic impact for PLWHIV. Impact – Over a period of two years, the drop outs due to unwanted pregnancy dropped from 20% to 3%. PLWHIV have gotten at least a goat and gardens for farming. Young mothers have known the importance of using modern contraceptive methods and its effectiveness. Youth leaving with HIV have known the importance of protected sex. Post Training evaluation showed success of SRH.

LESSONS LEARNED:However much such programs help adolescents learn, there is a need to have sex education in the curriculum for continuous learning.

Some Clans and tribes do not allow for open discussion about sex education and hence a need for change of mindset. Government will for sex education in secondary in secondary schools is important. The adolescents face problem because of lack knowledge and curiosity.

CONCLUSIONS/NEXT STEPS:Substantial and meaningful involvement of local stakeholders at all stages of the project. Activities are adapted from national strategic framework and thus the project is to strengthen existing structures. Continuous peer mentoring will encourage the availability of service providers. RPSA will embark on formation of youth clubs that will be spearheading the peer education in their communities. Women groups anti HIV youth clubs and faith based organizations through dialogue are being empowered with Sexual and reproductive Knowledge to keep members updated.

IAAH170405

Capacity building: A Tool to Ensure Good Quality Comprehensive Sexuality Education

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BACKGROUND: In 21 years of working on sexuality and Sexual and Reproductive Health and Rights (SRHR), TARSHI, an Indian NGO, has seen that building capacities of teachers and educators to engage deeply with an affirmative, rights-based perspective towards SRH and Comprehensive Sexuality Education (CSE) is important to ensure that young people have better control and agency over their SRH and overall well-being. With this objective we have been conducting trainings and online courses on SRHR, and CSE with diverse groups such as students, teachers, parents, and care providers.

DESCRIPTION: TARSHI's trainings and eLearning course on CSE for educationists aim to fill the gap created by the lack of teacher training on CSE and equip professionals with skills to engage with SRH issues within a school setting. These onsite and online courses provide exposure to various concepts such as CSE, Sexuality, Gender and on body image, technology and its influence, harassment of teachers and students, etc. and also provides a space for self-reflection and values clarification and facilitate discussions on ethical concerns that arise in this work.

LESSONS LEARNED: The post-training feedback shows increased knowledge, and understanding of CSE, SRHR and sexuality amongst participants. Our long-term engagement with participants reflect that when teachers, counsellors and other service providers have clarity and confidence around sexuality and SRH issues, they ensure accurate dissemination of information, development of content and provide more relevant/useful services. This helps young people access better quality sexuality and SRH services from reliable sources which also help them make responsible and safer choices for themselves.

CONCLUSIONS/NEXT STEPS: The silence and stigma around sexuality makes it difficult for teachers and educators to manoeuvre their way around sexuality related concepts. Cultivating a clear understanding of how sexuality, gender roles and stereotypes influence sexual relationships and constructions of the self assists them tremendously when working in the area of CSE. Trainings and sessions on sexuality, SRHR, and CSE allow teachers and educators to delve deeper into issues, which in turn provides spaces for students and young people to air their concerns, clarify doubts and solidify their positions from a rights-based perspective.

IAAH170428

Reproductive and Sexual Health Knowledge Among Adolescents visiting ARSH Clinic, NMCH, Patna

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BACKGROUND: Adolescent are heterogeneous, but sexually active group, vulnerable to reproductive health problem. Ensuring correct knowledge about reproductive and sexuality is crucial for safe guarding their future reproductive and sexual health. This public health challenges has lead to establishment of ARSH clinic under RMNCH+A. This study was undertaken with aim to assess knowledge conception, contraception appropriate menstrual hygiene, STIs/RTIs, Adolescent visiting ARSH clinical NMCH, Patna.

METHODS: A study designed-clinic based cross sectional study. Study population: All clients visiting the ARSH/YUVA clinic NMCH during 6 month. Tools- knowledge about key variables recorded on pretested predesigned structured questionnaire administered after informed consent

RESULTS: Of the total 163 adolescents enrolled, 112 were males and 51 females. 123 (76%), know about pregnancy and contraception; 117 (72%) had knowledge about contraception. among adolescent girl 42 (84.62%) knew about appropriate menstrual hygiene practices .35 (70.06%) knew about HIV/AIDS; for majority adolescent (85%) the source of information about HIV/AIDS was the television .Regarding knowledge about modes of transmission of HIV/AIDS; 95.25% of them knew about sexual mode of transmission and prevention by condom, rural background, and low socioeconomic classes were significantly associated with lack of knowledge.

CONCLUSIONS/NEXT STEPS: In my study number of girls attending the clinic was remarkably low .This points to social barriers in utilising ARSH services. The study shows there was adequate knowledge regarding menstrual hygiene practices among girls (84.51%). Though knowledge about reproductive health was fairly good in urban population, more clinics need to be established in rural area to encourage them and females to come forward to utilize ARSH services.

IAAH170432

University undergraduates' perspective on strategies for educating on sexual and reproductive health with in Universities in Sri Lanka

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BACKGROUND: Adolescent fertility rate has increased from 28 to 36 per 1000 over 2006-2012. Literature reflects the existing gaps in the knowledge on adolescent sexual reproductive health (ASRH) among youth.

DESCRIPTION: Four focus group discussions (FGDs) consisted of 10-12 students in each were conducted among non-medical undergraduates in Universities of Colombo and Kalaniya in 2015 with the aim of identifying best possible strategies for increasing knowledge and skills on ASRH within universities. Participants were of 18-24 years. Informed verbal consent was obtained before FGDs and privacy and confidentiality were ensured. Discussions for males and females were conducted separately. FGDs were audio-recorded and observations were made and noted down with the facts and expressions. Each discussion lasted 70-90 minutes. Point of saturation was reached by fourth FGD, and no new information was forthcoming. Discussions were transcribed and analysed by identifying themes and categories using constant comparison.

LESSONS LEARNED: All the trainees had the realization of existing gap in ASRH and the need of strengthening knowledge and skills on ASRH within universities. They identified the need of easily accessible services for them within the university as well as outside. The group suggested of having compulsory module on ASRH for all university curriculums preferably within pre-academic period and preferred teaching by health professionals in an interactive manner using latest teaching and learning methodologies. Inclusion of case-based scenarios was highlighted. Second strategy suggested was to have an e module. Yet issue of availability of computers and internet were raised. They identified the need of a social- media campaign on availability of sources of knowledge and services. Need of undergraduate participation in the whole process of development of new strategies were highlighted.

CONCLUSIONS/NEXT STEPS: Present assessment suggested: Inclusion of pre-academic compulsory module on ASRH for all university courses • Inclusion an interactive component in ASRH teaching. Development of e-module and parallel expansion of internet and computer access. Using social media for raising awareness of knowledge sources. Having quality services accessible to them within and out- side the universities

IAAH170522

Assessing the associated factors of teenage pregnancies and perinatal outcomes in the selected tribal blocks of Chhota-Udepur district of Gujarat, India

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BACKGROUND: Teenage pregnancy remains a challenge requiring urgent resolution the world over. In 2014 the World Health Organization reported that 11% of all births were due to women aged 15-19 years, an estimated 16 million women globally.

METHODS: Aim: The study aims to assess the associated factors and perinatal outcomes of teenage pregnancies. Girls between 10 to 19 years, who attended the antenatal clinic and/or who were admitted in the hospital while pregnant or during labor were included in the study. The study was conducted from April 2016 – March 2017. 21246 ANC cases were reported during the year 2016-17, out of which 571 (around 3%) were teenage pregnancy cases.

RESULTS: Of the 571 adolescents around 77% belonged to the ST (Tribal) community while 22 % were from OBC (other backward caste). 30% of the adolescents were educated till primary level while 70% had studied till secondary level. 75% of the adolescents had taken less than 3 ANC check-ups. 30% of the adolescents had normal delivery, 60% had assisted deliveries and 10% required C-sections. The analysis shows that the rate of C-sections was high (15%) among adolescents who had less than 3 ANC check-up. Anemia was identified as one of the major risk factors with around 90% prevalence among all adolescent pregnancies reported. 80% of the anemic adolescents required assisted or C-section during labor. 55% of the babies delivered by the adolescents were low birth weight babies who needed special care. The percentage of low birth weight babies high (70%) among adolescents who took less than 3 ANC.

CONCLUSIONS/NEXT STEPS: Low socio-economic status, limited education, cultural factors appeared to be related to teenage pregnancy. Education could play a significant role in developing self-confidence, increasing age at first sexual intercourse and delaying marriage. Health service utilization by teenagers has been poorly studied.

IAAH170530

Early Sexual Debut in An Adolescent Girl – A Case Description.

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BACKGROUND: The adolescent period is characterized by rapid changes in body structure, physiologic, psychological and social function although the adolescent does not have the maturity of the adult. Peer pressure and several socio demographic characteristics may predispose an adolescent to early sexual debut which is defined as having had a 1st sexual intercourse at or before age 14 years. This paper describes early sexual debut in an adolescent girl with a focus on family dynamics that may predispose to early sexual debut in adolescents.

METHODS: A case review and discussion of a 13 year old female who presented with signs suggestive of pelvic inflammatory disease. Ethical clearance was obtained from Research and ethics committee of Federal Teaching hospital Abakaliki, Ebonyi State.

RESULTS: Adolescents are often under pressure to have sexual intercourse. Certain family dynamics may predispose adolescents to early sexual debut. These modifiable factors can be eliminated to delay sexual intercourse in adolescents to a time when they can be better prepared and matured.

CONCLUSIONS/NEXT STEPS: Adolescents are often under pressure to have sexual intercourse. Certain family dynamics may predispose adolescents to early sexual debut. These modifiable factors can be eliminated to delay sexual intercourse in adolescents to a time when they can be better prepared and matured.

IAAH170547

Gender inequality, norms around body and restricted mobility – barricades to adolescent girls' education

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BACKGROUND: Girls tend to have fewer avenues to pursue interests, learn

skills, and their lives are often characterized by limited awareness and access, restricted mobility, and limited ability to exercise their own rights due to deep rooted gender inequality. This research tries to explore the existing normative structures that negatively impact girls' higher education, ultimately pushing them to child marriage.

METHODS: The research is from a comprehensive study situated in the schools as well as community, with adolescent girls (10 -16 years) from 7 villages of Pune district in Maharashtra, India. This research includes quantitative data collected from 168 girls and qualitative assessment including FGDs with parents (7) and girls (8) and in-depth interviews with teachers and stakeholders (20).

RESULTS: Roles and responsibilities of boys and girls greatly differ and continue to define adult roles and their decision making power. Even if a girl gets educated, her primary responsibilities remain confined to household chores and sibling care, revealed 79% girls. There is an overwhelming emphasis to protect chastity- 80% of girls reported their responsibility to protect family's honor. 72% stated that they should not be visible in public spaces as these are dominated by men and thus unsafe for them. 67% girls expressed that they are not allowed to be seen with men in public spaces after menarche. 6 out of 10 girls agreed that early marriage forces a majority of the girls to withdraw from school, whereas education is prioritized for boys as they are expected to contribute directly in the household even after marriage.

CONCLUSIONS/NEXT STEPS: Gender inequality, fear of harassment, and norms around chastity push girls to discontinue secondary education. The research indicates that facilitating transformative changes in adolescent girls would involve multiple approaches by engaging teachers, community and parents, especially fathers to empower girls and enable them to make informed decisions.

IAAH170552

Challenges in school level implementation of Weekly Iron Folic Acid Supplementation Programme in National Capital Territory of India- A Qualitative Study

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BACKGROUND: As per National Family Health Survey -3, 2005-06; 56% of female and 30% of male adolescents in age group 15-19 years were anemic in India. Government of India introduced Weekly Iron Folic Acid Supplementation (WIFS) programme to address the high burden of anaemia in school adolescents (aged 11-19 years). During year 2013, coverage assessed with at least one dose of iron folic acid pill by school students in last month within Delhi was only 23%. Number of barriers affects the actual implementation for a proven successful strategy.

DESCRIPTION: Data was collected using qualitative research tools viz in-depth interviews with key informants and focus group discussions. The stakeholders included within the qualitative health inquiry included school health coordinators, school principals, nodal teachers of the WIFS programme. From health department, nodal officers managing the programme were included for the study. Data was collected in National Capital Territory Region within north India.

LESSONS LEARNED: The supply and distribution of iron folic acid pills was regular and weekly approach was followed by school teacher for drug administration. The students cited low compliance and weak monitoring and supervision of the programme. Compliance was reported to be low due to bad taste and side effects were reported. There was belief that free government medicines were ineffective and students with normal hemoglobin who had no anemia were also asked to take the pill. There was a felt need that students should be examined for their anemic status on regular basis and then managed appropriately. Teachers could be role models in the implementation programme if supported by health officials adequately. Students and teachers called for an enhanced support in terms of health education events and supervision by health officials to improve the situation.

CONCLUSIONS/NEXT STEPS: Concerted actions from health and education departments through regular monitoring and better ground level advocacy will be imperative to improve the implementation and coverage of WIFS Programme within north Indian school settings.

IAAH170559

To study the adolescent attitude and relevance to Family Life Education Program

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BACKGROUND: Family life education is a comprehensive program to educate the growing children regarding the various aspects of living in a society and interacting with other individuals at different levels and in different ways along with imparting age appropriate knowledge of biological and sexual development. Lack of awareness, ignorance, or inappropriate knowledge among youth made us take up this study.

METHODS: This study was done on a total of 150 students of which 84 were boys and 66 were girls studying in Government School in VIII and IX standards. They were asked to anonymously answer a questionnaire. Separate questionnaires were given for boys and girls.

RESULTS: There is a need for educating adolescents on various issues specific of their age group through meaningful family life education programme. In our study, the knowledge about menstrual hygiene is poor among girls 8%. The common source of knowledge about sex and sexuality is through their peers and media (60%, 85%). Knowledge about HIV/AIDS was very less almost insignificant 5%. 50% of boys felt masturbation is harmful to health, myths regarding masturbation need to be addressed.

CONCLUSIONS/NEXT STEPS: Curriculum for family education should be appropriate for targeted group. The adolescent's family life education program should include 1-growth and development. The physiological changes, emotional changes should be addressed. 2-Human relationships which include interpersonal interactions, personality development within the family. 3-Values, morals and ethics, Honesty, trust, self-control should be taught. 4-Decision making and problem solving in context to peers, social, personal in should be addressed. 5-Career goals and planning should be discussed. 6-sexual activity problems of premarital, non-marital sex, sexually transmitted disease should be addressed. Pregnancy and childbirth should be addressed. Parenting skills regarding breast feeding, child development, should be highlighted 7-Preventing violence, substance abuse.8- stress management issue like examination stress, peer pressure, family related problems are told.9- HIV related prevention and management are discussed. 10-diet and fitness obesity, under nutrition, eating disorders are discussed.

IAAH170597

Association between Involvement in Economic Activities and Health Status of Adolescents in Secondary Schools in Ibadan, Nigeria

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BACKGROUND: Globally, millions of adolescents engage in remunerated or unremunerated work. There are indications that the increasing economic hardship in Nigeria has resulted in more adolescents engaging in economic activities to augment the family income. Studies have shown that engaging in economic activity may have some benefits for adolescents, however, it also has negative effects on their health. This study was conducted to determine the association between involvement in economic activities and the health of adolescents in secondary schools in Ibadan, Nigeria.

METHODS: A cross-sectional study design was utilized and 600 adolescents were selected from senior secondary classes in public and private secondary schools within the LGA via a four-stage sampling technique. An interviewer-administered questionnaire was used to obtain information on the adolescents' socio-demographic characteristics, types of economic activities they engaged in and history of work-related illnesses. The adolescents' self-rated health status was assessed using the General Health Questionnaire (GHQ-12). Data was analysed using SPSS and level of significance was $p < 0.05$.

RESULTS: The mean age of the respondents was 15 ± 1.5 years; 54.0% were female and 48.5% were currently engaged in an economic activity. Common economic activities they engaged in were fashion designing 26.1%, petty trading and hawking 12.4%, hairdressing 8.6%, bead and bag making 7.6% and remunerated participation in various sports 7.6%. 55% frequently felt tired after a day's work, 37.5% had experienced muscle and joint pain associated with their work and 18.2% had ever sustained an injury while working. About

17.3% of all the adolescents had symptoms of ill-health at the time of the study. Overall, the mean GHQ score was 15.1 ± 5.6 . There was no significant difference between the GHQ scores of working (15.1 ± 5.8) and non-working adolescents (15.1 ± 5.4). However a significantly higher proportion of working adolescents had symptoms of ill-health 22.3% compared to non-working adolescents (12.6%); $p = 0.002$).

CONCLUSIONS/NEXT STEPS: Many of the adolescents were currently engaged in an economic activity and this had exposed them to adverse work-related health outcomes. Interventions to reduce adolescents' engagement in economic activities could be beneficial in ensuring the health of adolescents in the study area.

IAAH170608

Knowledge of Menstrual Hygiene and Practices among In-School Adolescents in Ibadan, Nigeria

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BACKGROUND: Menstruation is a physiologic process in females and a high level of hygiene should be maintained during this period as unhygienic practices exposes females to risk of reproductive tract infections. The aim of the study is to assess menstrual hygiene knowledge and practices among in-school adolescents.

METHODS: A cross-sectional survey design was adopted. Using a three-stage sampling technique, four schools (two private and two public) of the 52 secondary schools in IBNLGA, 30 of 87 classes and 336 of 2148 females who had experienced at least three menstrual periods were randomly selected. A semi-structured interviewer administered questionnaire was used to obtain information on menstrual hygiene knowledge and menstrual hygiene practices. Data were statistically analysed using SPSS software version 20. Quantitative data were analysed using descriptive statistics and Chi-square test.

RESULTS: The age range of the adolescents was between 10 and 18 years with a mean of 14.0 ± 1.6 years. Twenty-nine percent had good menstrual hygiene knowledge. Identified common sources of menstrual hygiene information were mothers 64.8%, teachers 26.0%, and school clubs 8.0%. Over a third 38.3% had good menstrual hygiene practices. Common absorbents used were sanitary pad 84.2%, cloth 8.6% and tissue 5.7%. About 9% of girls have their absorbents changed once a day, 49.1% twice, 39.9% thrice and 2.1% four times. 60% of the girls do not change in school due to unavailability of clean toilets and lack of privacy. Out of those with good knowledge, 41.4% had good practices compared with those with poor menstrual hygiene knowledge 37.0%.

CONCLUSIONS/NEXT STEPS: Adolescents had poor knowledge and practice of menstrual hygiene. There is a need for targeted information that could improve menstrual hygiene knowledge and practices among adolescents. Availability of neat functional sanitary facilities in school will improve menstrual hygiene practices of adolescents and also their reproductive health.

IAAH170612

Structural roots of unwanted adolescent pregnancy in developing economies and conservative contexts

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¹PUCP

BACKGROUND: Almost fifty years of experience in research, academics, policy design, advocacy, international consultations to governments, NGOs, UN agencies, and cooperation organisms in the realm of adolescent sexual and reproductive health and rights, gender, discrimination and violence, and poverty and exclusion, allows for a better understanding of the complex, structural roots that underlie adolescent unwanted pregnancy, especially in Latin America and under developed economies with strong religious and conservative forces impinging upon national and regional programs and policies.

DESCRIPTION: Analysis of contexts of unwanted adolescent pregnancies is done from the micro to the macro-level and from a historical and cultural viewpoint. Examples are drawn from case studies, national and regional statistics, and qualitative data from different parts of the world, and from policy design experience as well as United Nations negotiation processes in Cairo and

Beijing processes, UNAIDS and the Conference of the Child processes during the 90s and 2000 and their follow ups up to the Sustainable Development Goals. Pictures, conceptual maps, charts with statistical information, and graphs illustrate main issues.

LESSONS LEARNED: Structural and context constraints need to be addressed to surmount resistance to recognition of sexual and reproductive health rights for the adolescent populations. Although diversity matters, continuities among diverse contexts can be underlined and confronted. Change is to be built at different levels of action and with a diversity of target groups that impact decision-levels at social and health policies concerning adolescents and children.

CONCLUSIONS/NEXT STEPS: Lessons learned are aimed to pass to new generations in order to facilitate advocating for adolescent sexual and reproductive health, development, citizenship and rights.

IAAH170625

Evaluation of School Health Nursing Implementation Results of a Primary School in a Rural Area of Turkey

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BACKGROUND: To ensure adolescents being healthy and can fulfil their roles in society in a healthy way is one of the 2020 targets of The World Health Organization. This target points to the importance of school health services that protect and improve the health of children and adolescents. This study highlights the importance of school health screening programs in the early identification and resolution of health problems of school children.

METHODS: This descriptive research's purposes are; to determine the growth situations, vision disorders, oral-dental health problems in primary school students, to direct the students for the determined problems, to provide counselling and health education. The study was conducted in an elementary school in rural Samsun in the academic year of 2015-2016. The screenings were conducted with 119 students, two days in a week of three-month period, by a group of senior students and faculty members of the Nursing Department of the Faculty of Health Sciences of Ondokuz Mayıs University. Within the scope of the the screenings, students were assessed for BMI, mouth and dental health examination, Snellen test, tuberculosis vaccine control and blood pressure measurements. The screening results of each student were processed into prepared forms, shared with class teachers and student parents.

RESULTS: According to BMI values, 63% of the students were overweight, 17% were obese, 8% were overweight, 10% were weak and 2% were extremely weak. As a result of visual examination, 26.5% of the students had disorders related to visual acuity. 64.71% of the students were found to have oral and dental health problems. One of the students had high blood pressure and four of them had tuberculosis vaccine problem. As a result of the screening results, it was seen that students needed health education on personal hygiene and health nutrition.

CONCLUSIONS/NEXT STEPS: In conclusion, the problems of mouth, dental health, vision and physical growth were determined in the students. As a result of the study, health education was given to the subjects determined for all students by senior students. Parents of students who are at high risk of screening results were informed and directed to a doctor.

IAAH170668

Utilization and Awareness of Adolescent-Friendly Reproductive and Sexual Health Services: A Community Based Study among adolescents in a Rural Block of Darjeeling District, West Bengal

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BACKGROUND: Most of studies examined the use of reproductive health services in special clinics and intervention based and among youth. Scarcity of community based studies in India. Specific Objectives: 1) To determine the extent and pattern of utilization of Anwasha clinics in a rural block, Darjeeling district. 2) To assess awareness of the adolescents regarding availability of services

METHODS: The sample size is calculated using the formula: $n = Z^2 (1 - \alpha/2) P (1 - P) / d^2$ where: $n = 3.84 \times 0.5 \times 0.5 / (0.1 \times 0.1) = 96$ As simple random sampling was followed, no design effect considered, so the sample size becomes = 96 Further considering a non-response rate of 10%; the final sample size was

= 96 + 10 = 106. This was rounded off to 111. The sample size is calculated using the formula: $n = Z^2 (1 - \alpha/2) P (1 - P) / d^2$ where: $n = 3.84 \times 0.5 \times 0.5 / (0.1 \times 0.1) = 96$. As simple random sampling was followed, no design effect considered, so the sample size becomes = 96. Further considering a non-response rate of 10%; the final sample size was = 96 + 10 = 106. This was rounded off to 111. Matigara block of Darjeeling district was selected purposively. 2 Villages from each GP selected purposively. One GP headquarter village and other the most distant village from the GP headquarters was selected. Adolescents from each village were selected according to population proportion to size from each of the 10 villages by simple random technique.

RESULTS: The extent of utilization of ARSH clinic was around 20.7% including the outreach services at school, mostly among late adolescents 43.5%, female 60.9% and school going adolescents. It was found that the most important factor affecting utilization were SES and School going status with p value 0.006 and 0.017 respectively. Most utilized services was of sanitary napkin, but services related to reproductive and sexual health including contraception, were not at all utilized. Regarding awareness of special clinics for their age group, around 82% of study subjects in community were unaware of any special clinics for adolescents.

CONCLUSIONS/NEXT STEPS: Lack of awareness was the main obstacle for service utilization in Anwasha clinic and thus Anwasha clinic has landed up with merely sanitary napkins supplying store. More emphasis on generating awareness of ARSH services among adolescents.

IAAH170675

Utilization of maternal healthcare among young mothers in urban India

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BACKGROUND: Unacceptably high proportion of young mother's deaths (9%) in total maternal deaths in India is a challenge for policy makers and government. Considering the lack of studies looking at factors associated with the utilization of maternal healthcare services among young mothers in urban India.

METHODS: This study is an attempt to fill the gap using the data from District Level Household Survey-3. The three outcome variables included in the analyses are 'full antenatal care (ANC)', 'safe delivery' and 'postnatal care (PNC) within 42 days of delivery'. Chi-square test and binary logistic regression were performed to fulfil the study objective.

RESULTS: It was found that around 23% of young mothers received full antenatal care (full ANC), 70% had undergone safe delivery care, and nearly 65% received postnatal care within 42 days of delivery. Findings indicate that there is considerable amount of variation in use of maternity care by educational attainment, household wealth, religion, parity and region of residence. The full ANC visit was found to be key in the utilization of safe delivery and PNC.

CONCLUSIONS/NEXT STEPS: The coverage of maternal healthcare, particularly full antenatal care is inadequate and far from satisfactory. Urban young mothers as a group have drawn very little attention in policies and programs related to maternal health despite the fact they are among the most vulnerable groups of mothers in reproductive ages.

IAAH170676

Sociocultural factors influencing use of Sexual Reproductive Health services by young people in Swaziland

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BACKGROUND: Access to reproductive health services by youth has received minimal attention given that Sexual Reproductive Health (SRH) service provision for many years has been tailored to meet the needs of the adult population. The youth have therefore been neglected partly due to cultural sensitivity that dictates what, when and how SRH information and services should be transmitted to them. The current study therefore sought to unveil and explore sociocultural factors influencing youth utilization of SRH services provided in health facilities.

METHODS: A mixed method approach was used to gain a comprehensive view of factors influencing utilization of adolescent sexual reproductive health (ASRH) services. Data were collected quantitatively by using semi-structured questionnaires and qualitatively through individual in-depth interviews and Focus Group Discussions (FDGs) among a total of 927 youth aged 15-24 years (222 out of school youth and 705 in-school youth). The study sample also comprised of 68 gate keepers who included: teachers, religious authorities, parents/guardians, traditional authorities and health professionals.

RESULTS: The study exposed factors underlying utilization of SRH services among Swazi youth. Such factors included the family, peers, religious and community values and norms. Youth who perceived their families, communities and peers to be liberating towards uptake of SRH services were more likely to utilize those services compared to youth who perceived the opposite.

CONCLUSIONS/NEXT STEPS: The results persuade optimistic youth programs determined to increase uptake of SRH services among youth to incorporate parental and community programs instead of exclusively focusing on youth in all interventions designed to propel protective sexual behaviour among youth at all service delivery level. Parental, community, traditional and religious leadership involvement in the development and execution of youth program interventions should be prioritised.

IAAH170723

A Study of Knowledge of Adolescent Girls towards Reproductive Health and Related Issues

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BACKGROUND: Adolescence is a challenging phase of life, within which the individual attains physical, sexual and social maturity. Reproductive health is the state of physical, mental and social well-being in all matters relating to the reproductive system at all stages of life. This transition phase from childhood to mature adult is a state of constant transformation and turmoil, hence stress and storm situation for the adolescents, which make them vulnerable to number of issues namely general health problem, reproductive health related problem, sexually related problems etc. Therefore, adolescents need guidance and awareness regarding the reproductive health and related issues so that they could cope-up with such kind of situation.

METHODS: Present study was to assess the knowledge of adolescent girls on reproductive health and related issues amongst 60 girls of class 9th and class 10th of Borbheta M.E. Govt School, Jorhat (Assam). Pre and Post-test was adopted to study the level of knowledge of the respondents. Lecture methods along with power point and posters were used to give awareness on the topic (adolescent girls on reproductive health and related issues). A self-constructed questionnaire was used to collect the background information and to assess the knowledge of adolescent girls on reproductive health and related issues.

RESULTS: Majority 46.6% of respondent's father were working as daily wage earners while 81.6% of the adolescent's mothers were unemployed. 91.6% of respondent's father earns a monthly income of Rs 5000-10000 while majority percent of the adolescent's mother were not earning. Results after the post-test revealed that * majority 78.3% of the girls have the idea of onset of puberty. Maximum 71.6% of the adolescent were aware about the changes during adolescence. 96.6% of the respondents felt that menstruation is common thing. Majority of the respondents came to know about menstruation from their mother, family members, friends and mass media. Almost 88.3% of the respondents revealed that certain medicine are harmful for reproductive health

CONCLUSIONS/NEXT STEPS: Results revealed that respondents showed better performance after the intervention/ lecture session.

IAAH170724

Linking schools with nearest health centers to meet the health care needs of adolescents in Rwanda

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BACKGROUND: The Rwanda counts 3 millions of adolescents aged 10-19 years out of 11 million of the general population and 90% of them are in school.

The average age at first sex is 16 years in boys and 17 years for girls and 64% of adolescents in union are not using contraceptive methods. Consequently adolescents suffer a disproportionate burden of poor SRH, including high rates of sexually transmitted infections and adolescent pregnancy, often with significant socioeconomic consequences due to lack of SRH service and commodities they need.

DESCRIPTION: Health, Development and Performance in collaboration with the Ministry of Health Links the health centers with youth friendly service to nearest schools to allow students to get reproductive service including provision of information, counselling and service on adolescents sexual and reproductive health (ASRH), Family Planning, Sexually Transmitted Infections, Human Papilloma Virus and HIV and AIDS; Sex, Gender, and Gender Based Violence prevention and response; Safe Motherhood for adolescents; Risky behaviour of adolescents; Alcohol and abuse of harmful substances; Post abortion care; Prenatal Consultation; Life skills education. The project has trained teachers/mentors from schools and nurses on ASRH which closely collaborate; regular visits of the health center by the students are organized by the school, thus, students are aware of available service, where they can get them and who they can contact for assistance.

LESSONS LEARNED: Integrating the youth friendly service into existing structures is more cost effective than creating new ones. A youth friendly environment in terms of providers, facility and program design guaranty the use of service by adolescents; Demystifying the health center; young people must understand that centers offer curative as well as preventive care.

CONCLUSIONS/NEXT STEPS: Building strong collaboration between schools and Health centers has improved adolescents' knowledge in and increased the use of sexual and reproductive health service. In 6 out of 30 districts in which the project has been implemented. It is reported no more risk behaviour among students from schools linked with health centers compared to the schools without. We recommend this strategy to be expanded in other areas.

IAAH170726

Mitigating ASRH challenges through improving access to knowledge and information on SRHR for young people 10-24 years in Uganda

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BACKGROUND: Despite Uganda having a predominantly young population 55% under the age of 18; and 31.7% 10-24 years, Adolescent Sexual and Reproductive Health services (ASRH) remain limited and do not address the full needs of adolescents. sexual and reproductive health rights of the young people have continued to be compromised. Little is known about SRH rights of young people. Most studies have focused their attention to availability, access and utilization of services and information. The current challenges of ASRH are attributable to the limited knowledge of rights which in itself disempowers young people to demand for the services.

METHODS: In November 2015, Naguru Teenage Information and Health Centre (NTIHC) conducted a baseline survey on knowledge/awareness of Adolescent Sexual Reproductive Health and Rights (SRHR) in Uganda. The study further assessed the current levels of knowledge/awareness of SRHR among young people, health care providers and general population in Uganda. A cross sectional design employing Quantitative and Qualitative methods of data collection was used for the survey. Data was collected from the population of young 10-24 years, health care providers, teachers, parents and general population of adults. Focus Group Discussions (FGD), In-depth Interview (IDI) and Key Informants (KI) using structured interview guides.

RESULTS: The findings revealed that only 20% of adolescents knew their SRHR identified in the Adolescent Health guidelines 2011/12-2014/15, despite a wide spread of information, with 73% respondents indicating that they had ever received any information on SRHR, 53% of the health care providers knew the SRHR of adolescents and about 49% significant others i.e. teachers, parents and guardians knew their SRHR. Only 58% of the respondents were aware of the role of health care providers to observe SRHR.

CONCLUSIONS/NEXT STEPS: There's is urgent need of popularizing SRHR across all stakeholder's, strengthen advocacy efforts for SRHR and integration of SRHR in all activities including health care delivery as means of addressing SRH related challenges.

IAAH170727

Women's Role in Peace: Understanding Gender and Development through Sexual and Reproductive Health

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BACKGROUND: Successful peace building is a community development initiative focused on human security, equitable development and a movement away from conflict. Through evaluating women's role in building community based sustainable sexual and reproductive health initiatives evidence will be presented that women led, organized and implemented projects are at the forefront of successful peace building. This paper will use the theoretical framework of UNSC resolution 1325 that recognizes "women are disproportionately affected by conflict, and to address this, women should play a key role in achieving lasting peace after conflict" (United Nations).

DESCRIPTION: This paper will focus on the area of conflict and violence of sexual and reproductive health rights, which includes sexual assault and restrictive access to contraception/family planning initiatives as a form of violence.

LESSONS LEARNED: Community focused health projects in Chile and Indonesia will be used as imperial evidence toward the necessity of women in leadership positions of development in SRHR initiatives. Data and research will also be presented from the York Region Youth Sexual Health Network, a project funded by Bayer International and Women Deliver. These case studies will demonstrate the necessity of Sexual and Reproductive Health projects focused on access to contraception and sexual assault awareness and the link toward SRHR and peace.

CONCLUSIONS/NEXT STEPS: This paper will also explore the correlation between peace, conflict and sexual/reproductive health. For the definition of this paper, the term 'women' is defined as anyone who self identifies and includes trans, non-binary and two spirited women.

IAAH170765

Increasing Access to Sexual and Reproductive Health and Rights (SRH/R) Services among Adolescents and Young People through the Mariestopes Uganda Youth Ambassador Program

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BACKGROUND: Uganda has the second largest growing population of adolescents and young people in the world with 78% of the population below 30 years (UDHS, 2016). 23% of the population are adolescents and 52% of the population is below 15 years (WHO, 2016). Furthermore, on average adolescent girls begin sexual intercourse at the age of 16.3 and approximately 10% of adolescents 10 years report having had sexual intercourse at least once (MOH, UNICEF) accounting for 25% rate of teenage pregnancy in Uganda the second highest in Africa. Nearly 3% of the adolescents are HIV positive (WHO, 2016). Many reasons account for these sexual reproductive health challenges most especially myth and misconceptions, lack of access to quality health services that young people face in Uganda.

DESCRIPTION: The youth ambassador program is a Mariestopes Uganda program that focuses on empowering young people with sexual and reproductive health rights knowledge and information through trainings to enable them educates fellow young people in their communities. Adolescents and young people are trained to provide information on family planning, post abortion care and Sti's including HIV as a way of enabling them the deal with social misconceptions and also refer adolescents to Mariestopes centers and other health care networks for SRHR services. Their referrals are tracked through codes that are generated through texting their referrals to mariestopes system using their mobiles phones.

LESSONS LEARNED: Adolescents and young people are willing to volunteer in programs that relate to adolescents. Their meaningful engagement has evidently increased the number of adolescents seeking for SRH services especially contraceptives. Adolescents will seek SRH services when services are free or subsidized because most adolescents in developing countries lack financial resources. Adolescents prefer reliable and responsive services; they feel comfortable when dealing with fellow young health workers.

CONCLUSIONS/NEXT STEPS: Adolescents in Uganda are faced with many

sexual reproductive health challenges like STI's unsafe abortion, HIV among others because of different factors but most of all due to lack of accurate information, limited access to quality services etc. There is an urgent need to train adolescents as community SRH ambassadors especially on matters of contraception.

IAAH170774

Re:MIX: A pilot study of using young parents as peer educators to deliver a comprehensive sexuality education curriculum

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BACKGROUND: Re:MIX (which stands for Maximize Strengths, Imagine a Healthy Future, and Explore Identities) is an in-school, comprehensive sexuality education program for adolescents funded by the U.S. Department of Health and Human Services Office of Adolescent Health from July 1, 2015 to June 30, 2018. The program's goal is to empower and educate in-school adolescents (13–17 years old) and young parents (18–24 years old) so they are prepared to make informed decisions and lead healthy lives.

DESCRIPTION: Re: MIX is designed to teach mixed-gender groups of students at local charter schools (grades 8–10) to delay sex and/or use protection if/when they have sex. Re:MIX uses a three-pronged approach using classroom instruction, health care referrals, and professional development targeting two populations of young people. Information is delivered using non-traditional approaches, such as game-based activities, gender-transformative theory, and storytelling. Re:MIX offers both primary pregnancy prevention to in-school adolescents and secondary pregnancy prevention to parenting peer educators (PEs). The program employs young parents as PEs; in Year 1, PEs was all young mothers aged 19–27. The PEs co-teach Re:MIX classes with a health educator, providing them with an opportunity to learn about sexual and reproductive health and develop presentation and classroom management skills. Outside of curriculum facilitation, the PEs receives additional training in four core professional competencies: accountability, communication, leadership, and personal motivation.

LESSONS LEARNED: After 10 months from the start of the program, PEs demonstrated improved proficiency in three of the four core competency areas (with limited progress in accountability). All PEs reported increased self-confidence and self-efficacy to share their stories, to facilitate classroom work, and to fulfil a professional role. Re:MIX program staff observed PEs' growth in these competency areas as well.

CONCLUSIONS/NEXT STEPS: Program staff has revised the PE training process to place greater emphasis on the boundaries and expectations related to accountability for the incoming cohort. Social, family-oriented team-building activities are being included throughout Year 2 to promote and nurture the relationships among PEs, health educators, and staff. The results of this pilot evaluation year demonstrate that the PE program merits further study.

IAAH170775

Designing for Choice: A Human-Centered Design Approach to Youth Reproductive Health

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BACKGROUND: IDEO.org improves the lives of those living in vulnerable communities through human-centered design (HCD). HCD is a creative problem-solving approach that gains a deep understanding of our end-user and results in solutions that are tailored to meet their needs. We're taking on the challenge—today around 16 million girls aged 15 to 19 give birth every year and the complications of pregnancy are a leading cause of death for adolescent girls across the developing world.

DESCRIPTION: IDEO.org infuses public health frameworks with the principles of HCD to create solutions that enable young people to overcome barriers to accessing contraception. We've partnered with adolescent health organizations in seven Sub-Saharan African countries—including Marie Stopes International, Population Services International, and DKT International—to understand the barriers adolescent girls face, and design, test, and pilot solutions

that address these needs. In this session, Jocelyn Wyatt, Executive Director of IDEO.org will share insights that have emerged across contexts, and the tools we use to design impactful, scalable solutions.

LESSONS LEARNED: In Kenya, Future Fab, a youth-centered movement, resulted in a six fold increase in the numbers of girls 15-19 years of age visiting service points each month, with 70% of girls adopting a long term contraceptive method. In Zambia, a pilot of our girl-only clinic experience resulted in a 16-fold increase in adolescent clients served, with 83% of those adopting a contraceptive method. In the DRC, a demand-generating campaign - Batela Lobi Na Yo - reached more than 20,000 and early results show 5,000 young women visited clinics in Kinshasa, with 75% of those adopting a contraceptive method.

CONCLUSIONS/NEXT STEPS: HCD leads to holistic solutions for adolescents. Prototyping facilitates tight learning loops, where designers can test components of solutions with adolescents to understand what resonates with users, so that only solutions that show strong potential are iterated upon and taken forward for piloting. By addressing emotional, experiential, and structural barriers, HCD overcomes barriers in supply and demand, and creates the conditions for adolescents to have more choice.

IAAH170786

Integrated Multi-Sectoral Approach to improving the sexual and reproductive health of young people in Myanmar (IMSA)

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BACKGROUND: The 2014 Myanmar Census estimates 20% of the population (approximately 10 million) are adolescents aged 10 - 19 years. Recognising the imperative to ensure health and well-being of adolescents, the Government of Myanmar developed the National Strategic Plan (NSP) for Young People's Health 2016 - 2020. The NSP highlights the need for inter-sectoral action for adolescent health, prioritising health, education and community sectors. However, the limited evidence base for adolescent health in Myanmar poses a significant barrier to implementation, particularly for sexual and reproductive health (SRH). In 2016 a formative study was undertaken by our group to understand the SRH needs of adolescents in Magway region. Key findings included poor SRH knowledge and limited access to services. Parents, teachers and health providers were identified by adolescents as preferred sources of SRH information, however considerable socio-cultural and systems barriers were noted challenges.

DESCRIPTION: IMSA was established with the broad goal of improving adolescent SRH in Myanmar. Specific aims include: 1) improve adolescents' SRH knowledge, attitudes and skills; 2) improve community support and demand for adolescent SRH services; and 3) improve the delivery of adolescent-friendly SRH services. Interventions are prioritised across three key sectoral platforms (schools, communities and health facilities) given they represent existing opportunities to improve SRH in Myanmar. For example, 'Life Skills Education' provides a platform for improving SRH knowledge through the education sector. Project activities will be identified through the participatory method of Intervention Mapping (IM) with a core group of stakeholders to identify barriers and opportunities, consider interventions, plan and participate in implementation and evaluation. Activities will be implemented across 8 schools, health facility and community clusters, representing approximately 2,000 young people. IMSA will be evaluated by cross-sectional survey at base and end line.

LESSONS LEARNED: Establishing this inter-sectoral program has been time-consuming and expensive. Feedback from government stakeholders highlighted the value of integrated approaches with strong ownership, coordination, planning and government engagement across all 3 sectors.

CONCLUSIONS/NEXT STEPS: A supportive policy platform and real stakeholder engagement coupled with time and financial flexibility provides the environment for in-depth and sustainable participatory development and operational research design. IM will start in September 2017.

IAAH170827

Knowledge of Contraception and its usage among sexual active rural adolescent males in Haryana

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BACKGROUND: The transition from childhood to adolescence is characterized by an increase in personal control, responsibility, self confidence and independence. During adolescence, unplanned pregnancy is a serious issue and effective communication by parents regarding sexual health especially focusing on contraception is the key to prevention of STD, HIV/AIDS and adolescent pregnancy. Aims and Objectives: 1) To find out knowledge about contraceptives among school going adolescent boys 2) To find out usage of contraceptives among sexually active school going adolescent boys.

METHODS: The study was an interview based cross-sectional descriptive type of epidemiological study and carried out in a rural block Beri of Distt Jhajjar (Haryana) which is rural field practice area of department of Community Medicine, Pt B D Sharma PGIMS Rohtak. The study recruited 1000 rural adolescent male students studying in 9th to 12th classes of the senior secondary schools of block Beri. The study subjects were selected by systematic random sampling from the selected schools proportionate to the strength of students in the schools. A semi-structured and pre-tested interview schedule in local, vernacular language was used for interviewing the study subjects. The study data was analyzed by applying percentages and proportions for different parameters.

RESULTS: Out of total, 87.4% of adolescent males have heard about contraception. Most common known contraceptive among them was condom and least known to them was copper-T. Majority of adolescents knew that it prevent AIDS but not all knew about its role in STD or pregnancy prevention. Television and friends were the most common sources of knowledge about contraceptives. Condom usage during sexual activity was meager as compared to knowledge about it. Few subjects had relationship with multiple non professional and multiple professional partners.

CONCLUSIONS/NEXT STEPS: The study concluded that the contraceptive knowledge is not adequate among adolescent, further adolescents have indulged in sexual relationship with multiple professional and multiple non professional partners.

IAAH170833

Social Norms and Menstrual Hygiene Knowledge and Practices among Rural Adolescent Girls

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BACKGROUND: The onset of menstruation is one of the most important physiological changes occurring among girls, with an impact on many aspects of their lives. In India, myriad social, economic, and health factors undermine the ability of adolescent girls to lead full and productive lives. Though there has been a concerted effort on the part of the government to address the needs of young people through programmes and policies, however, adolescents continue to face a number of vulnerabilities and challenges, highlighting the gaps in the implementation of programmes and policies (UNICEF, 2013). In the above context the present paper looks into the various ways by which culturally relevant social norms and practices determines the health behaviour of your adolescent girls in rural Rajasthan and the need for innovative ways to change the mind-sets and to do away with the negative social norms that hinders health development.

METHODS: Interviews were conducted with rural adolescent girls in Rajasthan through a well-structured interview schedule. Data were analysed statistically by simple proportions and supported by qualitative data for in-depth understanding.

RESULTS: Preliminary observations out of 173 girls 111 (64%), had attained menarche at the time of the interview. Little more than 60% reported having correct knowledge about menarche. 90 girls (52%) did not have any knowledge regarding bodily changes during menstruation. 43 % felt disruptions in daily routine activities affects the menstrual cycle and about 106 girls (61%) reported that menstruation cleans the body of dirty blood. 70% reported experiencing several prohibitions during menstruation at home and 23 % reported not going to school during menstruation as it is considered as inauspicious to venture out of home during menstruation.

CONCLUSIONS: Knowledge regarding menstruation and menstrual hygiene is an important aspect of health education. Menstrual health management is a multifaceted issue and compels us to consider that there is a pressing need to engage with it in a holistic manner and educate the mothers and the family elders along with young girls to bring about a paradigm shift in the prevailing norms of our culture and society with regards to menstruation.

SRH/HIV

IAAH170005

Association of poverty and sexual and reproductive health among Brazilian adolescent students

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BACKGROUND: Although poor adolescents in low and middle-income countries suffer from higher rates of adverse sexual and reproductive health outcomes, evidence on the association between poverty and sexual risk behaviours has been less consistent. This study investigates the association between adolescent poverty, and sexual risk behaviours and outcomes in a middle-income country using a nationally representative sample of Brazilian students.

METHODS: Cross-sectional analysis of the Pesquisa Nacional de Saude do Estudante (PENSE), a nation-wide school-based survey of 102,301 adolescents attending 9th grade, carried out in 2015. Analyses include descriptive statistics, and multivariate logistic models that control for individual, interpersonal and environmental factors.

RESULTS: *Preliminary Results* sexually experienced students comprised 28.14% of the survey sample, and within this group 63.74% were males. Median age of first sexual intercourse was 13 years old, yet 6.29% of sampled students reported sexual debut at age 9. Bivariate analysis results show that while there were no household asset differences in reported condom and contraceptive use at last intercourse ($p=0.3413$ and 0.1441 respectively), pregnancy odds for females in the bottom quintile were 1.99 ($p<0.001$) times those in the top household asset quintile. Further analyses will explore confounders and potential mediators of these relationships.

IAAH170018

Access to health and legal justice for people who use and inject drugs in Uganda

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BACKGROUND: The issue of regulation of drug use made headlines with the recent enactment of the narcotic drugs and psychotropic substance (control) Act of 2015 in Uganda. The war on drugs has had negative implications of the individual users of drugs who are harassed and forced to hide. The criminalization of individual drug users increases vulnerability of this group to numerous social economic outcomes including the risks of HIV.

DESCRIPTION: PWUIDs in Uganda make up a hidden population due to criminalization and discrimination. The government has positioned its self with the approach of criminal justice while dealing with PWUIDs. The criminal justice approach has instead increased harm to the PWUIDs. It is globally acknowledged that IDUs play a major role in HIV transmission, which is a gap in attaining the 909090 target on Universal Access to HIV prevention, treatment and care for PWUDs. Although there is scanty data on HIV prevalence amongst PWUDs in Uganda, the available information through a combination of UNAIDS and UNODC data, provide HIV estimates of PWID as 17%, another study in Kampala (MARPS Network in 2012-2013) highlighted HIV prevalence at 11.7% for IDUs but little attention is being given to PWUIDs yet they may have a major contribution to the 7.3% (Uganda AIDS Indicator Survey 2011).

LESSONS LEARNED: The legal prohibitions on provision of harm reduction interventions such as; sterile needles (Needle and Syringe Exchange program) and opioid substitution therapy directly impede HIV prevention efforts. The existing government policies and laws such as; Anti-narcotic Act 2015, Penal code, continuous arrests and harassment by law enforcement of PWUDs and continue to hide drug users from testing for HIV and AIDS and thus contribute to increase in HIV and AIDS amongst the hidden population. Justice approach continues to cause more harm than the rights approach.

CONCLUSIONS/NEXT STEPS: There is a great need for strengthening access to health and legal justice services for PWUIDs in Uganda and without greater attention to the health and legal needs of drug users, reaching the 90–90–90 targets will not be possible without reducing new HIV infections among people who inject drugs in Uganda.

IAAH170020

Traditional Korean Medical (TKM) treatment for dysmenorrhea in adolescent girls

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BACKGROUND: Dysmenorrhea in adolescent girls are usually treated with oral contraceptives. Severe dysmenorrhea even disrupts school life or daily activities. This might lead to infertility by thinning endometrium that plays an important role in implantation. In Korean Medicine, Reasons of primary dysmenorrhea are circulatory disturbance of qi and blood caused by stress, blood stasis of uterus and its vicinity, and deficiency in cold uterus caused by lack of qi and blood. Underlying diseases should be treated by priority in secondary dysmenorrhea. In Sasang Constitutional Medicine (SCM) approach, prescription is made to regulate superiority of organs and ameliorate neighboring condition of uterus or itself to relieve dysmenorrhea without causing any complication or side effects, but improving overall health condition of adolescent girls.

METHODS: The data from the 26 participants suffering from dysmenorrhea with average age of 13 ± 1 years (range: 11 to 18 years) were collected using a structured menstrual history questionnaire and responses on VAS (Visual Analogue Scale). Based on the survey responses, we had 11 adolescents with menstrual disorder as the test group and 15 adolescents without menstrual disorder as the control group. The clinical trials subjects were asked to respond to another questionnaire for identifying their constitutional types. Individual treatments including acupuncture, moxibustion, Korean herbal medicine (KHM), hip steam bath and foot bath were conducted.

RESULTS: The data from the 26 participants suffering from dysmenorrhea with average age of 13 ± 1 years (range: 11 to 18 years) were collected using a structured menstrual history questionnaire and responses on VAS (Visual Analogue Scale). Based on the survey responses, we had 11 adolescents with menstrual disorder as the test group and 15 adolescents without menstrual disorder as the control group. The clinical trials subjects were asked to respond to another questionnaire for identifying their constitutional types. Individual treatments including acupuncture, moxibustion, Korean herbal medicine (KHM), hip steam bath and foot bath were conducted.

CONCLUSIONS/NEXT STEPS: This case study implies a potential of herbal treatment as an adjuvant management for dysmenorrhea. Further extensive studies are needed to verify efficacy, safety and detailed pathology of herbal medicine and other treatments in TKM for dysmenorrhea.

IAAH170047

Integration of entertainment and education to advance SRH information and services among young people in Uganda

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¹Public Health Ambassadors Uganda (PHAU)

BACKGROUND: Worldwide, entertainment is core to the well-being of adolescents and youth. It alters their moods, furnishes much of their slang, dominates their conversations and greatly influences their behaviour. This is the rationale of the Edutainment, Informative and Performance Arts (EIPA) approach, which sets out to educate youths and adolescents on issues of SRHR by creating an interactive and fun environment for learning through skits, plays, poems, dance narratives and flash mobs that are in cooperated with targeted SRHR messages.

DESCRIPTION: Public Health Ambassadors Uganda (PHAU) commemorated the International Condom Day dubbed "Condoms Are Cool" on 13th February 2015. It was aimed at increasing awareness and knowledge on consistent and correct use of condoms among university students. Furthermore, students at International Health Sciences University received a public health talk on SRH with more emphasis put the effectiveness use of condoms as a dual protection measure for preventing HIV/AIDS, STIs and unplanned teenage pregnancy and later took part in a "Condom Challenge". To climax the International Condom Day, a flash mob with over 50 young people was staged at HAM shopping grounds; one of the busiest commercial center with over 2500 people carrying out different business ventures but lack access to SRH information and services.

LESSONS LEARNED: 77,000 Condoms were distributed 35 students

sensitized on consistent and correct use of condoms at International Health Sciences University (IHSU) Over 2500 people reached out with accurate information on use of condoms as an HIV/AIDS Prevention measure in one of the highly densely populated area.

CONCLUSIONS/NEXT STEPS: SRHR based interventions especially focusing youths and adolescents should be integrated with interactive, participatory and fun sessions inform of music, dance and drama as these tend to stick in their minds hence cannot forget the message. Musicians, actors, opinion leaders and public icons can be used as ambassadors in SRH based interventions to influence behaviour change, increase acceptability and uptake of contraception among youths and adolescents. This is due to the fact that many youths and adolescents look up to these people as role models, mentors and sources of inspiration.

IAAH170048

Using social behavioural change communication to improve utilization of SRH services among young people in Uganda

Patrick Segawa¹

¹Public Health Ambassadors Uganda (PHAU)

BACKGROUND: Statistics shows evidence of inadequate or lack of accurate SRHR information and services among young people in Uganda. For instance, teenage pregnancy is higher among uneducated girls: 45% of girls without education have already had a baby, compared to 16% of girls with secondary education. (UBOS and Macro International Inc 2011). Young people are poorly informed about issues of HIV, STI and family planning hence making them more vulnerable to engage in risky sexual behaviours. Several myths and misconceptions exist among teenagers: 54% of young people think a girl cannot get pregnant the first time she has sex. (Straight Talk Foundation 2013). In line with above, only 5% of public health facilities in Uganda provide Youth Friendly Sexual and Reproductive Health services. (Ministry of Health, 2011)

DESCRIPTION: Public Health Ambassadors Uganda with support from Program for Accessible Health Communication and Education are using various BCC interventions to increase utilization of SRH services available at health facilities in Luweero in a project dubbed Women's Health Program (WHP). WHP uses a strategy of reaching the young women and girls wherever they are with accurate information thereby enabling them to make informed safe and healthy decisions as far as HIV prevention and other sexual and reproductive health issues are concerned through door-door sensitization using peer educators, community Market day outreaches and school outreaches and Community Family Planning Concert

LESSONS LEARNED: - 12,183 young people were reached with SRH information and only 10,459 were referred to selected facilities to receive integrated SRH information and services during the door to door mobilization. - 3039 young people were reached with SRH information and services during the community/market day outreaches. - 1157 young people were reached with SRH information and services during the school outreaches. - At the concert; an estimated total of 8000 people attended the concert at Kasana grounds. 1916 young people received free SRH information and service and 28,800 male condoms were distributed.

CONCLUSIONS/NEXT STEPS: SRH interventions especially intended to reach the young women and girls should be brought where they are through peers they know, respect and often interact with.

IAAH170058

Health seeking behaviour of brothel based sex workers in Bangladesh

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¹Population Council

BACKGROUND: Around 3000 sex workers reside in 9 official brothels in Bangladesh. Though sex work is legal in Bangladesh but still sex workers are one of the key populations to be stigmatized and marginalized by the society which makes them to be at increased risk for sexually transmitted infections (STI) including human immunodeficiency virus (HIV). Most of the sex workers do not have clear knowledge on HIV/STI and safe sexual practices. The aim of this study is to describe the health seeking behaviour of brothel-based sex workers.

METHODS: A survey was conducted in 8 brothels in Bangladesh. A total of 1016 brothel-based FSWs aged 18-24, who sold sex were interviewed. The

survey elicited information on key socio-demographic factors, service seeking behaviour for STI and HIV and their preferred place to seek services.

RESULTS: Findings suggest that most of the sex workers do not have knowledge on HIV/STI and safe sexual practices and approximately 42% had no education. One third of them currently having a primary partner. About 39% of the respondents seek medical care from outside health facilities and 20% received services from health clinics located inside the brothels. Almost half of them tested for HIV and 47% tested at least once in the past 12 months. On an average they have 20 paying clients in last seven days. About 47% reported that they have no chance of having STIs including HIV though 57% experienced signs and symptoms related to STI in the last six months. On an average 42% reported they regularly use condom with their paying clients. Bivariate analysis indicated that knowledge on HIV/STI of unmarried FSWs 52% and married FSWs was 58%. FSWs who had other source of income were significantly associated with knowledge on STI compare to comprehensive knowledge of HIV/STI.

CONCLUSIONS/NEXT STEPS: Findings suggest that brothel residences preferred to visit NGO clinic which is inside their residence. So increase of service quality and integration of services is required for their health.

IAAH170063

Reduction in risky adolescent sexual behaviour associated with increased health education in Cameroon, West Africa

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BACKGROUND: In 2004, HIV prevalence in Cameroon was 5.5% among youth aged 15-49. Prevalence in young women aged 15-24 was 4.8%, significantly more than 1.4% in men of the same age group. In 2003, the Cameroon Baptist Convention Health Services (CBCHS) started the Youth Network for Health (YONEFOH) to promote healthy behaviours to reduce the transmission of HIV and other Sexually Transmitted Infection (STIs) among youth.

DESCRIPTION: CBCHS developed a questionnaire which includes questions on demographics, occupation, HIV status, prevention methods and sexual history. YONEFOH surveyed 4,389 unmarried youth aged 12 to 26 in 2004 in the Northwest and Southwest Regions of Cameroon, in 58 schools and 85 churches. STI-focused health education was provided to youth through schools and churches. In 2007, the same survey was administered to 4,858 youth in the same regions.

LESSONS LEARNED: Respondents were 56% female and 44% male in both surveys. Age-adjusted, statistically significant behavioural changes occurred from 2004 -2007 as follows; Preference for abstinence to prevent STIs increased from 67% to 73%; condom use increased from 8% to 11%; "not sexually active youth" at the time of survey administration grew from 34% to 52%; Number of youths who had sexual relation "less than one month" prior to the survey decreased from 34% to 21%; Youths who had "sex with one partner" at the time of survey increased from 35% to 46%; The proportion of sexually active youths who have ever used condom increased from 45% to 58%. The number of youths who reported that they have been tested for HIV increased from 10% to 27%. "Self-reported HIV prevalence" decreased from 6% to 4% among those tested.

CONCLUSIONS/NEXT STEPS: The overall trend reveals a reduction in risky sexual behaviour among youth of ages of 12 – 26 which can be associated with increased sexual health education. YONEFOH offers voluntary HIV counselling and testing. Contact Tracing services and currently reaches over 60,000 adolescents annually with education on STIs, drug abuse, tobacco use and alcohol abuse. More follow-up surveys are essential to further monitor program impact and equally expand the program to reach more adolescents and improve their health.

IAAH170066

"Inexperienced"? Exploring patterns in romantic and sexual activities among urban poor young adolescents in Nairobi, Kenya

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BACKGROUND: The need for early HIV prevention approaches to improve adolescent sexual health in sub-Saharan Africa is gaining increased attention, yet little is known about the sexual experiences of very young adolescents (VYA)

in the region. In this study we used cross-sectional data collected from VYA in an informal (slum) settlement in Nairobi (Kenya) to describe the prevalence and patterns of romantic and sexual activities.

METHODS: The final analytical sample comprised 365 never-married 11-14-year-olds (50% boys) who responded to a survey administered via computer-assisted personal interviews. Latent class analysis was used to identify sub-groups of VYA based on self-reported awareness about sex and involvement in various romantic and sexual activities. Multivariate latent class regressions were fitted to examine the individual, family and community-related characteristics of each sub-group.

RESULTS: The mean age of respondents was 12.4 years; most (98%) were enrolled in school. The prevalence of romantic and sexual activities was low but varied by type of activity; 16% had liked someone 'as more than friends' and all together one in six reported some form of sexual activity. Latent class analysis revealed three distinct sub-groups: 1) Involved (12%, high probability of being aware of sex and to have engaged in romantic and non-coital activities); 2) Observant (48%, high awareness but little own experience); and 3) Naïve (40%, little awareness or personal experience). Involved VYA were more likely than Observant and Naïve VYA to be older, have started puberty, to be orphans and to live in households of greater relative wealth. Class membership was not associated with biological sex, being born in the settlement, household size or number of people sharing a sleeping space, sibling age/sex, or perceived neighbourhood social control.

CONCLUSIONS/NEXT STEPS: Findings suggest that while most VYA in the study context had not initiated romantic and sexual activities, there are distinct sub-groups of adolescents who would not have been captured by looking only at the prevalence of single indicators (e.g. vaginal sex). Research and programming aiming to improve adolescent sexual health thus need to use a wider range of measures to understand and characterize the emerging sexual experiences and needs of VYA.

IAAH170088

Sexual and reproductive health profile of young people: A cross sectional study in two rural districts in Greater Accra

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¹Dodowa Health Research Centre

BACKGROUND: Young people usually refer to people between the age of 10 and 24 years. They face barriers to sexual and reproductive health information and care. This paper highlights on the sexual and reproductive health profile of young people in rural Ghana.

METHODS: The study was conducted in Shai-Osudoku and Ningo-Prampram districts in Greater Accra region. The study was cross sectional, a sample size of 1,689 individuals were selected from Dodowa surveillance site. Trained fieldworkers were used to conduct face-to-face interviews using an electronic device. STATA 12 was used for descriptive analysis. Ethical clearance were sought from the ERC-GHS and the IRB-DHRC.

RESULTS: There were 869 (51.5%) females and 820 (48.6%) males in the study. A proportion of 1561 (92.4%) had never married. More than half of participants were in school 1044 (61.8%) and 617 (36.5%) lived with a single parent. Generally, 1247 (73.8%) knew the term family planning but 708 (56.8%) had no knowledge on a family planning method(s). Only 168 (31.2%) of all participants had never used a family planning method. Injectables 368 (68.3%), condoms 240 (44.5%), implants 148 (27.5%) were the commonly known family planning methods. A total of 709 (42%) individuals had experienced sex. A proportion of 457 (64.5%) did not use condom during their 1st and last sexual encounters. Store/pharmacy 937 (95.6%) was the most common known place to get condom. Some 931 (55.1%) could not get condom if there was a need. Reasons such as no knowledge on place to get condom 348 (37.4%), shyness 290 (31%) and fear of seen as among others 216 (23.2%). A total of 291 (11.7%) individual had ever been pregnant of gotten someone pregnant, these pregnancies resulted in live births 197 (68%) whereas 57 (19.6%) resulted in abortions.

CONCLUSIONS/NEXT STEPS: The need to re-focus on the access to sexual and reproductive health services among young people especially among 10-14 years through the removal of barriers is critical. Strengthening the integration of sexual and reproductive health services into primary health care is also important in promoting sexual health care.

IAAH170092

Young people's and stakeholder's perspectives of adolescent sexual risk behavior in Kilifi County, Kenya: A qualitative study

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BACKGROUND: Sexual risk behaviour (SRB) is a predominant route for new HIV infections among adolescents. However, at the Kenyan coastal region, a dearth of published literature currently exists on the prevalent forms of SRB, their determinants and protective factors among adolescents. The aim was to evaluate perceptions on prevalence, protective and risk factors for adolescents' SRB.

METHODS: This qualitative study involved 11 focus group discussions with 85 young people and 10 key informant interviews with stakeholders who work with adolescents in Kilifi County. All interviews were audio-recorded and transcribed. Data analysis was guided by the Ecological Model of Adolescent Behaviour from which risk and protective factors were identified at each ecological level. A thematic framework analytical approach was used.

RESULTS: Most of the young people's perceptions concurred with those expressed by stakeholders. Transactional sex, cross generational sex, coerced sex, early sexual debut, multiple sexual partnerships and unprotected sex were perceived as prevalent. The perceived risk factors within a social environment context were: poor sexual and reproductive health (SRH) services; social events like funerals parties; risky commercial activities like bartending; poor safe sex negotiation skills; effects of tourism; insecurity; and access to social media. Individual level risk factors included: inaccurate SRH knowledge; conduct problems; and pubertal changes. At a family level, household poverty, sexual perpetration by family members and neglectful parenting were cited. Macro level risk factors included: traditional beliefs which infringe adolescents' rights; and certain SRH policies perceived as restrictive. Moreover, few protective factors were reported such as: presence of a functional education system; responsible parenting; some level of access to SRH services; and presence of punitive action for sexual offenders.

CONCLUSIONS/NEXT STEPS: These findings underscore that SRB is a significant problem among adolescents living at the Kenyan coast. Essentially, there is urgent need for: pragmatic adolescent friendly SRH services; improved safety within the adolescents' neighbourhood, home and school environments; responsible parenting; tackling oppressive and potentially harmful cultural norms and customs; and alleviating poverty within households. To this end, intervention research should focus on delineating effective program and policy action to tackle these drivers of adolescent SRB at different levels.

IAAH170103

Trends and patterns of HIV testing among youth in sub-Saharan Africa: The role of mass media

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BACKGROUND: HIV testing and knowledge of one's status is vital in the prevention, care and treatment continuum. The mass media have enormous influence on the youth in most societies and can help normalize positive youth behaviours and gender roles, and to direct young people to appropriate health services. Exposure to mass media in relation to youth development has been linked to a number of attitudinal and behavioural changes. However, there is a dearth of research on the influence of mass media on HIV testing among the youth in Sub-Saharan Africa (SSA).

METHODS: Using three rounds of Demographic and Health Surveys (DHS) from three selected countries in SSA (Kenya, Nigeria and Uganda), this paper investigates the changes that have occurred in HIV testing among the youth as a result of exposure to mass media in SSA. Logistic regression was used to examine these associations.

RESULTS: Preliminary results show that SSA has witnessed an increase in the percentage of youth who get tested. Exposure to mass media was significantly associated with HIV testing in the last 12 months among the youth in Kenya and Nigeria.

CONCLUSIONS/NEXT STEPS: The findings highlight the role of media exposure in changing attitudes of youth in relation to HIV testing. We suggest that continuous and proactive media campaign may lead to diffusion of ideas among youth that may ultimately promote positive behaviour in relation to HIV testing.

IAAH170156

Research priorities for adolescent HIV: A mixed-methods synthesis

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BACKGROUND: Despite increased global attention to issues related to adolescent HIV, further effort is required to prioritise evidence and policy gaps. Since 2013, the World Health Organization has conducted three research priority-setting exercises for adolescent health using the Child Health and Nutrition Research Initiative (CHNRI) methodology. These exercises have focused on 1) adolescent sexual and reproductive health; 2) eight areas of adolescent health; and 3) HIV testing, treatment, care and support. The objective of this study was to synthesize findings among the top-ranked research questions from the three priority setting exercises related to HIV among adolescents.

METHODS: All 131 top-ranked questions from the three exercises were screened for relevance to adolescent HIV; and in this way, 35 questions were selected for the synthesis. Keywords in these selected questions were used to generate a word cloud illustrating frequency. Content analysis was conducted for all 35 questions. Questions were coded and categorized into one of four research types: descriptive, discovery, development, and delivery. Themes from the content analysis are presented overall, organized by research type category.

RESULTS: The most commonly included keywords in the top research questions related to adolescent HIV were intervention (n=22), strategies (n=14), improve (n=12), services (n=12), and peer (n=11). The most frequent research types were development (n=19), delivery (n=8), descriptive (n=6), and discovery (n=2). Top descriptive questions examined the incidence and burden of HIV/tuberculosis (TB) co-infection and rates of contraceptive usage and antiretroviral therapy (ART) initiation in key populations. Top discovery questions assessed novel HIV drug delivery systems and female-controlled methods of preventing both HIV and pregnancy. Top development questions explored interventions to improve access to HIV testing services and adherence to ART, and to facilitate retention in care. Top delivery questions investigated interventions to improve access to and quality of related health services, from sexual and reproductive health to mental health and TB care. All four research categories placed emphasis on adolescent vulnerable populations.

CONCLUSIONS/NEXT STEPS: This study advances the adolescent HIV/AIDS research agenda by synthesizing themes across the three global research-priority exercises, using keyword and content analysis.

IAAH170190

Forming a Kanyakla: A qualitative study to develop a novel social support intervention for adolescents living with HIV

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BACKGROUND: HIV is a leading cause of morbidity and mortality in the developing world among youth 15-24 years of age, and the only age group in which AIDS deaths have increased over the past decade. Interventions that promote participants' exchange of social capital have been developed in order to improve retention in HIV care among adults. This study explores the adaptation of an adult social network intervention for adolescents.

METHODS: This study was conducted in Kisumu, Kenya from July 2016-November 2016. Data was collected from: (1) semi-structured interviews (n=31) with Adolescents living with HIV (ALWH) aged 15-19 (in care and out of care); and (2) two focus groups discussions (FGDs) with 21 youth. Each FGD was composed of three HIV infected index participants and their invited social network members. Transcripts were recorded, transcribed, and coded for themes using a thematic approach.

RESULTS: ALWH were interested in participating in a ‘Kanyakla’, a club that could serve as an adolescent social network intervention, in order to build social supports, learn new skills, and participate in recreational activities. Participants reported confidentiality to be of utmost importance to adolescents, many of whom feared inadvertent disclosure because of perceived and enacted stigma. Non-clinical sites were preferred as meeting locations to reduce the chances of inadvertent disclosure. Kanyakla meetings should include trusted peers, extended family, and anonymous experts such as trained peer-aged counsellors. ALWH who were out of care were more inclined to include participants in their Kanyakla who lived far away from them. Both tangible and emotional supports were motivators for participation.

CONCLUSIONS/NEXT STEPS: Several dichotomies emerged from these interviews and focus groups, including the need for privacy vs. need for social support, elder preference vs. preference for same-aged peers, and the need for face-to-face interactions vs. increasing need for virtual interactions for social network members living far away. Understanding these complexities must be considered when adapting this intervention for adolescent populations.

IAAH170197

Continued care and support services help in drug adherence among adolescents living with HIV/AIDS

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BACKGROUND: The normal developmental course of adolescent involves physical and psychological changes leading to risky sexual behavior, peer comparison and use of alcohol and drugs. Around 2 million adolescents (10–19 years) across the world were living with HIV in 2014. Adherence to antiretroviral therapy (ART) is crucial for viral suppression, boosting immunity and consequent treatment success. Literature shows that adolescents with HIV have decreased adherence to ART compared to adult People Living with HIV (PLHIV). In this context, the present analysis aims to explore how does the counseling, referrals and social protection schemes to PLHIV improves their survival chances and quality of life through increase ART adherence.

DESCRIPTION: The present analysis uses the CMIS data from the GFTAM funded VIHAAN care and support project (2013 to 2017) of MAMTA, which looked into the care and support for PLHIV through Care and Support Centers (CSCs) in partnership with NGOs in 3 North Indian States (Jammu & Kashmir, Himachal Pradesh and Uttarakhand).

LESSONS LEARNED: Till February 2017, PLHIV registered with care and support centers of Himachal Pradesh, Jammu & Kashmir, and Uttarakhand were 3625, 2189 and 3203 respectively. Of the total registered PLHIV with CSCs in three states, 6.2% (529) were adolescents. LFUs among adolescents were 5% which was far lower compared to 22% among adult PLHIV. The data suggests interstate variation in LFUs among the adolescent PLHIV, it was 13 out of 241 in Himachal Pradesh, 4 out of 108 in Jammu and Kashmir and 10 out of 180 in Uttarakhand. While care and support intervention caters to the PLHIV population at large, few specific interventions in the form of counselling related to adolescent issues and linkages to social protection focused on adolescents and young adults enable care and support centers to gain their trust. Also close supervision of sub-groups within PLHIV such as adolescents by vigilant out-reach workers, counselors, and project coordinators within care and support system contributes towards retaining adolescent PLHIV in treatment adherence.

CONCLUSIONS/NEXT STEPS: Continued Care and Support services are crucial for treatment adherence and reducing LFUs among adolescents as healthy adolescents become economically productive adults. If provided Timely services and regular follow up can reduce the LFUs among adolescent PLHIV which will benefit Public Health Programs combating HIV/AIDS.

IAAH170222

Using fine arts to educate young people on HIV/AIDS, STIS prevention including their sexuality health!

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¹The Young Changemakers

BACKGROUND: Lahore is the second largest city of Pakistan and the provincial capital of Punjab. Lahore is also a major industrial city where

migration from rural to urban areas is at its peak. A large number of migrated people belong to religious minorities who migrated from different parts of Pakistan to earn their livelihood and have settled in the small villages surrounding Lahore due to the over-population in the city area. Although, Lahore is considered to be the most advanced city with all the necessary facilities available, but still the people particularly the young people living in the villages surrounding Lahore are deprived of many basic needs including education, health services, information regarding HIV/AIDS including sexual and reproductive health, recreational and entertainment activities etc.

METHODS: The project aims to be aware and make aware young people living rural areas about HIV Prevention and their Sexuality Rights through Arts. The activities of the projects are; Conducting Painting Competitions in Lahore to access the knowledge, Attitude, and Perception of Young people particularly women about Sexuality and HIV/AIDS Educating young people particularly women of 10 schools and 5 Colleges of District Lahore about gender, sexuality including HIV/AIDS, mode of Transmission and Prevention through 1 Day training sessions

RESULTS: 1) 1000 young people of “Lahore” got accurate education about Gender, Sexuality rights and HIV/AIDS. 2) 800 young people volunteered to be part of these HIV/AIDS training sessions and recommend their school administration to continue these sessions and or made it part of their curricula.

CONCLUSIONS/NEXT STEPS: Young people loved arts activities so HIV/AIDS education should be integrated in their art class curriculum of schools and colleges to ensure accurate information about Gender, SRHR and HIV/AIDS for young people.

IAAH170242

Acceptability and uptake of voluntary medical male circumcision and educational modules as part of a coming-of-age retreat – an HIV prevention intervention for adolescent street youth in Western Kenya

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BACKGROUND: Preliminary research has shown a substantial epidemic of HIV among street-connected children and youth (SCY) in Eldoret, Kenya. Voluntary medical male circumcision (VMMC) is extremely effective in reducing the risk of HIV transmission. The majority of males in Kenya are circumcised, and the procedure forms part of an important cultural rite of passage tradition. We piloted and assessed the acceptability of a coming-of-age initiation retreat that included VMMC and educational modules for this population.

METHODS: Staff, community leaders and peer navigators conducted outreach and held community meetings to inform SCY of the intervention. Group 1 took place in December 2016 and involved 44 male adolescents aged between 12 and 18 years who spent the majority of their days and nights on the street or in a shared shelter. VMMC was completed at the beginning of the 10-day retreat, after which individuals recovered and received educational modules that taught life skills such as communication, self-esteem, peer pressure, making good decisions, good manners, sexual and reproductive health, and HIV/AIDS prevention and care. A qualitative evaluation tool assessed acceptability, whereas pre- and post- quantitative questionnaires assessed change in HIV knowledge, attitudes, and perceptions. Groups 2 and 3 will take place in May 2017, with 120 adolescents in total undergoing the intervention.

RESULTS: Due to effective community mobilisation, the demand for the intervention exceeded the number of places available in group 1. The median age of the adolescents was 14 years. Sixty-one percent had been residing on the street for over two years. The intervention increased knowledge of HIV transmission and prevention methods and reduced stigma against those living with HIV. Eighty-two percent agreed that there was enough time for recovery after the procedure. Eighty-nine percent of adolescents had no criticisms regarding the intervention. They especially appreciated the food, feeling of safety, and lessons on respecting self and others. All healed well in the following weeks.

CONCLUSIONS/NEXT STEPS: Providing VMMC and education modules

as a coming-of-age retreat could be an effective and acceptable method of delivering an HIV intervention in this population.

IAAH170259

Personalities and HIV transmissions knowledge associated with stigmatizing attitudes toward people living with HIV/AIDS among balinese high school students in Klungkung

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BACKGROUND: Stigma toward people living with HIV/AIDS (PLWHA) is one problem to address in the general management of the illness. Adolescents are potential targets for the future participants of the work force for this program, hence it's important to assess their stigma-related perspective of PLWHA. Adolescents' personality and knowledge about HIV transmissions might affect this perspective, but data concerning this matter in Indonesia are limited. This study was therefore conducted to identify the level of stigmatizing attitude towards PLWHA and the factors associated with it among high school students in a Balinese sample.

METHODS: A cross-sectional study involving 221 eleventh grade students (age 13-16) in High School 1 Semarapura, Klungkung, Bali. Instruments used were 42 items Questionnaires about Stigmatizing Attitudes towards PLWHA and 35 items Big Five Personality Inventory, added with demographic data (age, gender, domicile, ethnic group, duration of stay in Bali) and eleven questions regarding knowledge about HIV transmissions. Data were analyzed using univariate and bivariate analysis (Spearman Correlation).

RESULTS: From a total of 221 respondents, 122 students (55.2%) showed high scores of stigmatization towards PLWHA. Female students scored higher than male students. Neuroticism personality trait ($r=0.249$; $p<0.001$) was positively correlated to the total stigmatization scores towards PLWHA. A negative correlation was found between extraversion personality trait and total stigmatization scores towards PLWHA ($r= -0.139$; $p=0.04$). No correlations were found between other personality traits and stigmatizing attitudes towards PLWHA ($p>0.05$). Positive correlation between the level of HIV transmissions knowledge and stigmatization scores for the item avoiding personal contact with PLWHA ($r=0.149$; $p=0.027$) were also reported.

CONCLUSIONS/NEXT STEPS: More than half of the students show high stigmatization towards PLWHA, female scored higher. Neuroticism personality trait was positively correlated to the stigmatizing attitudes towards PLWHA, while negative correlation was found between extraversion personality trait and stigmatizing attitudes towards PLWHA. High level of HIV transmissions knowledge indicate more stigmatizing attitude for the item avoiding personal contact with PLWHA. Anti-stigma programs that involve adolescent should take these factors into account.

IAAH170260

Correlates for missed clinic visits among adolescents living with HIV in Western Kenya

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BACKGROUND: Adolescents living with HIV (ALWH) face barriers to achieve positive health outcomes such as low social support, high HIV-related stigma, and low HIV self-disclosure. The purpose of this study was to identify how demographics, social support, HIV-related stigma, and self-disclosure are correlated with missed HIV clinic visits among ALWH.

METHODS: 201 HIV-infected adolescents aged 15-19 in the Kisumu County Kenya were surveyed on socio-demographic characteristics, social support, HIV-related stigma and HIV-self disclosure. Social support was measured using the Medical Outcomes Study Social Support Survey. Stigma was measured using Berger's abbreviated HIV-Stigma Scale. Factors related to HIV self-disclosure were measured using a survey developed by Centres for Disease Control investigators. De-identified clinical data regarding missing visits was collected from the electronic medical record during the year prior to collection of survey information.

RESULTS: Participants mean age was 17.1 years (SD=1.5), 70% were female, 53% resided with a parent, 15% were married, 60% attended school, 15% had a job, 52% reported ever having sex, 30% reported low social support, 68% reported high disclosure stigma, 56% reported high public attitudes stigma, 18% reported high self-image stigma, 20% reported high personalized stigma, and 62% reported ever self-disclosing their HIV status. The median proportion of missed visits per patient was 20% (IQR 11, 33) with an average of 9 (SD=3) visits per patients. In bivariate and multivariate linear regression, demographic factors, social support, and disclosure were not significant predictors of proportion of missing visits. In bivariate analysis, having self-image stigma was associated with a higher proportion of missed visits (p value=0.024). In bivariate and multivariate analysis, participants' who felt 'knowing their HIV status changed the way they felt about themselves' was associated with a higher proportion of missed visits (p value= 0.016) in both analyses.

CONCLUSIONS/NEXT STEPS: While social support and disclosure have been hypothesized to play a role in adolescents' retention in care, they did not prove to be statistically significant in this study. Experiencing self-image stigma was a significant correlate with missing clinical visits. Future interventions aiming to improve retention in care for this population should specifically address methods to reduce self-stigma.

IAAH170267

Ukuvikela impilo yethu youkuzalana eyigugu: Acceptability of a home-based testing, treatment of reproductive and sexually transmitted infections among young people in rural KwaZulu-Natal, South Africa

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BACKGROUND: The incidence of HIV infections remains high amongst adolescent and young adults in South Africa. However, little is known about prevalence of reproductive and sexually transmitted infections (R/STIs) in this population. R/STIs have been associated with increased susceptibility, transmission of HIV, as well as poor reproductive and sexual health. If rates are high, interventions for RTIs can be designed in tandem with HIV and adolescent health programmes. We carried out an acceptability and feasibility study of home-based testing for bacterial vaginosis, chlamydia, gonorrhoea, trichomonas, herpes, and syphilis amongst young men and woman aged 15-24 years in rural KwaZulu-Natal, called "Protecting your precious reproductive health." As a part of this study, we conducted qualitative research to assess acceptability.

METHODS: Of the 447 participants enrolled in the study, 10 participants were randomly selected for individual in-depth interviews. Consenting participants were interviewed on the acceptability of sampling (blood, urine [men] and self-collected vaginal swabs [women]), receiving test results and treatment. Interviewers were gender matched. A thematic approach was utilized for the analysis.

RESULTS: Participants cited several advantages of home-based testing, including avoiding transportation costs and long queues in clinics. Participants reported that parents and other adolescent peers encouraged them to join the study to obtain free testing and treatment of S/RTIs. A few noted disadvantages such as worrying that participation may signal sexual activity to parents, and loss of privacy at home during sample collection. No participant reported to have experienced pain during sample collection. However, some young women experienced discomfort with providing vaginal swabs in front of the nurse. Several participants noted stress during the period of awaiting test result outcomes, and some participants reported fear of stigmatisation with partner notification.

CONCLUSIONS/NEXT STEPS: Acceptability was high among adolescents and parents for home-based testing of S/RTIs in this community. A positive message of protecting ones future reproductive health may have made this study less stigmatizing. While there was little reporting of pain with sampling, issues of privacy must be attended to. In addition, efficient provision of results must be ensured, and innovative modes of partner notification should be explored to ensure treatment.

IAAH170271

An Intersectional analysis of street-connected young people's disparate sexual health and HIV risks in Eldoret, Kenya

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BACKGROUND: Street-connected young women in Eldoret, Kenya are disproportionately acquiring HIV compared to their male peers. Using an intersectional theoretical framework, we explore how the intersections of street-connected youths' (SCY) social identities interact with systems of power to create the disparate sexual practices and HIV risks this population.

METHODS: This qualitative study sought to explore the sexual practices of SCY aged 11-24, in Eldoret, Kenya. We used thematic analysis with an intersectional framework to analyze data collected from 65 SCY who participated in 25 in-depth interviews and 5 focus group discussions.

RESULTS: SCY have three primary socially constructed identities that are shaped by the systems of oppression and street subculture. SCY identify as 'Mshefa' (hustler), which is rooted in their inability to secure livelihoods in the capitalist economy. Male SCY have been conditioned by the patriarchy to express their masculinity and power as 'Mshefa' in the street subculture through sexual and gender-based violence. Female SCY also hustle as a result of the need to engage in the informal economy; yet, they do so through engaging in transactional sex and commodification of their bodies on the market, as a result of capitalism, sexism, and a lack of social protection. Female SCY identity is also expressed as 'mboga ya jeshi' (vegetables for the street soldiers). Female SCY's subservient role in the street subculture as 'mboga ya jeshi', excludes them from positions of power within the street subculture, reflecting the dominant patriarchal and sexist systems of power in Kenya. Female SCY are objectified and treated as commodities, stripped of their former identities and controlled by male SCY for sex. SCY's stigmatizing identity of 'Chokora' (garbage pickers), given by the wider community, results in maltreatment, sexual abuse, and an inability of SCY to report crimes or receive adequate healthcare, resulting in increased HIV vulnerability especially among the female gender.

CONCLUSIONS/NEXT STEPS: The street subculture and social identities of SCY is a reflection of the systems in Kenya that enact structural violence in this marginalized group. SCY imitate and amplify these systems within the street subculture, thereby propagating oppressive structures and driving disparate HIV rates.

IAAH170301

Hope, happiness and structural interventions among adolescents in rural South Africa in the era of HIV

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BACKGROUND: Hope is happiness projected into the future. Effective disease prevention and health promotion strategies are positively associated individuals' self-efficacy and socio-economic milieu. Research shows that hope and self-efficacy measure the same construct. Studying experiences of hope may help identify novel factors influencing health outcomes. How hope levels in adolescence affect behavioural intentions in resource-limited settings has not been explored. A study goal was to investigate a cohort of 15-17-year-olds to identify individual and group responses to environmental influences affecting behavioural and associated health and welfare outcomes.

METHODS: A multi-method qualitative approach examined understandings and constructions of hope and happiness among adolescents (aged 15-17 years) in rural KwaZulu Natal, South Africa. FGDs and individual interviews with 53 adolescents used lifeline drawings as a point of departure. The Human Sciences Research Council (HSRC) Research Ethics Committee approved the study.

RESULTS: Participants told how within their community young people engaged in substance abuse, while others dropped out of school. Girls fell pregnant with the intention of receiving childcare grants as a source of income. Young people said that absence of recreational space for association in their immediate milieu led them to seek other, more individual and private, sources of happiness. Diminished hope and happiness were both related to risky behaviours including

unprotected sex. Respondents reported that confidentiality and persisting stigma of HIV means that sexual partners do not know or disclose their sero-status.

CONCLUSIONS/NEXT STEPS: Young people's perception of their community, as a physical, social and economic environment, prevented them from developing a sense of hope as to the prospect of changing their situation, and thus of future happiness. Recreational spaces can give young people the opportunity to pursue their interests and create support networks, providing them with hope of succeeding in their goals and pursuing their interests. Within this context, structural interventions that equip empower and enable with hope to overcome social inequalities may help engage them in behavioural change and ultimately greater control over their lives – and thus greater happiness, self-efficacy and better life choices.

IAAH170326

Impact of intervention on knowledge, attitude and practice of HIV among adolescent potential migrants in rural India

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BACKGROUND: Adolescent is that period of life wherein one undergoes biological, psychological, and social transitions; often accompanied with risks associated to sexual behaviour. Understanding this nascent stage of life and need to have knowledge associated to sexual behaviour of adolescent, a project funded by Elton John Foundation "Meri life Meri Choice (My Life My Choice-MLMC)" was implemented in rural India. The current analyses tries to look at the impact of intervention on knowledge, attitude and practice relate to HIV prevention among adolescent who are potential migrants.

METHODS: The intervention was implemented in three districts of central India namely Rewa (Madhya Pradesh state), Banda and Allahabad (Uttar Pradesh states) which had low ranking in Human Development Index (HDI). We used mixed method approach to measure the knowledge, attitude and behaviour of the adolescents. Data for the current analyses comes from the baseline (n=881) and end line (n=709) evaluation of the project. Bivariate and multivariate analyses were done to analyse the results. Apart from survey, we also conducted 12 in-depth interviews with the adolescents and village representatives to have deeper understanding on the issues.

RESULTS: A significant improvement in the knowledge about HIV (p<0.001) was reported among the adolescent potential migrants from baseline 37.0% to end line 94.4%. Use of condom also increased from 20% to 60% among the adolescent who had sexual relation after joining MLMC intervention program. At the end line 8%, the adolescent reported less about the paid sex as compared to baseline 17%. Sexually transmitted diseases reduced by 7% after the project was implemented amongst the respondents (52 vs. 45). Significant change was seen in treatment seeking behaviour (63.4% vs. 92.3%). Seeking care from public health care facilities also showed a positive change (45% vs. 83.3%).

CONCLUSIONS/NEXT STEPS: Results revealed that interventions were successful in changing knowledge, attitude and practice of adolescents on HIV prevention. The project created awareness about the risky behaviour practiced among adolescents who were potential migrants by increasing condom use and treatment seeking behaviour. Post intervention findings suggest the need for extensive awareness programmes on sexual and reproductive health in rural migrant community to reduce their vulnerability towards HIV.

IAAH170354

Sexual behavior, knowledge and attitude of young adolescent in Ilorin, Kwara State.

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BACKGROUND: Health information on adolescents, by contrast is not widely available in many developing countries apart from indicators on sexual and reproductive health collects by international health surveys, in the context of HIV/AIDS. Adolescents are a key target group for HIV/STI prevention efforts, yet very little is known about the youngest adolescent: those under age 15. A new survey data from 12-14 years old in Nigeria are used to describe their sexual activity, knowledge about HIV/STIs prevention and attitude towards SRHR, including sex education in schools education.

METHODS: A first stage systematic selection of enumeration areas was made

from a household. All 12-19 years old de facto resident in each sampled household were eligible for inclusion in the survey. Once the parent or caretaker gave consent, separate informed consent was then sought from the eligible underage adolescent. This paper analyses data for infrequently studied group of very young adolescent aged 12-14. Interviews were completed with 2500 respondent which falls within the age range of 12-14 years old. in 3 Local Government Area of the State.

RESULTS: Shows that adolescent are already beginning to be sexually active. They have high level of awareness but little in-depth knowledge about HIV and STI prevention. Multiple information sources are used and also preferred by adolescents. Given their needs for HIV/STIs and pregnancy prevention information that is specific and practical and considering that the large majority attend school where sex education is preached, school based sex education is particularly promising avenue for reaching adolescent under age 15.

CONCLUSIONS/NEXT STEPS: It was discovered that the major reasons that many young adolescents have not received sex education is that it is not offered in their schools to this end there is a great need for development of programs and approaches tailored to reach out of school adolescents, given the high rate of schools drop-out in many countries in Africa, and given a situation like Ilorin East where the proportion of who have ever been to school is still low. Programs that provide sexual health information to young adolescent who are not attending schools may be channelled through multiple sources.

IAAH170418

Systematic review of interventions to increase adolescents and young people's access to services for reducing their risk of HIV

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BACKGROUND: Although, globally the HIV epidemic is declining, there are 4 million young people (15-24 years) living with HIV in the world, 29% of whom are below 19 years. There are various interventions to prevent HIV but young people face a lot of barriers in accessing these services. Therefore, it is crucial to understand the effective interventions for preventing HIV among young people. The overall aim is to conduct a systematic review of interventions designed to increase adolescents and young people's access to services for reducing their risk of HIV.

METHODS: We conducted a systematic review of the evidence on interventions designed to increase adolescents and young people's access to services for reducing their HIV risk. We focused specifically on the young people under the age of 24 years in low to middle income countries. We searched PubMed, Medline and Cochrane databases using MesH terms to identify peer-reviewed articles. We included studies with designs such as randomized control trails (RCT), clustered randomized trails, quasi experimental, prospective observational and studies that measured outcomes pre and post an intervention. We identified a total of 10 studies that were included in the review based on certain inclusion and exclusion criteria's.

RESULTS: In our review we found that studies that were conducted in South Africa, Malawi, Nigeria, Zimbabwe and Kenya. There were various kinds of behavioural and structural interventions which included cash transfers plus social protection, life skills education, micro grants, community participation activities, mass media campaigns and youth centres. The biological interventions focused on point-of-care testing services for HIV testing and initiation of anti-retroviral treatment (ART) and Treatment as prevention (TasP).

CONCLUSIONS/NEXT STEPS: Multi-component interventions that include behavioural, structural and biological strategies are effective in improving HIV related knowledge; attitude and behaviour among adolescents and young people. In specific cash transfer interventions, points-of-care HIV testing have emerged as promising and effective strategies that can be considered for scale-up. The need for rigorous evaluation of HIV prevention interventions resulting in positive behavioural health outcomes for young people is crucial for this population.

IAAH170419

Baseline progress towards the UNAIDS 90-90-90 HIV cascade goals: Findings from the Adolescent innovations project in South Africa

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BACKGROUND: Wits RHI's USAID-funded Adolescent Innovations Project (AIP) is focused on meeting the UNAIDS 90-90-90 HIV treatment targets for adolescents and youth living with HIV (AYLHIV) in two sub-districts in South Africa. This analysis assesses baseline HIV care cascades (HCCs) for Sub-District F of the Johannesburg Health District, Gauteng Province and Matlosana sub-district, Dr. Kenneth Kaunda District (DKK), North West Province.

METHODS: Data were compiled for AYLHIV aged 10-24 in 15 primary health facilities in Sub-District F and 16 primary health facilities in Matlosana. The number of AYLHIV was estimated using catchment population size and HIV prevalence estimates. Number engaged in care was used as a proxy for the number of AYLHIV who know their status and was calculated based on the number of individual patients who had received a CD4 count or viral load (VL). ART and VL data were extracted from TIER.net.

RESULTS: Based on a total population size of 255216 in the two sub-districts, there were an estimated 16153 AYLHIV, of whom 82% (13286/16153) had engaged in care. Of the 57% (7626/13286) who initiated ART, 55% (4161/7626) were still active on treatment and 40% (3032/7626) had been active on ART for more than 6 months and were thus eligible for VL assessment. Overall, 77% (2321/3032) of these AYLHIV received a VL test in the last 12 months, and 83% (1937/2321) were virally suppressed. In relation to the UNAIDS goals, 82% (13286/16153) of the targeted 90% of AYLHIV engaged in care, 26% (4161/16153) of the targeted 81% of AYLHIV were active on ART, and 12% (1937/16153) of the targeted 73% of AYLHIV had a suppressed viral load in the last 12 months.

CONCLUSIONS/NEXT STEPS: Baseline HCC performance highlights implementation gaps being addressed by the AIP. In addition to facility-based technical assistance and mentoring, innovative interventions are being implemented to strengthen linkage to care, retention on treatment and viral suppression. These innovations include peer navigators, Youth Care Clubs and mHealth messaging.

IAAH170429

Awareness about HIV/AIDS among adolescent school student of Kumhrar, Patna

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BACKGROUND: After 2015 WHO moved from MDG to SDG. Though all goals of MDG were not achieved but India made substantial progress. Goal 6 : TARGET 7 : Have halted by 2015 and began to reverse the spread of HIV/AIDS made significant progress, although the progress was uneven among states and within States. It has been noted that there is decline in number of new cases among high prevalence states but there is contribution of 57% by low prevalence states, including Bihar. In 2011, Bihar, the adult HIV prevalence was estimated to be 0.20% with no school providing AEP. As per NACP data transgender and IUDs has major burden. In Bihar major burden is among migrant workers especially those working in high prevalence states. This study was taken up to access the knowledge about HIV among adolescent students of a school in Patna district.

METHODS: A cross sectional study was conducted in a private school of Patna. Ethical clearance was taken from institutional ethical committee and after obtaining permission from principal of the school the study was conducted study include all the seniors student who were available and willing to participate. It was questionnaire based survey which was pre tested predesigned and semi structured accessing their demography knowledge and belief about the disease.

RESULTS: Total 257 students participated in study where 149(57.9%) were boys and 108(42.1%) were girls. More than 10% of students were from rural,

areas. Most of them have adequate knowledge about HIV infection .88.6% knew full form of HIV and AIDS.70% students were aware about availability of test to detect HIV. It was observed that there was inadequate knowledge about transmission of disease. Multimedia and class room teaching was major source of information to the students.

CONCLUSIONS/NEXT STEPS: Majority of students knew about various route of transmission so need for AEP in schools .Here teachers play major role ,so need of training of teachers and special health education programmes to be conducted at school level to halt the progression of deadly disease.

IAAH170450

School-based religion also has the right in access to health promotion as HIV-AIDS prevention programs

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BACKGROUND: The issue of HIV-AIDS in Indonesia until today has become a priority. The government has made many attempts to suppress the case. One is through health promotion activities for prevention of HIV-AIDS. School became a base in the implementation of health promotion activities. Schools in Indonesia consist of public schools and faith-based schools. Boarding School is one of the education system in Indonesia based on religion. Many health promotion activities in public schools, but the implementation of health promotion activities in faith-based schools are lacking. Based on the study the authors, it is known that the level of knowledge of adolescents associated with HIV-AIDS prevention of religious schools (pesantren) is still in the low category. Though risky behaviour in youth group is the same faith-based schools with public schools.

DESCRIPTION: Promotional activities in faith-based schools are also important for prevention of HIV-AIDS. Health Post Pesantren (Poskestren) as health promotion activities in the youth group of faith-based schools. Poskestren conducting planning to evaluation in the delivery of health promotion activities according to the needs and abilities of teenagers. The application of the principle of empowerment has Poskestren activities and edutainment. Teens are required creative and innovative in doing health promotion efforts of his colleagues.

LESSONS LEARNED: Edutainment and Empowerment in health promotion activities is the principle applied in health promotion activities in schools based on religion. Teens designing health promotion activities through a collaborative culture, religion, education and health. Many of the activities resulting from the peer counselling, health checks, networking with health professionals and academics in the chaperone activity, to be a winner at province level.

CONCLUSIONS/NEXT STEPS: Adolescents in religious schools also have the right to access health promotion for HIV-AIDS risk behaviours are also potential in this youth group. Health Post Pesantren as a strategy in the development of health promotion through the principles of empowerment and edutainment can be used as one of the HIV-AIDS prevention efforts are effective. The success of the activity is also influenced by various parties. Therefore Poskestren will always do the coordination, collaboration with government and academia to develop this activity.

IAAH170472

The art of listening: Re-imagining adolescent sexual and reproductive health programs through user-centred design in Ethiopia, Nigeria and Tanzania.

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BACKGROUND: Adolescent girls in many countries face barriers to accessing SRH information and services, often resulting in high rates of unwanted pregnancy. Despite commitments by national governments to reach youth, unmet need for contraception remains high.

METHODS: Using a qualitative approach, we combined elements of Youth Participatory Action Research (YPAR) techniques, ethnographic data collection, and human-centered design to establish empathy with girls 15-19 and understand barriers girls face in accessing SRH information and services. From October to December 2016, we visited two states in Nigeria, three regions of Ethiopia, and two regions of Tanzania, and interviewed 208 girls and 493 influencers

including mothers, fathers, husbands, boys, health providers and community leaders. These interviews explored girls' experiences of puberty, sexual debut, marriage, contraceptive use, and childbearing. The study team of staff researchers and trained youth researchers used an inductive thematic approach for data analysis. At the completion of data collection, patterns were identified, exposing both region-specific and cross-cutting barriers.

RESULTS: Across geographies, our findings indicate the importance of generating strong feelings of relevance, credibility, social support and accessibility in program design. This aligns with the global body of evidence for best ASRH practices but indicates the need for nuance reflecting how these may manifest in distinct geographies. Relevance depends on what matters to girls and their families today, be it an understanding of puberty and menstruation or supporting the development of job skills and a life plan. Credibility indicates the importance of overcoming persistent myths surrounding the effect of contraception on fertility. Social support includes assisting mothers or husbands to grant permission – but not assume responsibility – for girls to access accurate SRH information. Improving access begins with the use of mystery girl clients to identify health providers truly friendly to youth, as perceived in the local context; in turn supporting providers to serve more girls, ensuring that contraceptive counselling addresses return to fertility and bleeding changes, and linking girls to supportive and qualified providers.

CONCLUSIONS/NEXT STEPS: Existing ASRH programs targeting girls may fail to account for girls' social, emotional and developmental needs. Programs must ensure that relevance, credibility, social support and access are addressed from a girl-centric perspective.

IAAH170475

Improving access to quality comprehensive clinical and psychosocial care for adolescents living with HIV (ALHIV) across Malawi using the “Teen Club” Model

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BACKGROUND: Malawi's population of ALHIV continues to increase due to the successful scale-up of the national pediatric ART program. However, only a small percentage of ALHIV access ART services for reasons including lack of guardian support, distance to health facilities, feeling out of place in traditional clinic waiting rooms, lack of youth-sensitive staff, and conflicts with school hours. ALHIV often have poor adherence, retention, and viral suppression rates. Baylor College of Medicine-Children's Foundation Malawi (BCM-CFM) established a network of “Teen Clubs” (TCs) across Malawi specifically for ALHIV to provide comprehensive HIV, sexual reproductive health, and psychosocial services on weekends in a safe and confidential space using intentional programming techniques for engaging youth.

DESCRIPTION: TC Malawi was first established in 2006 at the Baylor Centre of Excellence (COE) in Lilongwe. BCM-CFM has expanded the model to 185 health facilities across Malawi with over 9000 ALHIV recruited from local ART clinics now enrolled in care. BCM-CFM trains healthcare workers and community mentors using side-by-side mentorship and a 12-month curriculum. Teens must be fully disclosed to enroll in TC. BCM-CFM conducted a retrospective analysis of ALHIV enrolled in TC at the Baylor COE from January 2016 to December 2016.

LESSONS LEARNED: 540/1525 ALHIV (aged 10 – 19) were enrolled in TC.. 490 had adherence information at the last visit, of which 418/85.31% have good adherence (pill count of 95-105%) compared to 84% (1268/1501) for total adolescents and the clinic rate of 83% (2375/2835). 477 TC participants had a viral load drawn in the past 12 months, of which 396/83.02% had viral suppression (<150 detectable copies), compared to 81% (1099/1355) for total adolescents and the clinic suppression rate of 80.8% (2037/2520).

CONCLUSIONS/NEXT STEPS: Involvement in TC programming positively influences behavior that promotes good adherence to ART leading to viral suppression and improved quality of life for ALHIV. Provision of care to ALHIV requires acknowledgement and understanding of the struggles they face. The Baylor-Malawi TC model should be considered an important differential care model for service provision for ALHIV in low-resource countries.

IAAH170484

Improving uptake of and retention in care during the perinatal period for HIV infected young mothers

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BACKGROUND: Pregnancy during adolescence is a global issue, with 17 million girls 19 years old or younger giving birth each year. Similarly, teenage pregnancies are common in Malawi, with 65% of females giving birth by age 20. Pregnant adolescents with HIV are at high risk for defaulting and transmission of HIV to their baby. While Malawi has made great strides in reducing the general prevalence of HIV due to PMTCT Option B+ and other initiatives, the HIV rates among young people continue to remain high, most concerning among adolescent girls. Baylor College of Medicine-Children's Foundation Malawi's (BCM-CFM) Clinical Centre of Excellence is the largest provider of paediatric HIV clinical services in Malawi, and supports a network of "Teen Clubs" for HIV-infected youth.

DESCRIPTION: BCM-CFM completed the first year of its "Young Motherhood" program, a pre- and postnatal care clinic with a structured 12-month curriculum that includes pregnancy danger signs and HIV disclosure to partners. 21 HIV positive young mothers (HPYM) were enrolled, 8 pregnant and 14 lactating, with 20/22 completing the twelve months. During the monthly visit, young mothers receive comprehensive antenatal care per WHO guidelines, including hemoglobin and viral load testing. Post-partum girls are offered VIA screening and contraception. Psychosocial support is available and the program encourages peer support through group activities and reflection assignments.

LESSONS LEARNED: All patients were retained in care and maintained excellent ART adherence (95-105%) with the exception of two who left the program due to miscarriage/preterm delivery. Of 11 lactating mothers, all are using contraceptives (7 depo-provera, 4 LARC) and 7 were screened for cervical cancer. On 6-week DNA-PCR, 6/6 exposed infants of recently graduated mothers were negative. The program managed to bring back all patients who defaulted and improve hemoglobin levels to normal for a woman who was diagnosed with anaemia.

CONCLUSIONS/NEXT STEPS: HPYM and their children are at high risk of morbidity and mortality. Young Motherhood program has ensured age-appropriate and relevant education and care, including proper referral to reduce obstetric and neonatal complications, and has shown excellent retention in care of this vulnerable group and good HIV-related outcomes.

IAAH170488

STI/HIV and pregnancy rates for sexual minority teen girls in the United States

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BACKGROUND: Despite assumptions that sexual minority teen girls may not be at risk for STIs, HIV, and pregnancy, previous studies have found that sexual minority girls are 2-4 times as likely as heterosexual girls to become pregnant as an adolescent. Less has been reported about sexually transmitted infections for sexual minority girls.

METHODS: 316 sexual minority teen girls completed an online survey as part of their enrollment in a pregnancy prevention program. Adolescents were recruited from across the United States through Facebook advertisements. Eligible youth had to: be between 14-18 years of age, have their own cell phone and plan to have the number for one year, be enrolled in an unlimited text messaging plan, have used text messaging for the past 6 months, be enrolled in high school or equivalent, identify with a sexual identity that was not exclusively heterosexual, and provide informed assent and pass a capacity to consent and self-safety assessment.

RESULTS: One in five (22%) girls identified as Hispanic ethnicity; 62% as White, and 12% as Black race. One in three (35%) lived in a rural or small town and 29% appraised their family income to be lower than average. Fourteen

percent (n=43) of sexual minority girls have been tested for HIV and 16% (n=51) for other STIs. Of those who have been tested, 2% (n=1) said they were HIV positive and 15% (n=8) said they had tested positive for another type of STI. Half (50%) of teens who have had a positive STI test identified as gay, 62% as lesbian, and 38% as bisexual (identity categories are non-exclusive). Three percent (n=9) of girls in the study sample have ever been pregnant. Over half identified as lesbian (n=5) or pansexual (n=5), and one-third (n=3) identified as bisexual (again, identity categories are non-exclusive).

CONCLUSIONS/NEXT STEPS: Assumptions that sexual minority girls are not at risk for STI/HIV and pregnancy are false, as is the idea that bisexual girls must be at greater risk than lesbian girls. Identity-inclusive sexual health education that encourages STI testing and use of barriers during sex for sexual minority girls, including lesbian girls, is urgently needed.

IAAH170501

Knowledge, perception and attitude towards sexually transmitted infections: a college based study in Kerala

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BACKGROUND: Reproductive tract infections (RTIs) and sexually transmitted infections (STIs) present a huge burden of disease and adversely affect reproductive health of people. STIs and HIV mainly affect sexually active adolescents and young people. RTIs are generally seen as a 'silent epidemic' and are among the leading public health problems significantly contributing to gynecological morbidity and maternal mortality in India. The aim of the study was to evaluate later adolescents' knowledge, perceptions and attitudes towards STIs.

METHODS: A cross sectional study was carried out in two northern districts of Kerala, South India to investigate the perception, knowledge and attitude of adolescent students towards STIs and HIV/AIDS. The self-administered questionnaire was completed by 1640 male and female students from eight arts and science colleges.

RESULTS: More than one third of students in this study had no accurate understanding about the signs and symptoms of STIs other than HIV/AIDS. The results of the present study show that among both men and women, awareness about HIV/AIDS is substantially higher than that of RTI/STI. The study indicated poor knowledge among girls on STIs other than HIV/AIDS. All the participants had heard of AIDS and aware that sexual relation with infected person was the way in which a person can get AIDS. Interestingly, in the present survey, 36.25% of the students had agreed that there was nothing wrong with unmarried boys and girls having a sexual relationship if they loved each other. This observation is reflected in the increasing incidence of premarital sex in India. 12.4% of respondents in this study also considered AIDS could be cured, 49% felt that condoms should not be available to youth.

CONCLUSIONS/NEXT STEPS: Though controversial, there is an immense need to implement gender-based reproductive education regarding STIs, HIV and contraceptives in educational institutions in India.

IAAH170508

Men are not the means but an end in Themselves: Recognizing men's sexual and reproductive health needs

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BACKGROUND: Sexual and reproductive health and rights (SRHR) is popularly recognised as a domain involving the women population. However, discounting men from the sphere of SRHR obstructs men from realizing their role as equal partners and it is a likely intimation to men that family planning and reproductive health are women's affairs. Essentially, the exclusion of men has overlooked the important role men can play in enhancing positive sexual and reproductive health choices for them, their partner and their family.

DESCRIPTION: This paper explains the ways in which men are vulnerable and why men (particularly young married men) as much as women need attention in matters related to sexual and reproductive health.

LESSONS LEARNED:

CONCLUSIONS/NEXT STEPS: Information, services, consent and safety pertaining to SRH are some of the overarching concerns of SRH advocates that require primary attention. In particular, investment needs to be made in building positive gender role construction, educate to better influence the social structure such as masculinity and patriarchy in the socialisation process, acknowledge the SRH needs of young men in the laws and policies of the government, provide information and age appropriate and culturally acceptable SRH services to enable them to make informed decisions. Establishment of male front line health worker as like the Accredited Social Health Activists (ASHA) at the community level to educate, inform and motivate men to use contraception, seek services for SRH, contribute in Maternal and Child Health (MCH) care, etc. may be piloted for effectiveness. Till date, very little progress has been made to accelerate contraception that is meant for men. Research must invest on technological innovation for developing new contraception that can be easily available and be used by men.

IAAH170609

Patterns and factors associated with disclosure of HIV positive status among adolescents and young adults in Ibadan, Nigeria

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BACKGROUND: Current data reveals that adolescents and young adults are one of the hardest hit by the HIV epidemic. Many young people do not access HIV counselling and testing services and when they do, they are often faced with the dilemma of disclosure if they test positive. HIV management requires strong social support which necessitates that the individual discloses his/her status to significant others. However, HIV-related stigma and discrimination are still a problem in Nigeria with far-reaching effects on HIV management. The aim of this study was to determine the prevalence and factors associated with HIV disclosure among adolescents and young adults aged 18 to 35 years in Ibadan, Nigeria. Data for this paper are from a larger study on the socio-economic problems of people with HIV accessing care and support in Ibadan, Nigeria.

METHODS: A cross-sectional study was conducted among people with HIV attending two HIV support groups and one of the ARV clinics in Ibadan, Nigeria. All consenting clients present at the time of data collection were interviewed. Information was obtained with the aid of an interviewer-administered questionnaire. Descriptive and analytic (chi-square) statistics were conducted (level of significance was $p < 0.05$).

RESULTS: There were 170 clients with a mean age of 29.6 ± 3.9 years; 140 (82.4%) were female and 139 (81.8%) had disclosed their status. People first informed included the respondents' mother 49 (35.3%), spouse 39 (28.1%), father, 38 (27.3%) or sibling 3 (2.4%). Fifty-five percent disclosed to this person because they felt close to him/her. More female (82.9%) than male (76.75) respondents had disclosed their status ($p > 0.05$). Ninety-seven percent of respondents who knew their spouses/partners were HIV positive and 95.5% whose spouses/partners were HIV negative had disclosed their status compared to 72.5% who did not know the HIV status of their spouse/partner ($p = 0.001$).

CONCLUSIONS/NEXT STEPS: Many respondents in this study had disclosed their status. Respondents who knew their spouse/partner's HIV status were more likely to have disclosed. Efforts to improve HIV testing among adolescents and young adults and a culture of openness about HIV status; especially to significant others could improve disclosure and overall management of HIV our study area.

IAAH170641

Knowledge of reproductive health and HIV among school going adolescents of rural Patna

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BACKGROUND: World Health Organization (WHO) defines adolescence as the period of life between 10 and 19 years of age. The adolescent experiences not only physical growth and change but also emotional, psychological, social, and mental change and growth. Adolescence is a period of increased risk taking and therefore susceptibility to behavioural problems at the time of

puberty and new concerns about reproductive health. Majority of adolescents still do not have access to information and education on sexuality, reproduction, and sexual and reproductive health and rights, nor do they have access to preventive and curative service. So, this study was conducted with a objective to assess the knowledge, perceptions and views of the school going Adolescents, regarding puberty, reproductive health, contraception and STIs Especially HIV-AIDS.

METHODS: After taking approval from ethical committee of Nalanda Medical College, a cross-sectional study was done among 138 girls and 130 boys, who were school students belonging to 9th and 10th standards, of a 2 government and 2 private schools in sampatchak block, which is a field practice area under Community Medicine department of Nalanda Medical College, Patna. The information was gathered by using pre tested, semi structured questionnaire. Data was analysed by using Microsoft Excel and SPSS for windows.

RESULTS Majority 60% not knew the changes during puberty, 47% knew about family planning methods, 20% knew about STDs and its transmission. Only 15% knew about adolescent friendly clinic and none of them had visited it. Source of information regarding reproductive health was mainly through friends, TV, Internet and other Medias.

CONCLUSIONS/NEXT STEPS: The knowledge of school-going adolescents, both boys and girls, is poor about pubertal changes, reproductive health issues and HIV. Adolescence health education program therefore needs to be considered as a possible source of information.

IAAH170650

Health connectors – Improving adolescent HIV and sexual health outcomes by personalising linkage to HIV treatment, prevention and sexual and reproductive health (SRH) services in South Africa

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BACKGROUND: Loss of adolescent HIV-patients is greatest between diagnosis and initiation of anti-retroviral treatment (ART). Introducing universal test and treat (UTT) has reduced time to ART initiation, but loss to follow-up in adolescents remains high. Adult studies show that contact with a health system or peer navigator reduces structural and personal barriers for newly diagnosed HIV patients accessing treatment and care. Whether a similar model for adolescents, both HIV-positive and -negative could improve ART linkage and STI, SRH and prevention intervention uptake, and clinical outcomes is unknown.

METHODS: Wits RHI's USAID-funded Adolescent Innovations Project is implementing a peer navigator model - Health Connectors - to improve HIV care linkage and SRH and prevention intervention uptake in youth aged 12-24 years, in 13 primary healthcare (PHC) facilities. Health Connectors are young people with experience in HIV health promotion and counselling, and knowledge of the local health, social welfare and NGO services. An introduction to a Health Connector is offered during every HIV post-test counselling session. Patients that opt in, regardless of the test result, are linked with a Health Connector who assists HIV-positive patients to navigate clinical care and support services; and helps HIV-negative patients to decide on individually tailored and appropriate SRH and HIV prevention options. Health Connectors maintain their link with patients through face-to-face meetings, SMS and 'WhatsApp' messages and telephone conversations. A Health Connectors' support continues until a patient either joins a support group or a youth care club and initiates ART, or decides on an appropriate package of SRH and prevention options.

RESULTS: Six Health Connectors are currently support 13 facilities, visiting each clinic weekly. An evaluation assessing the Health Connectors' contribution to improved HIV-patient care linkage and to routine patient clinical outcomes (8 weeks post-HIV testing) is currently underway.

CONCLUSIONS/NEXT STEPS: The Health Connector model has the potential to be a simple, effective model to improve adolescent care, while simultaneously increasing youth involvement in health services and giving youth a strategic voice in health care management systems.

IAAH170684

Youth participation in HIV and sexual and reproductive health decision-making, policies, programmes: Perspectives from the field

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BACKGROUND: In order to improve access to and quality of HIV and SRH information and services, there is a growing interest in 'youth participation' approaches. In particular, youth advocates and allies have in recent years used international policy discussions and agreements to establish a need for and encourage investment in youth participation in development programs and funding. A broader evidence base is needed to examine the effect and quality of youth participation approaches to SRH policy and programme decision-making.

METHODS: The study combines a literature review with an assessment of the experienced quality and impact of young people's participation on policy or decision-making bodies through targeted in-depth interviews and a global survey of youth advocates.

RESULTS: The study uncovered some truth to common assumptions about who has access to decision-making spaces with regards to HIV: overall, older youth (aged 25-29) and young men are more able to access decision-making. Investments in making policy and programme decision-making more accessible to key affected populations, though, are beginning to increase representation of those communities, in particular among young men who have sex with men and young people living with HIV. Perceptions of the quality of youth participation varied, with a correlation between those who had access to participation and those who felt strongly that their participation had an effect. Young people who have participated in decision-making bodies and processes reflected improvements in outreach and representation, but also expressed concern about tokenism, age-based hierarchies, and access for younger adolescents, women, and marginalized groups. The majority of respondents felt strongly that more investment would be needed in both the amount and quality of participation available, and in ensuring that participation was open to all.

CONCLUSIONS/NEXT STEPS: Given the limitations and gaps in available evidence, significant increased investment in research and evaluation on the impact of meaningful youth engagement on policy processes, programmes, and youth empowerment. This study uncovers potential priority approaches for improving youth participation, including cross-generational and youth-adult partnership capacity building, and increased investment in youth networks and communications mechanisms.

IAAH170688

Adolescents' insights into STDs/HIV/AIDS and family welfare methods in India: Realities and myths

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BACKGROUND: Indian culture prohibits sexual interaction prior to marriage but realities are far from these restrictions. Scarcity of data on premarital sexual activity, awareness of contraceptives, HIV/AIDS and STDs among unmarried adolescents, encouraged us to conduct this study. Our aim is to assess the level of comprehensive knowledge of school adolescents regarding transmission and prevention of HIV/AIDS and STDs and awareness about various contraceptives.

METHODS: A cross-sectional study was conducted in the urban area of Varanasi, India. We recruited a total of 1800 (700 boys and 1100 girls). Of these, 1672 completed the questionnaire (650 boys and 1022 girls) from different background, yielding a response rate of 92.8%. Both boys and girls are interviewed by a self-administered structured questionnaire maintaining high level of confidentiality. Bivariate and multivariate analysis was performed to identify the factors associated with adolescent's knowledge and behaviour.

RESULTS: With regard to knowledge of contraceptives, the awareness of condom is highest among adolescents. Our study shows that adolescents are less aware of STDs (64% boys and 47% girls) as compared to HIV/AIDS. More than half adolescents are ignorant that HIV/AIDS is curable. Furthermore, more than two third of adolescents were unaware that HIV could be transmitted from a mother to his child through breastfeeding. Knowledge is associated with age, medium of school, their involvement in sexual activity and whether they are getting coeducation.

CONCLUSIONS/NEXT STEPS: Adolescents' involvement in unsafe sexual

activities and lack of knowledge regarding contraceptives, sexually transmitted diseases including HIV/AIDS pose a threat to adolescent sexual and reproductive health. Formal sex education and special intervention programmes should be implemented at school level and promote adolescent friendly health clinics for better counselling of adolescents on the aspects of contraceptives, abortion, STIs/RTIs and HIV.

IAAH170743

Youth network of peer education in HIV/STD prevention for youth

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¹China Youth Network

BACKGROUND: At present, China has about 300 million young people aged 10-24 years. In the rapidly changing social transition, young people face many health risks in adolescence. Among these risks, the spread of HIV/STD in youth is severe at present, and it has the tendency to increase. Some young people think it's far away from themselves and ignore it. And some have fears and discrimination to patients. As a peer educator said: "They don't examine the problems of HIV/STD accurately, scientifically and objectively."

DESCRIPTION: Peer education is a mode to use participatory methods to assist young people to develop life skills, form healthy relationships, promote correct information, take a responsible attitude and negotiate condom use. Youth network is a network including volunteers, youth health club in college, local youth network and China youth network. Under the lead of the higher levels and mutual cooperation, more young people could accept qualified and efficient peer education. In this way, we enlarge the coverage of peer education in youth.

LESSONS LEARNED: Under youth network, it's efficient to use positive peer pressure to help young people to learn the prevention of HIV/STD and eliminate the related stigma and discrimination initiatively and comprehensively. Besides, the creativity, passion and participation of all levels young people enhance the efficiency of health promotion; optimize the forms of activities, which helps to be well accepted by more young people. Finally, through the youth network, young people are able to promote the health of the whole society by their efforts in the field.

CONCLUSIONS/NEXT STEPS: The number of participants in one peer education is limited. We are planning to use our structure of youth network to further enhance the influence of youth health, including peer education and other activities of propaganda, and expand the coverage of educates by strengthening inter-school cooperation and exchanges in the field. The goal of us is promoting more young people to learn the relevant knowledge of HIV/STD prevention, using which for self-protection. We advocate young people to use the mode of peer education to cover more people, for the promotion of juvenile health.

IAAH170767

A joint modeling approach to assess the association between child and adult HIV infections in Kenya, having adjusted for covariates

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BACKGROUND: Recent studies have adopted a joint modeling approach as a more robust technique in studying outcomes of interest simultaneously especially when the interest is in the association between two dependent variables. This has been necessitated by the fact that modeling such outcomes separately often leads to biased inferences due to existing possible correlations especially in medical studies.

METHODS: This paper focuses on establishing if there exist a correlation between child and adult HIV infections measured for each county in Kenya, while adjusting for several predictors such as coverage of anti-retroviral therapy (ART) in each county, the number of adults and children in need of ART amongst other variables. We obtain HIV data for each county from the Kenya government open data website for the year 2014 and visualize on each county the HIV infections on the Kenyan map. High infection incidences are observed for counties located in Nyanza province of Kenya. We further jointly model the two outcomes of interest using the linear mixed models approach for repeated measures to capture the correlation between the two outcomes for each county

RESULTS: Results indicate the infections are indeed correlated with significant predictors such as ART coverage, Adults and Children in need of ART as well as number of people undergoing testing voluntarily. This forms the basis of our

results presentation while demonstrating linear mixed modeling approach to account for such correlations.

CONCLUSIONS/NEXT STEPS: By so doing, researchers or students who have little understanding in application of linear mixed models, both theoretical understanding and practical application on real datasets, have an opportunity to bridge this gap. Additionally, insights developed from this study should interest the Kenyan health sector and practitioners as well as other institutions working in HIV related interventions.

IAAH170783

A study to assess the knowledge and attitude regarding HIV/AIDS among school going adolescents in a rural area of Haryana

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BACKGROUND: There are 2.47 million persons living in India with HIV. Out of total cases of HIV/AIDS in India, 35% were in the age group of 15-24 years and most of them were infected through unprotected sex. The Acquired Immune deficiency syndrome caused by HIV is a serious public health problem. Adolescents may be exposed to the risk of being victims of HIV/AIDS, mostly because of lack of knowledge about HIV/AIDS and inadequate access to HIV prevention and treatment services. The study was done to assess the knowledge and attitude regarding HIV/AIDS amongst adolescent students in a rural area of Haryana.

METHODS: Two schools in district Gurgaon were selected for the study and written permission of Principal was obtained. The study was done in May and June 2017. A total of 300 students of 9th to 12th class were interviewed using a pre-designed pretested semi structured interview schedule. The data was collected by the investigator herself. Privacy of the students was maintained. The data was entered in Microsoft Excel software. The data was analyzed by using appropriate statistical software.

RESULTS: The mean age of adolescents was 15.3 years. 62% of the students were females. Only 3% knew the full form of HIV/AIDS. The correct routes of transmission of HIV were known only to 46% of the study participants. Only 32% of the students were aware of the ways to prevent HIV/AIDS. 58% of the students believed that there is no treatment for HIV/AIDS. 63% of the students believed that discrimination against HIV positive people is justified.

CONCLUSIONS/NEXT STEPS: It can be concluded that the knowledge of adolescent students regarding HIV/AIDS is very poor. The low level of knowledge and less favourable attitude among school going adolescents indicates that a lot needs to be done to educate this group on the issue of HIV/AIDS. Although mass media activities are being done in this regard, yet there is need for increased IEC/BCC activities among school students to raise their awareness on HIV/AIDS.

IAAH170828

PROMOTING UPTAKE OF FAMILY PLANNING BY YOUNG GIRLS THROUGH EMPOWERING YOUNG MEN IN NAROK COUNTY, KENYA

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¹*Christian Aid*

BACKGROUND : The CPR in Kenya is at 58% (KDHS2014) up from 46% in 2008. Overall there has been a reduction in unmet need for FP in Kenya from 25% in 2008 to 18% in 2014 (KDHS 2014). However the unmet need for young girls 15-19 still remains very high. In Kenya, almost one-quarter of women give birth by age 18 and nearly half by age 20. 18% of adolescent women age 15-19 are already mothers or pregnant with their first child (KDHS2014). Narok County has a CPR of 47% (KDHS 2014) and has the highest teenage pregnancy amongst all the 47 counties at 40% against the national prevalence of 18% (KNA2017). The young girls in Narok County are confronted with cultural norms and negative masculinity which make them vulnerable SGBV and unplanned pregnancies.

DESCRIPTION : Christian Aid through its Sexual and Reproductive Health project supported by COMIC RELIEF has been implementing an innovative model aimed at protecting the rights of the adolescent girls and to promote access to contraceptives by working through their sexual partners. This focuses on young men (10-24 years) who are organized into groups then sensitized on the need to protect their partners since they have the power to negotiate for safe sex by using male condoms, encourage their partners to access FP and address SGBV. Results; FP uptake amongst young girls has increased. The proportion of men using male condoms has increased a total of 13117 condoms were distributed in year 2 compared to 8603 in year one and 2359 at baseline.

LESSONS LEARNED : Through the men to men groups, the men have demonstrated the will to positively use their power to protect their partners

Sexual and Reproductive Health rights.

CONCLUSIONS/NEXT STEPS : Youth friendly services should appreciate the power young men enjoy which can be used positively to protect and promote girls' SRH rights. There is need for replication of these best practices in other regions in Kenya

IAAH170831

Increasing access to Comprehensive Sexual Reproductive Health care to young adolescents in Kenya

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BACKGROUND : Reproductive Health Network piloted a project on the use of trained youth peer providers in marginalized counties to help increase access to Comprehensive Sexual Reproductive Health care. Over 50% of young adolescents had little or no knowledge on law on reproductive health in Kenya including on access to comprehensive sexual reproductive health care. Lack of social support due to cultural and religious beliefs influenced uptake of contraceptive and safe abortion services. Over 60% of healthcare providers within the counties had inadequate capacity to provide youth friendly SRH services.

DESCRIPTION : RHN trained 75 young people from three counties in Kenya, Kilifi, Meru and Trans Nzoia Counties serving rural populations and Nairobi County which is peri urban with the objective of increasing their knowledge and skills on sexual and reproductive health and rights. The youths formed part of community advocacy groups that developed work plans focused on creating awareness on abortion and contraceptives, as well as making referrals for contraceptives, safe and post abortion care services. RHN also trained 62 healthcare providers from the counties on provision of integrated youth friendly SRH services including safe abortion services and contraceptives emphasizing on the need for long term Family Planning methods.

LESSONS LEARNED : Increased number of trained healthcare providers and youth peer providers has made safe abortion services more accessible. Feedback reports indicate that a total number of 7,347 young adolescents have been able to access contraceptives with 6,542 accessing safe abortion services.

CONCLUSIONS/NEXT STEPS : RHN was able to achieve these positive results through its concerted efforts to engage different stakeholders such as the Legal Support Network to provide information on SRH law within the Kenyan constitution, county governments to address challenges in provision of reproductive health information and services including provision of Family Planning commodities to RHN trained providers. RHN intends to expand geographically with the youth model to other counties to help increase access to contraceptives and reduce early pregnancies.

IAAH170834

Adolescent's knowledge, attitude and behaviour on the issues related to RTI/STDs and HIV/AIDS in the Desert Area of Rajasthan

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¹*World Bank*

BACKGROUND: This research paper discusses the issues related to adolescence sexual and reproductive health with special focus on HIV/AIDS among boys and girls having rural background of desert area of Rajasthan, India. The study deals with the knowledge, attitude and behaviour on the issues related to RTI/STDs and HIV/AIDS including the exposure towards mass media.

METHODS: The data for this exploratory research was collected by using systematic random sampling method from 200 adolescents boys and 200 adolescent girls aged between 13-19 years through personal interviews and focus group discussions by using structured schedules and checklists. The responses of the adolescents boys and girls on these issues were analysed with respect to their education (school, going vs. out of school), age (younger vs. elder), sex (boys Vs girls) and importantly their personality type (introvert vs. extrovert). The data was analysed through SPSS and Chi square tests were applied to identify the significance of the differences.

RESULTS: The study findings reveal that the correct knowledge about HIV/AIDS is still a challenge as many of the respondents were not certain about the mode of transmission and having lot of misconception. As per the statistical analysis of the data, the category wise differences were not found much significant. The study uncover the "felt need" on the information on HIV and Sexual Health and suggested effective mode of communication on the same.

CONCLUSIONS: The study would be useful in developing policies, activities and programmes by the government and non-government organizations.

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Astuti Putu Ayu S	IAAH170730	Bhave S	IAAH170218; IAAH170236;
Atchison J	IAAH170498		IAAH170238; IAAH170239;
Atif M	IAAH170591		IAAH170244; IAAH170310
Auerswald C	IAAH170365; IAAH170367	Bhuta B	IAAH170411
Aurora B	IAAH170725	Bhutia T	IAAH170159
Aydin A	IAAH170695	Bisani S	IAAH170268
Ayyavoo C	IAAH170717	Bisht N	IAAH170554
Azzopardi Peter S	IAAH170780	Biswas A	IAAH170487
		Blades J	IAAH170775
		Bloem P	IAAH170311

Blum R IAAH170066; IAAH170067
 Boddula S IAAH170287
 Borschmann R IAAH170278
 Bumanzi A IAAH170724
 Burns L IAAH170786

C

Caffe S IAAH170284; IAAH170469;
 IAAH170361
 Cal A IAAH170625
 Calle C IAAH170537; IAAH170476
 Catanzarite Z IAAH170601
 Chakraborty S IAAH170789
 Chandra M IAAH170170
 Chandra R IAAH170459
 Chandrashekhar IAAH170186
 Chanu B IAAH170723
 Chatterjee B IAAH170514
 Chaturvedi A IAAH170834
 Chau K IAAH170143; IAAH170144;
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 Chaudhary N IAAH170568
 Chauhan S IAAH170377
 Chayal V IAAH170827
 Chetry D IAAH170810
 Chima V IAAH170507
 Chitindi N IAAH170577
 Chourasia M IAAH170173
 Chowdhury B IAAH170208
 Christina S IAAH170299
 Christmas A IAAH170308
 Crivello G IAAH170466
 Cyrilvincent S IAAH170243

D

Dagadu A IAAH170657; IAAH170660
 Dahal A IAAH170318
 Dahiya J IAAH170320
 Dalui A IAAH170812
 Dana J IAAH170100
 Das A IAAH170760
 Das M IAAH170631; IAAH170632
 Davey S IAAH170748
 Davidson L IAAH170183
 Debbarma S IAAH170602
 Deol R IAAH170745
 Dhal S IAAH170329; IAAH170330
 Dhavan N IAAH170643

Dhawan S IAAH170174; IAAH170423
 Dhillon P IAAH170042
 Dhyani Ida A IAAH170226
 Doyle AM IAAH170189
 Dunning D IAAH170273; IAAH170348
 Dut R IAAH170223; IAAH170366
 Dwivedi S IAAH170525

E

Ehsan I IAAH170031
 Eisenberg M IAAH170049
 Ekanayake S IAAH170599; IAAH170451
 Eltyeb E IAAH170019
 Elvis A IAAH170404
 Elvis Ndikum A IAAH170463
 Embleton L IAAH170271
 Emirie G IAAH170792
 Enamul K IAAH170824
 Eren D IAAH170639
 Erulkar A IAAH170069; IAAH170082

F

Fadl N IAAH170221
 Fairey M IAAH170727
 Faiz S IAAH170795
 Faizi N IAAH170555
 Fanello S IAAH170056
 Ferguson J IAAH170134
 Fernandez A IAAH170597
 Fordham C IAAH170822
 Franco C IAAH170089

G

Gaete V IAAH170368
 Gaitho D IAAH170538
 Galdo E IAAH170470
 Ganesan S IAAH170509
 Gay J IAAH170737
 Gayles J IAAH170740
 Gebretsadik A IAAH170761; IAAH170762
 Gervais A IAAH170172
 Ghimire A IAAH170801
 Goel P IAAH170232
 Gogoi A IAAH170396; IAAH170410;
 IAAH170412; IAAH170415
 Golub S IAAH170665
 Gonsalves L IAAH170241
 Goyal I IAAH170621

Goyal R	IAAH170071
Gracian S	IAAH170309
Gumus E	IAAH170456
Guo Y	IAAH170804
Gupta D	IAAH170734
Gupta R	IAAH170784
Gupta S	IAAH170146; IAAH170629

H

H H	IAAH170713
Hale D	IAAH170431
Haley N	IAAH170060
Hall A	IAAH170017
Halli P	IAAH170026
Hassan A	IAAH170664; IAAH170671
Heard E	IAAH170163
Hermanson E	IAAH170202; IAAH170275
Hernandez Maria Del R	IAAH170393
Hinchcliffe L	IAAH170261
Hinson L	IAAH170513
Hoopes A	IAAH170340
Hope R	IAAH170653
Hurley L	IAAH170109

I

Iliadi C	IAAH170464
Igras S	IAAH170500
Imrie J	IAAH170650; IAAH170651
Ishaku S	IAAH170753
Isimbi R	IAAH170806
Islam M	IAAH170087

J

Jackson E	IAAH170192
Jarrett D	IAAH170433
Jayakody D	IAAH170797
Jeelani A	IAAH170231
John N	IAAH170642
Joshi S	IAAH170342
Joshua T	IAAH170726
Jubirca S	IAAH170607
Jusril H	IAAH170712

K

Kabiru C	IAAH170699
Kala S	IAAH170668
Kalapala A	IAAH170749
Kalsi M	IAAH170408

Kandpal V	IAAH170199
Kaneda T	IAAH170454
Kang M	IAAH170050
Kansagara T	IAAH170370
Kapungu C	IAAH170496
Karakas D	IAAH170711
Katende D	IAAH170018
Katti V	IAAH170798
Kaufman M	IAAH170652
Kaul P	IAAH170191
Kaur V	IAAH170094
Keane E	IAAH170389
Khairy A	IAAH170659; IAAH170662
Khandeparkar P	IAAH170344
Khanna P	IAAH170402
Khanna T	IAAH170165
Khedr A	IAAH170382
Khurana A	IAAH170755
Kigumire P	IAAH170765; IAAH170766
Kim N	IAAH170020
Kinner S	IAAH170324; IAAH170325
Kirubakaran J	IAAH170825; IAAH170830
Klein J	IAAH170497
Kohl K	IAAH170773
Kohli N	IAAH170790
Kosola S	IAAH170248
Krelle A	IAAH170371
Krishnan R	IAAH170666
Kulkarni V	IAAH170697
Kumar A	IAAH170180; IAAH170335; IAAH170752; IAAH170778
Kumar D	IAAH170744
Kumar K	IAAH170683
Kumar R	IAAH170206
Kumar S	IAAH170547
Kumar S	IAAH170572
Kumari N	IAAH170177; IAAH170336
Kumari S	IAAH170623
Kumcagiz H	IAAH170569; IAAH170689; IAAH170690
Kuteesa W	IAAH170570

L

L C	IAAH170398
Lal A	IAAH170522
Lesco G	IAAH170681
Lewetie E M	IAAH170406
Lewis-Smith H	IAAH170439

Liu S	IAAH170384
Luglio F	IAAH170707; IAAH170709
Luikham P	IAAH170264; IAAH170265
Lundgren C	IAAH170179
Lundgren I	IAAH170516
Lundgren Rebecka I	IAAH170515

M

M S J	IAAH170829
Madge V	IAAH170198
Madjidian S	IAAH170319
Magalasi P	IAAH170478
Magida A	IAAH170138; IAAH170139
Mahapatra A	IAAH170815
Maharaj P	IAAH170070
Maisnam B	IAAH170305
Malhotra S	IAAH170548; IAAH170552
Manchanda S	IAAH170209; IAAH170220; IAAH170266
Mandal G	IAAH170312
Mandal P	IAAH170573
Mane S	IAAH170274
Marak C	IAAH170117
Maravilla J	IAAH170290; IAAH170331
Marin M	IAAH170304; IAAH170306 IAAH170314; IAAH170315
Martin C	IAAH170419; IAAH170647; IAAH170648
Masangane Z	IAAH170676
Mathew B	IAAH170399; IAAH170422
Mato R	IAAH170054
Mbayo B	IAAH170452
Mbati M	IAAH170603
Mcdougal L	IAAH170194
Mchunu L	IAAH170267
Mckenney A	IAAH170435
Medise B	IAAH170286; IAAH170583
Mehra D	IAAH170418
Mfula C	IAAH170598
Michaud A	IAAH170039; IAAH170270
Mikwamba G	IAAH170133
Mir U	IAAH170782
Mirthipati R	IAAH170372
Mishra S	IAAH170346; IAAH170347; IAAH170349
Mkwananzi S	IAAH170302
Mlambo V	IAAH170083
Moeller S	IAAH170123
Mog M	IAAH170610

Moitra M	IAAH170655
Montalto G	IAAH170630
Moura L	IAAH170656; IAAH170658
Mtowa A	IAAH170438
Muchene E	IAAH170767
Mugore S	IAAH170137
Muhammed F	IAAH170472
Muhammed Y	IAAH170093
Mulenga V	IAAH170616
Muluneh D	IAAH170035
Munyasia N	IAAH170831
Murguia C	IAAH170482
Murigo D	IAAH170085
Murithi L	IAAH170523

N

Nadhiroh S	IAAH170458
Nagata J	IAAH170046; IAAH170156
Nair T	IAAH170667
Nakiyingi J	IAAH170116
Nakka R	IAAH170217; IAAH170461
Nalukwago J	IAAH170714
Namiiro S	IAAH170338
Nagraj P	IAAH170527
Nanavati J	IAAH170809
Naranjo-Rivera K	IAAH170493
Ndayishimiye J	IAAH170529
Neemi A	IAAH170233
Negi K	IAAH170675
Ngwenya N	IAAH170297; IAAH170298; IAAH170301
Nimbabazi O	IAAH170536
Nyanwu O	IAAH170530
Nyariki D	IAAH170436
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O. Cheikh L	IAAH170090
O'Brien A	IAAH170323; IAAH170796
Odo A	IAAH170512
Odunaiya A	IAAH170011
Olumide A	IAAH170609
Onukwuli V	IAAH170511
Opiyo C	IAAH170828
Osman M	IAAH170453; IAAH170316
Osseni A	IAAH170467
O'Sullivan M	IAAH170294
Otuku W	IAAH170162
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P

P P IAAH170793

P Salodia U IAAH170803; IAAH170700

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Pahwa P IAAH170350

Pallavi IAAH170178; IAAH170386

Pandey N IAAH170519

Pandian R IAAH170203; IAAH170204;
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Park S IAAH170715

Patel R IAAH170288

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Paul M IAAH170230; IAAH170246

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Pellegrom S IAAH170499

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Prost A IAAH170636; IAAH170637;
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R

Rachmi Cut N IAAH170358

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Rai A IAAH170542

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Rani R IAAH170392

Rani R IAAH170403

Rastogi A IAAH170670

Rathee R IAAH170080

Rathnayake M IAAH170263

Rauh S IAAH170774

Rawat A IAAH170799

Razdan G IAAH170390

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Reddy A IAAH170281; IAAH170374

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Rene K IAAH170063

Rehman A IAAH170197

Renati S IAAH170785

Ricker C IAAH170684

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Robards F IAAH170068

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Sabramani V IAAH170283

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Sawni A IAAH170541; IAAH170543

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Shah S IAAH170296; IAAH170614

Shahabuddin A IAAH170729

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Stevens M IAAH170006
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Takhellambam N IAAH170175
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Tellis E IAAH170414
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Tewari A IAAH170383; IAAH170416;
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U
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V
Van Reeuwijk M IAAH170015
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Vogeler A IAAH170364
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Wasti S IAAH170072
Winter F IAAH170352
Wolf H IAAH170190; IAAH170260
Woolley N IAAH170005; IAAH170030

Y
Ybarra M IAAH170488; IAAH170489
IAAH170490
YU X IAAH170526
Yusari A IAAH170259

Z
Zavier A IAAH170557
Zeitz L IAAH170624
Zhang Q IAAH170794
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