

Most girls have their first period between the ages of 11 and 14. Some girls start as early as 8 and some at 17 or older. The time period from the first day of your period (when the bleeding starts) until the first day of your next period is usually 28 days (one month) but can range from 21-35 days. A girl can look at a calendar to predict her period. For many years after a girl starts having her period, she may not get her period every month. This is perfectly normal.



WASH in Schools Empowers Girls' Education

Proceedings of the Menstrual Hygiene Management in Schools Virtual Conference 2014



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Contents

Acknowledgements	4
Conference Overview	6
Global: Puberty education and menstrual hygiene management booklet	8
Global: Strengthening research capacity on menstrual hygiene management in schools through an e-learning course	11
Global (Bangladesh, Bolivia, China, El Salvador, Kenya and the Philippines): Menstrual hygiene management operational guidelines	15
Bangladesh, India and Kenya: “Knocking down menstrual taboos” - a game-based menstrual hygiene management curriculum	18
Bolivia: Using games to research menstrual hygiene management	22
Cambodia: Development of a girls’ puberty book	26
India: Psychosocial factors and gender norms around menstruation and their effects on girls’ self-confidence	29
India: The health impact of menstrual hygiene management on women of reproductive health and its implications for schoolgirls	33
Kenya: Menstruation, school attendance, spatial mobility and wider gender inequalities	36
Kenya: Research on menstrual hygiene products: Inferences for WASH in Schools programmes following an acceptability, use and safety study	40
Pakistan: Learning, acting and learning research on menstrual hygiene management in schools	44
Rwanda: SHE28 - the intersection of innovation, health, WASH and economic development for girls and women	48
Sri Lanka: Menstrual hygiene handbook for adolescent schoolgirls	52
Tajikistan: Using puberty research to better inform menstrual hygiene management interventions	55
Uganda: Improving sanitation facilities through human-centred design	58
Zambia: SPLASH - Schools Promoting Learning Achievement through Sanitation and Hygiene	61

Conference Overview

Empowering Girls' Education

A solid body of research conducted across numerous countries and contexts has revealed the discriminatory nature of many school environments, with menstruating girls unable to adequately manage their monthly menses with safety, dignity and privacy. In recognition of the positive impact on girls' education, initiatives around the world are addressing adolescent girls' menstrual hygiene management (MHM) needs in coordination with ongoing efforts to improve water, sanitation and hygiene (WASH) facilities and services in schools. By offering an alternative to the stigma and marginalization often associated with menstruation, integrating MHM into WASH in Schools (WinS) empowers all students, especially girls.

Columbia University's Mailman School of Public Health and UNICEF convened the third annual

Menstrual Hygiene Management in Schools Virtual Conference in New York City on 29 October 2014. Building on recommendations from the 2013 conference, the aim was to focus on programmes that have gone to scale. However, as the conference submissions demonstrated, to date there has been limited scale up of MHM programming in schools. This is due in part to the need for additional evidence on the effectiveness of various MHM interventions to convince national governments and donors to support scale up. The conference therefore focused on a range of new research and programming efforts that are being undertaken in a wide range of low- and middle-income countries, with particular attention on approaches addressing insufficient menstrual knowledge and inadequate WASH facilities, including for the disposal of used absorbent materials.

The one-day event brought together over 300 participants from academic institutions, non-governmental organizations (NGOs), the private



Adolescents make sanitary napkins at the Sani-Mart centre in Baunia Badh, Mirpur, Bangladesh.

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Definition of menstrual hygiene management

Women and adolescent girls use a clean material to absorb or collect menstrual blood, and this material can be changed in privacy as often as necessary for the duration of the menstrual period. MHM includes soap and water for washing the body as required, and access to facilities to dispose of used menstrual management materials.

sector, advocacy organizations, the United Nations Girls' Education Initiative (UNGEI) and UNICEF. While the vast majority of participants attended online, 25 participants attended in-person.

The conference included 16 web-based presentations, focusing on: (1) sufficient knowledge, guidance and support; (2) adequate facilities (privacy, disposal mechanisms, access to water and soap, etc.); and (3) availability and accessibility of absorbent materials. Presenters responded to questions from online participants and in-person experts served as discussants, summarizing the main points and posing questions. The presentations are available online at www.unicef.org/wash/schools

This publication brings together the key elements of the 16 presentations in a case study format. Each case study outlines the context in which the programme or research is being undertaken, the methods or approaches used, the accomplishments realized and challenges faced. Each case study also provides a number of recommendations to help guide future work.

The virtual conference also provided an opportunity to engage in a visioning exercise during which the participants collectively brainstormed and ranked a list of priority action items to be accomplished by 2024.

The 2015 virtual conference will showcase findings from formative research on MHM in WinS that is underway in a variety of countries. There remains much to be learned about the MHM barriers facing schoolgirls and female teachers and the best approaches for addressing these barriers. The new research findings will be used to strengthen and scale up programmes to reach more girls and women.



A specially trained teacher discusses hygiene with a group of young children at a government primary school in Quetta, Pakistan.

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Priorities for MHM in WinS: results of a visioning exercise

- Develop a common, evidence-based advocacy strategy for use when approaching decision makers.
- Improve the maintenance of school environments so that schools are transformed physically (with WASH facilities appropriate for MHM) and socially (with taboos around menstruation diminished).
- Create and implement an “MHM-healthy Schools” certification system.
- Establish an evidence-base for a comprehensive approach to incorporating MHM into WinS interventions.
- Move the field beyond individual MHM champions to more systematized and standardized approaches for improving MHM in WinS.

Puberty education and menstrual hygiene management booklet

United Nations Educational, Scientific and Cultural Organization (UNESCO)

Overview

Background

Every year, a new cohort of learners reaches puberty, yet despite the urgent and recurring need, there is little guidance on this vital subject and many girls and boys enter puberty unprepared for its challenges. The information they do receive is often partial, selective and surrounded by taboos. This may leave children confused and unsupported, jeopardizing their educational attainment and long-term health. In contrast, quality puberty education can help improve students' self-esteem, equip them with practical life skills and prepare them to identify and challenge harmful gender norms. However, the education sector as a whole tends to avoid puberty education, considering the issue a private matter to be addressed within the family.

To fill this gap, UNESCO and partners teamed up to develop *Good Policy and Practice in Health Education: Puberty Education and Menstrual Hygiene Management*, the ninth booklet in the UNESCO series. The document articulates a rationale for the education sector to improve school health by addressing puberty education and MHM, describes good policies and practices from various global contexts and provides clear actions for administrators, practitioners and advocates. The document is organized around the four pillars included in the Focusing Resources on Effective School Health (FRESH) framework: equitable school health policies; skills-based health education; safe learning environments; and health and nutrition services.

Setting

The publication was developed following a comprehensive literature review, including a review of curricula from 10 countries in Eastern and Southern Africa. It also drew on key informant interviews and an international technical consultation held in Nairobi, Kenya in July 2013. At the consultation, participants from United Nations agencies, governments, civil society, academia and the private sector discussed and debated the content in depth.

Stakeholders

- Girls and boys transitioning through puberty in schools around the world are the primary stakeholders.
- Additional stakeholders include UNESCO and other development partners, the



A young girl attends class at a primary school in Niamey, Niger.

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technical experts who took part in the Nairobi consultation, and the primary audiences for the book, including education sector policymakers such as planners and managers, school governing bodies and administrators.

Activities

Knowledge and education

The curricula review found that while content is generally age-appropriate, information about puberty is often the exception, with lessons on the topic frequently delayed to age 14 and above, restricting their effectiveness. The review further found that references to sexuality were often limited, and that messages were frequently negative and fear-based. Information on the reproductive process was often included, but the practical information girls need for MHM was frequently absent. Menstruation was often portrayed as a “problem” to be managed in private. This approach implies that menstruation is unpleasant, shameful and something to be hidden. The findings are consistent with past studies by NGOs and academia that have highlighted the weaknesses of curricula and school-based responses to puberty and MHM.

The publication lays out the context and rationale for education sector involvement in puberty and MHM education, identifies the characteristics of quality puberty education, including MHM, and explores key issues for programme development, implementation and sustainability. The publication has three main messages for the education sector:

- Educate all learners about puberty.
- Provide safe environments, both physical and social.
- Connect learners to health services and commodities.

The case studies in the publication demonstrate that in every context, no matter how challenging,



A teacher delivers a session on menstrual hygiene with a group of adolescent girls at Krishnopur High School in Rokonpur, Bangladesh.

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there are actions teachers and other education staff can take to improve students’ learning and health outcomes.

Achievements

The publication was launched in early 2014 and its reach is growing. As of the end of 2014, 2,800 hard copies had been distributed to ministries of education, health and gender, United Nations agencies and NGOs. In addition, over 4,185 electronic versions had been downloaded. A French version of the publication was released in October 2014, making the content accessible to additional audiences.

Plans for scale up

UNESCO is using its work on curriculum and teacher training with ministries of education (especially in Eastern and Southern Africa and West and Central Africa) to ensure a stronger emphasis on puberty education and MHM in comprehensive sexuality education and skills-based health education. In addition, research on programmes in Latin America is underway, with the aim of informing Spanish-language adaptation.

Challenges and facilitators for scale up

Like sexuality education, puberty education is an area many teachers feel uncomfortable

addressing. This is due to the lack of knowledge, teaching materials and training in participatory teaching methodologies. Many teachers feel that this topic is outside their mandate and authority, and cultural and social norms make teachers uncomfortable addressing puberty. Thus, for the publication to have its intended effect, a number of systemic issues need to be addressed, beginning with curricula and teacher training, which often take years to revise and adapt. Further necessary developments include providing teachers with the mandate and responsibility to take on these topics and ensuring the education system collaborates with communities and parents to ensure they are supportive of the work.

As the curriculum development cycle tends to take approximately seven years, change will take many years. However, the first step is to engage ministries of education to create a supportive policy environment and ensure that these topics are included and taught within school health programmes.

Opportunities and challenges

While puberty and MHM education are rarely priorities, there is a growing recognition of the interconnectedness of health and education. The increasing emphasis on improving school health presents an opportunity to ensure puberty education is provided. UNESCO and its development partners are working with a number of ministries of education to review school health policies and programmes, thereby providing an entry point for discussions around and enhancements of puberty and MHM education.

The need for a multi-sectoral response presents a further challenge for delivering effective puberty and MHM education. Developing the much-needed comprehensive approach requires engaging education, health, infrastructure, gender and other sectors and bridging governmental and

non-governmental institutions. Given that in some countries even inter-ministerial coordination and implementation is difficult, the addition of further sectors and stakeholders presents a complex challenge. However, the growing number of effective multi-sectoral partnerships can provide important guidance in this regard.

The publication can serve as a tool to influence government policy and programmes and foster improvements in the provision of puberty and MHM education. However, it requires champions who can bring this to the attention of policymakers and advocate with sufficient authority to help coordinate all relevant stakeholders whose engagement is required.

Recommendations

The publication provides ministries of education with the basic foundation for addressing the lack of knowledge among students on puberty and MHM. As such, it should be used in conjunction with education on related topics, such as WASH, to ensure a comprehensive response. In many countries, ministries of education will not be able to rapidly scale up a response. Therefore, the publication provides various examples of partnerships that can be initiated to increase coverage and help ensure sustainability.

Finally, in order to catalyse lasting improvements, short- and long-term strategies should be developed, using the range of human and financial resources in a country, including those in the private sector.

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Global

Strengthening research capacity on menstrual hygiene management in schools through an e-learning course

Emory University

Overview

Background

The Center for Global Safe Water (CGSW) at Emory University and UNICEF have established a collaboration supporting research on MHM in schools. This new collaboration builds on the success of a research project conducted in Bolivia, the Philippines, Rwanda and Sierra Leone in 2012-2013. It was the first multi-country study to systematically investigate MHM across different contexts using similar tools and methodologies. The findings were documented in a set of research reports, which contributed to growing interest among UNICEF country offices and partners in conducting MHM research in their own countries.

Rather than replicate the original model, which relied on Emory University to carry out research activities, the current effort aims to equip UNICEF offices to complete the research on their own. With support from Canada's Department of Foreign Affairs, Trade and Development (DFATD), Emory will deliver an electronic-learning course (e-course) and provide intensive support to 14 UNICEF country offices and their local partners, including local government officials, programme implementers and academic partners.



Two girls in the bathroom of School Number 67, in Ulaanbaatar, Mongolia.

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Setting

UNICEF identified course participants through an internal application process, and selected Afghanistan, Bolivia, Burkina Faso, Eritrea, Ghana, India, Indonesia, Kyrgyzstan, Mongolia, Nepal, Niger, Nigeria, Pakistan and Zambia to take part.

Through 12 modules – covering MHM, WASH, ethics, qualitative research methods and design, research tools, data analysis, dissemination of research findings and advocacy – the e-course will enhance the capacity of participants to carry out qualitative research on the challenges girls in school face related to menstruation. The completed research will inform future programming.

Stakeholders

- The main stakeholders are the e-course participants, including UNICEF staff, local NGOs, policymakers, academic partners and consultants, whose capacity to conduct MHM-related research will be enhanced.
- The populations that will be engaged in the research, including girls and boys in schools, teachers, parents and community health professionals, are also important stakeholders.
- Other stakeholders include UNICEF headquarters and country offices, Emory University and regional and global-level representatives from NGO partners.

E-course participants in each country will create and agree upon a research plan as working groups. This will include defining the primary goal of the research, as well as the location and participants. A lead consultant will anchor the working group in each country, ensuring the research is carried out in the field. After the working group has reviewed the findings, they will be disseminated to various stakeholder groups, such as policymakers, teachers and girls who participated in the research, in modes suitable for

each audience. Once the e-course is complete, the working group members will work together to identify, develop, implement and evaluate a pilot intervention aimed at mitigating a challenge or set of challenges identified in the research.

Activities

Knowledge and education

Participants in the e-course will learn to identify and investigate context-specific menstruation-related knowledge gaps among girls, boys, teachers, guardians and others using an array of qualitative research tools. Tools used in the course are available to the public and working groups will adapt them to fit local contexts.

In addition, the e-course will directly improve participants' research skills and knowledge around MHM. Thus, 14 UNICEF country offices will receive an overview of current research on MHM as well as the support, guidance and tools needed to conduct research on the challenges and barriers that girls in schools face related to menstruation.

WASH facilities addressing MHM needs

Participants will learn to investigate girls' WASH needs by using both a facilities survey and a range of qualitative tools. The facilities survey is adapted from the UNICEF *WASH in School Monitoring Package* and assesses school WASH facilities (with additions made to include questions linked to MHM). The qualitative research tools include questions that aim to understand girls' and teachers' perceptions of the WASH facilities and resources available to them, if they are suitable and how they could be improved.

Availability and accessibility of absorbent materials

Research tools included in the e-course explore the availability of and girls' access to absorbent materials in schools and surrounding areas.



Children watch an interactive theatre group performance designed to raise awareness about hand washing at Rowa village in Sullah, Bangladesh.

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Achievements

Over 140 participants, including practitioners, policymakers and academics, are enrolled in the e-course. Notably, over 25 countries applied to participate in the course. This interest reflects the fact that capacity building in rigorous qualitative methods for MHM research is both required and desired.

The e-course reflects several achievements from the first Emory-UNICEF collaboration on MHM-related research. For instance, tools presented in the e-course were developed during the successful four-country study, and were published by UNICEF in 2014.

Monitoring and evaluation

Participants will complete brief pre- and post-course knowledge assessments to document learning acquired through the course. In addition, class attendance will be monitored, short quizzes will be administered after each session and a final in-depth assessment will be conducted at the conclusion of the course. Successful completion of these activities will enable participants to receive a certificate of completion. Throughout the course, UNICEF and Emory will also collect

feedback from participants, which will help to inform potential revisions to be incorporated into future courses.

Plans for scale up

The e-course represents an effort to bring systematic research around MHM to scale, expanding a four-country research collaboration to include 14 countries, 13 of which were not previously engaged. This effort is not simply a replication of previous research with additional countries, but represents a new approach altogether, as the current initiative seeks to engage and build the capacity of local partners to conduct the research themselves. Providing an e-course will not only generate research in the near term, but also strengthen local research capacity in the long term.

The e-course may be offered again in the future if there is sufficient interest from other UNICEF country offices or other partners. Finally, the development and dissemination of course materials may aid in capacitating other interested parties to conduct qualitative MHM research on their own.

Challenges and facilitators for scale up

Country offices may bring varying levels of research capacity to the course. Therefore, Emory plans to provide ongoing support and feedback to all country offices and course participants. Additionally, Emory staff intend to visit select country offices to support the execution of research and assist lead consultants in building local capacity as needed.

Opportunities and challenges

Opportunities

The Emory team designed and administered modules for the WinS Distance Learning Course and designed and participated in all aspects of the four-country MHM study. Therefore, the focus and scope of the e-course will be informed by their experience conducting rigorous MHM research and training researchers. This course will also afford UNICEF country offices the chance to learn from each other's experiences in research design, data collection and analysis.

Challenges

In the initial UNICEF-Emory collaboration, challenges included changes in work plans, the need to obtain appropriate ethical clearance in each country, unexpected delays in fieldwork and the need to allot sufficient time for data collection and analysis. This course will apply lessons learned from these challenges to encourage strong collaboration and communication among stakeholders and provide strategies for planning activities, managing data, writing results and disseminating findings.

Recommendations

The Emory-UNICEF collaboration generated a number of tools that can help to improve the quality of MHM research and programming even for those who do not take part in the e-course:

- To accompany the e-course, UNICEF will publish a booklet containing descriptions

of each module and the slides used. While this may not replace the interactive support offered through the course, it will provide guidance useful for those interested in conducting qualitative research to explore MHM challenges in a range of contexts.

- A compendium of tools used in the 2012-2013 Emory-UNICEF collaboration, *WASH in Schools Empowers Girls Education: Tools for Assessing Menstrual Hygiene Management in Schools*, has been published. Other agencies are encouraged to adapt these tools to use in their own research.

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Global (Bangladesh, Bolivia, China, El Salvador, Kenya and the Philippines)

Menstrual hygiene management operational guidelines

Save the Children

Overview

Background

MHM programme development requires special methods, careful implementation and a comprehensive approach. Save the Children developed operational guidelines for integrating MHM-related activities into school-based programmes, based on demand from the organization's country offices. The guidelines are broken down into four sections: (i) how to conduct a MHM situation analysis; (ii) how to design a MHM programme; (iii) how to conduct a MHM baseline study; and (iv) MHM programme activities and interventions.

Setting

The guidelines are being piloted in six countries (Bangladesh, Bolivia, China, El Salvador, Kenya and the Philippines) in a range of contexts (see Table 1).

Stakeholders

- Save the Children programme staff are responsible for reviewing the operational guidelines, carrying out pilot activities and providing feedback.
- Schools commit to providing a safe learning space for girls and boys, including

addressing girl-friendly WASH facilities, providing biologically accurate and skills-based health and hygiene information on menstruation to boys and girls and ensuring access to sanitary materials in case of a menstrual emergency.

- Girls and boys provide their time and insight when participating in pilot activities and data collection. In addition, children participating in MHM lessons commit to sharing what they have learned through peer mentoring and school health clubs. They also participate in the monitoring of school WASH facilities.
- Parents provide their time and insight when participating in qualitative data collection. Parents also provide consent for their children to participate in data collection and learning activities.
- Teachers provide their time and insight when participating in qualitative and quantitative data collection. Additionally, teachers contribute to carrying out pilot MHM lesson plans and participatory learning activities. Teachers also play a mentoring role and support the monitoring of facilities.

Table 1: MHM operational guidelines pilot countries and settings

Country	Age group (years of age)	Number of intervention schools	Setting
Bangladesh	10-14	10	Urban
Bolivia	9-14	9	Urban
China	To be determined	To be determined	Urban
El Salvador	10-15	6	Rural
Kenya	10-14	6	Urban
Philippines	10-12	20	Urban/rural



Students in Nairobi, Kenya participate in the activity: “Who do you want support from?”

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Activities

Knowledge and education

The guidelines help Save the Children country offices to identify MHM-related knowledge gaps and develop programme solutions that deliver practical information to girls, boys, parents and teachers on puberty and MHM. The lessons and activities recommended in the guidelines use participatory methods to engage both boys and girls.

WASH facilities addressing MHM needs

Tools are included in the guidelines to identify and address challenges with regard to WASH facilities in schools.

Availability and accessibility of absorbent materials

The guidelines assist in the identification of challenges around access to absorbent materials and provide programmatic solutions, such as having absorbent materials available through a health teacher or nurse or for sale in the school canteen.

Achievements

The guidelines are being piloted in six countries and will be finalized in 2015. The development of the operational guidelines has generated increased support and interest around MHM in the participating country offices. For instance, the Save the Children team in El Salvador has used the guidelines to conduct a situation analysis. The

analysis found that girls, boys and teachers lack accurate information about MHM and the biology of menstruation. Girls reported self-exclusion, reduced participation in class, distraction, lost class time, absenteeism and fear of getting pregnant during menstruation. School sanitation facilities were found to be inadequate (although school facilities were better than household sanitation facilities). Girls reported the practice of restricting food such as eggs, cheese, meat and citrus fruits during menstruation.

In Kenya, the guidelines have been used to pilot an activity called “My Friend’s Experience with Menstruation at School”, the objective of which is to address teasing and bullying around menstruation. Girls and boys are split into small groups, given a number of questions to consider and then asked to create a drama or story. The exercise encourages participants to reflect on how girls might feel when they are teased about puberty or menstruation and to consider ways to be more supportive.

Monitoring and evaluation

Process indicators are being used to monitor the implementation of the guidelines in the pilot settings.

Plans for scale up

Each of the six pilot countries has plans to carry out MHM activities and programme interventions in 2015, including, for example:

- Save the Children El Salvador will incorporate lessons learned from the situation analysis into programme design and activities.
- Save the Children Philippines will share lessons learned, findings and materials with the Department of Education, UNICEF and other NGOs working on MHM.
- Save the Children Kenya will continue to carry out pilot activities with school health clubs in Nairobi and Kiambu.

In addition, the guidelines will be shared with all Save the Children countries offices working on school health and nutrition. As the guidelines provide instructions on how to adapt activities for context-specific use, wider distribution is expected to catalyse the development of high-quality interventions in many settings.

Challenges and facilitators for scale up

Challenges around scaling up MHM-related interventions extend beyond considerations of quality guidance and planning. For instance, educators may have preconceived ideas about menstruation and menstrual hygiene that are rooted in the local cultural context. These beliefs may be difficult to change, as adults may not realize that their knowledge is not biologically accurate. While education on MHM focuses on girls' and boys' knowledge, it is also important to educate adults (including parents, teachers and community health workers) that deliver the information. As programmes are taken to scale, implementers should not take it for granted that biologically accurate health and hygiene practices are widespread among adults.

Opportunities and challenges

Opportunities

Developing the guidelines involved introducing MHM programming in several new settings. For instance, very little work on MHM had previously been completed in Spanish-speaking countries. The development and piloting of the guidelines has allowed for the strengthening of MHM work in Bolivia and the launch of new projects in El Salvador. The final guidelines will be available in English, French and Spanish, making them accessible across a range of settings.

Challenges

As addressing MHM-related challenges is a very complex and dynamic process, time management presented the biggest challenge to the project. Guidelines need to be adapted to each setting



A girl buys a sanitary pad from a school canteen in Manila, Philippines.

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and the learning curve varies between settings. Although many technical staff have knowledge of and experience in MHM, it is a new topic for most. Save the Children country offices are therefore learning about MHM as they pilot the guidelines.

Recommendations

In future efforts to implement the guidelines and develop high-quality MHM interventions, consideration should be given to:

- All steps outlined in the operational guidelines take significant time. Budgeting sufficient time for each ensures that steps are not skipped or rushed and improves the quality of implementation.
- Partners and staff members may have varying knowledge on menstruation, menstrual hygiene and puberty. This knowledge gap can be bridged with relatively simple activities. For example, holding information sessions for all staff involved in MHM programmes provides an important chance to review biologically accurate information on reproductive health and hygiene practices.

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Bangladesh, India and Kenya

“Knocking down menstrual taboos” - a game-based menstrual hygiene management curriculum

WASH United

Overview

Background

WASH United is an international non-profit organization operating primarily in sub-Saharan Africa and South Asia. Combining the power of games, ‘superstar’ role models and positive messaging, WASH United works to change attitudes around sanitation and hygiene and facilitate behaviour change at scale.

WASH United’s curriculum on MHM draws on past experience in game- and sport-based training on safe water, sanitation and hand washing. The trainings focus on empowering participants with the knowledge and confidence to overcome the “Three S’s” around MHM (silence, shame and stigma). Trainings also seek to empower girls to practice healthy MHM practices, engage boys as supporters and equip teachers to more easily address topics related to puberty and MHM.

Setting

WASH United has supported local partner organizations in Bangladesh, India and Kenya to deliver MHM trainings in both urban and rural/peri-urban settings. These diverse settings were chosen in response to partners’ requests to conduct the trainings to bolster WASH programming or, as in the case of Bangladesh, were part of a wider partnership with WaterAid.

Stakeholders

- The main stakeholders are girls and boys, teachers and local partner organizations.
- Secondary stakeholders include family members, peers and government officials.

Activities

Knowledge and education

WASH United’s approach is driven by game-based learning. By enabling participants to generate their own insights and engage in play, it generates deeper learning than other pedagogical practices and creates a positive atmosphere around a topic traditionally shrouded in silence and shame. Furthermore, by playing together, the approach encourages solidarity and peer support.

The MHM modules can be delivered as a stand-alone training or can accompany sanitation and hygiene training. It is recommended that the girls’ MHM training be split into two sessions of approximately four hours each. This setup is essential to build trust between the girls and the trainer and to ensure that participants have enough time to reflect on the training and ask questions. To further promote reflection and discussion, group size should be small, with between 20 and 50 participants.

The training for boys usually takes place over one four-hour session. Some content is designed to engage girls and boys together, although the extent to which this is done relies on local approval. The boys’ module includes a session on providing social support to girls.

The content of the teacher training varies based on the time available and pre-existing skills and capacities. This half-day or one-day training covers WASH as well as MHM. A longer three-day session is required to prepare teachers and other trainers if they are to become master trainers.

In general, before trainings WASH United conducts site visits that include focus group discussions and key informant interviews with boys, girls, teachers and other adults to identify the common barriers around MHM and to adapt the training to local contexts. Some examples of adaptations include:

- **Bangladesh:** The intervention was held in Sylhet, a region where it is common for families to keep girls at home for seven days when they reach menarche and then hold a wedding-like celebration. In site visits held prior to the training, girls reported that the practice is not a positive experience as it makes them feel isolated and stigmatized and the ceremony signals that they have reached marriage age (Bangladesh has one of the world's highest rates of child marriage). In response, the 'celebrating womanhood' activity that usually concludes trainings was replaced with a more appropriate activity (a dance show).
- **India:** Local officials and teachers were reluctant to address reproductive health or sexuality-related topics at school and it was advised that girls' and boys' sessions be held separately. Therefore, sessions were held in community centres rather than schools. Further, rather than explicitly mentioning menstruation, the curriculum was branded as "WASH in Schools for Girls".
- **Kenya:** Teachers recommended focusing on girls around 10 years of age as students in the target area start engaging in sexual activity at an early age. Facilitators also prepared to respond to questions around pregnancy and HIV/AIDS, which were expected to be of greater interest to participants in this context than in other settings.
- **Urban-rural:** The curriculum has been introduced in both urban and rural (peri-urban) areas in Kenya and Bangladesh.



Beverly Mademba, Head of WinS for WASH United Africa, explains the different stages of the menstrual cycle at Hope Gateway School in Nairobi, Kenya.

© WASH United/2014

In both countries, the level of exposure to menstrual products and advertisements differed between rural areas and urban areas. WASH United observed that girls and women in rural areas are more open to alternative materials, such as menstrual cups, but found that there are also stronger socio-cultural taboos and more conservative understandings of gender roles when compared with urban areas.

Achievements

Almost 1,000 students (including 260 boys) and 60 teachers have been trained using WASH United's approach. The programme has been met with positive feedback from participants and requests for additional training. Partners and participants have also reported positive effects on girls' empowerment.



Girls play “Knock down the taboos” at Kaji Jalal Girls High School in Sylhet, Bangladesh.

© WASH United/2014

Monitoring and evaluation

Prior to trainings, WASH United assesses the following:

- The local situation with regard to WASH facilities and the accessibility of sanitary products (via observation and interviews with teachers and local partners).
- Current knowledge, practices and socio-cultural barriers among girls, boys and teachers in relation to MHM.
- Specific needs/requests for training (via interviews and focus group discussions with teachers, girls, boys and local partners).

As trainings are held, WASH United evaluates interventions based on qualitative data, including feedback from participants and partner organizations, and students’ self-reported changes in empowerment and/or practice. WASH United is also preparing a number of quantitative tools to monitor effects, including a self-administered ‘rating questionnaire’, to assess changes in self-efficacy among participants.

Plans for scale up

WASH United’s long-term objective is to influence policy and practice by ensuring that MHM education is included in national WASH/ reproductive health curricula. As the organization seeks to take the programme to scale, WASH United intends to:

- Partner with organizations that are working to improve WASH facilities at scale;
- Create a critical mass of organizations who can access and use existing curricula (this may include capacity building of master trainers/fieldworkers and experts from partner organizations);
- Produce low-cost, locally adaptable curricula; and
- Document experiences and evidence of what approaches are effective and share findings in national education/WASH fora.

Challenges and facilitators for scale up

Regardless of the scale of this intervention, teacher/trainer preparation is a major challenge.

For the games to be effective, teachers need to be able to facilitate a game-based, participatory methodology and avoid top-down teaching. Teachers also need to have sufficient comfort and knowledge to discuss MHM and reproductive health topics, which also presents a challenge.

In the future, WASH United intends to focus more on training of trainers, as well as to make the facilitation guides as accessible and comprehensible as possible.

Opportunities and challenges

Teachers, particularly male teachers, often lack the necessary knowledge of and interest in MHM education. This barrier has been overcome by discussing teachers' concerns and by helping them understand that the curriculum is both child-friendly and engaging.

"Why should we involve the boys?", is a common question from school officials. In order to address this, WASH United and its partners provide information on the important role that boys can play in supporting girls, while teacher trainings also include content on engaging boys.

The lack of girl-friendly sanitation facilities in schools (with appropriate space, supplies and facilities) is a key barrier to healthy behaviour. WASH United seeks to partner with organizations that can upgrade WASH-related 'hardware'. In contexts where upgrades are not possible, WASH United works with school officials to identify realistic but meaningful improvements, such as the placement of dustbins in and around toilet facilities.

The accessibility and affordability of sanitary pads remains a challenge for many girls. In response, during trainings WASH United emphasizes the advantages and disadvantages of low-cost, local options, with particular attention paid to the washing and drying of reusable cloths.

WASH United also discusses potential school-level responses to this barrier, such as creating washable pads and/or stocking emergency pads.

Recommendations

- While the games are appropriate for various groups and locations, the training facilitator should take the local socio-cultural context into account when preparing for sessions. Focus group discussions and site visits prior to the trainings are essential in this regard.
- Along with promoting learning through games and activities, it is important for facilitators to ask open-ended questions, rather than lecture or impose their own knowledge or opinions on participants. Facilitators should work to create a comfortable atmosphere and ensure participants have fun.
- WASH United recommends that the facilitator conduct additional visits a few weeks after the training is completed to allow girls to reflect on the training and to ask follow-up questions. Ideally, these visits are combined with end-line data collection to evaluate the effects of the programme on students' knowledge and attitudes.

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Bolivia

Using games to research menstrual hygiene management

Emory University

Overview

Background

In an effort to expand current understanding of girls' experiences around MHM, in 2012-2013 Emory University and UNICEF collaborated on research in Bolivia, the Philippines, Rwanda and Sierra Leone. While conducting focus group discussions in Bolivia, researchers found that girls in rural areas were hesitant to discuss menstruation openly among their peers. During pilot sessions held to field-test the data collection instruments, girls were shy, whispered amongst each other and often chose not to answer questions. The local research team concluded that a creative approach was required to obtain richer data and understand menstrual-related challenges in this context. In response, the team adapted the original focus group guide into a board game. The adaptation process focused on maintaining the essence of the original questions, while making the activity fun in order to increase girls' engagement and interaction.



The board game created to help conduct MHM research in Bolivia.

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All research activities, including the development of the MHM game, were guided by the theoretical ecological framework of factors expected to influence MHM: societal, environmental, interpersonal, personal and biological. The research addressed each level of the ecological framework, but focused on typical experiences girls had at school during menstruation, as well as common practices and beliefs. It also examined the coping mechanisms and behavioural adaptations that girls utilized when adequate knowledge, facilities or supplies were lacking.

Setting

The research was conducted in Independencia and Tacopaya, two rural municipalities of Cochabamba, Bolivia. The research included 12 focus group discussions, involving 60 girls 14-17 years of age across 10 schools.

Stakeholders

- Emory University and UNICEF conducted the research as part of ongoing collaboration around WASH and MHM.
- The participants were adolescent girls, 14-17 years of age, but the methodology can be adapted for boys, and for girls of different ages.

Activities

Knowledge and education

The game sought to obtain information on girls' knowledge of and confidence regarding menstruation and menstrual hygiene practices. It included questions on:

- Who girls trust;
- Who their informal and formal sources of MHM-related information are in schools and in their communities; and
- Social norms (as seen by girls) and girls' attitudes towards menstruation.

WASH facilities addressing MHM needs

Through a series of activities, such as drawing and hypothetical scenarios, girls discussed the status of WASH facilities in their schools. Girls were introduced to this sensitive topic by first being asked to draw pictures of their bathrooms and describe both the good and bad elements. They were also presented with hypothetical scenarios aimed at eliciting further details on their schools' WASH situation and typical behaviours by students in their schools: "There's no water, you have to go back four spots! If you tell us how you get water in your school, you can stay in your spot"; and "You want to go into the bathroom, but there's a long line. What do you do? If you respond, you move forward one spot."

Through a scenario about a girl name Rosita who gets her period at school, girls were asked to explain what this girl would do when she realizes she is menstruating in school. Questions are designed to explore when she will use the bathroom and what facilities and supplies will be available (doors, toilet paper, etc.). Additional questions include whether Rosita will feel comfortable changing in the school bathrooms, and why or why not? Inevitably, Rosita will have to change her cloth or sanitary pad at school and the game examines how she disposes of the used material.

Availability and accessibility of absorbent materials

Girls were asked how Rosita gets the pads or cloth she uses to manage her menses and what Rosita would prefer to use. In the case of 'trapos', or menstrual cloth, girls were asked how they

change the cloths at school and how they clean the cloths at home. Girls were also asked to identify the sanitary materials that are available to Rosita at school and the reliability of that supply.

Achievements

The innovative MHM game proved to be an effective method to engage rural Bolivian girls on the topic of MHM and to gather information on menstruation-related challenges in school. The strategies that were incorporated into the game to increase girls' interaction, improve the detail of their responses, integrate participatory learning into activities, and keep the experience fun, were found to significantly improve data quality and research findings.

Plans for scale up

The use of interactive games is a viable qualitative data collection method, especially when researching stigmatized or sensitive issues such as menstrual hygiene. There are no plans for scale up, but an in-depth methodology will be published in 2015 to share the adaptation process with researchers and practitioners. In addition, a paper on the methodology is currently in submission.

Along with its potential use for future research on MHM, the game may be adapted and applied to other types of research and programming around various topics where young people's involvement is crucial. In this way, the MHM game may have an impact that reaches beyond the relatively limited scale of the initial research project.

Game questions and methods should be shared widely, and researchers and programme staff should be encouraged to tailor it to their own needs and contexts as follows:

- The game's ability to create a supportive and fun environment makes it a useful tool for overcoming the reluctance that often

inhibits qualitative research with young people. The game format is a promising approach for collecting data on sensitive topics, as well as involving young people who are not accustomed to speaking openly with adults in research settings. Specifically, while the current MHM game focuses on MHM within the context of WinS, it could be adapted for research focused on other WASH-related behaviours (hand washing, school WASH behaviours, etc.).

- Along with collecting data, the game could be adapted as a tool for use in programming to support skills-based learning on an array of topics for various age groups. It could serve as a peer education tool in various contexts, including classes and health clubs. As the game is played in small groups, it draws on the strengths of existing peer education approaches.
- The game structure may be used to provide a useful gauge of children's knowledge and behaviours around specific health topics. In this way, the game method could be used

in programme monitoring to examine how well children are learning and changing behaviours as a result of the interventions designed to address knowledge and behaviour gaps. Providing hypothetical scenarios may be particularly useful in assessing behaviour change.

Challenges and facilitators for scale up

As with any research or programme methodology, the MHM game has to be tailored to the context. As it is currently worded and designed the game may not function as well in another context and should be reviewed and adapted accordingly before use.

Opportunities and challenges

The introduction of small group activities encouraged interaction among girls. However, it is difficult to accurately capture discussions with only one note taker and without the use of audio recorders. Researchers who choose game methods can capture more details by limiting the number of groups to two, so that the facilitator



A facilitator assists girls with the board game in Cochabamba, Bolivia.

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and note taker can each record the conversation among one of the groups. Other options include the use of recording devices or utilizing additional note takers.

Researchers' preconceived notions of what girls want can bias the questions that are asked and limit opportunities to highlight girls' own perspectives. For example, researchers learned late in the study that there were aspects of the home experience that girls preferred with regard to MHM. In future research, instead of asking a girl to draw the perfect bathroom to manage menstruation, it would be more appropriate to ask her to draw her ideal "space". This further highlighted a general need to explore creative approaches for mapping girls' ideals and priorities that do not rely on existing structures and norms. When questions are left open, researchers will likely encounter new (and richer) information on girls' perspectives.

Transcription and translation of audio recordings is labour intensive and time consuming. Researchers should consider how to structure activities to include girls' explanations of their answers on paper (through writing or drawing), which can be used as the principal data source.

Recommendations

Researchers and practitioners need to consider youth-centred and child-participatory approaches when investigating and addressing issues that affect young people. A game method can be tailored to the needs of researchers and practitioners, while also engaging youth. However, this method must be carefully planned and evaluated to ensure that activities are effective. The following strategies will be useful to ensure that games are relevant for programme/research purposes and enjoyable for participants:

- Facilitators should be adequately trained to lead games. More intensive training may

be needed for research or interventions that address sensitive topics.

- As with focus group discussions, games should be structured so that conversations start 'light and easy', building rapport with and among youth in the group, and gradually lead into more difficult or sensitive topics.
- It is important to integrate the input of local stakeholders when creating the game to ensure that tools utilize proper colloquial language, consider cultural norms and that game activities are appropriate for the target population.
- Researchers should consider the attention span of the children to be involved in the activity. Younger children may not maintain interest for long, so games should be brief, while games for adolescents should last between 60 and 90 minutes.
- Activities/questions in the game should be connected to a clear objective or outcome within the larger research study or programme. It is also important to pilot activities to make sure they both engage participants and gather the intended information.
- Even if it is not the official language used in school, the game should be played in participants' native language or in the language in which the discussion would most likely occur in the 'real world'.

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Cambodia

Development of a girls' puberty book

Grow and Know

Overview

Background

The onset of menstruation marks a transition from girlhood to womanhood. Menarche also introduces strong social norms regarding the need for girls to hide their management of menses from men and even from other girls and women. This presents particular challenges in school settings that have insufficient water and sanitation facilities and where girls lack pragmatic guidance related to MHM. In Cambodia, a recent government survey indicated that 31 per cent of schools do not have a latrine on the premises. Of those schools that do have latrines, the facilities often lack adequate access to water, privacy or a means of disposing of soiled sanitary materials.

This suggests that post-pubescent girls may have to leave school in order to effectively manage menstrual hygiene.

To help address this challenge, Grow and Know, an international NGO, developed a puberty book to provide Cambodian girls with culturally relevant, pragmatic guidance to manage menstruation in the school environment.

Setting

Case studies were conducted in urban and rural settings in Cambodia to capture the relevant differences in social and cultural beliefs, the



existence and quality of the water and sanitation facilities in schools, and other aspects of menstrual onset and management that might vary between relatively traditional and modern settings within Cambodia. The urban research was conducted in the Dangkao District of Phnom Penh and the rural research was conducted in the Rotanak Mondul District of Battambang Province. In each site, participatory research sessions were held with four groups of in-school girls and one group of out-of-school girls engaged in vocational training. Overall, 149 girls 16-19 years of age participated across the 10 groups. Key informant interviews were conducted with 15 teachers and other adults influencing girls' lives. The research team, consisting of one American and one Cambodian woman, conducted ethnographic observation in primary and secondary schools.

Stakeholders

- Cambodian schoolgirls, who will benefit from the puberty book, are the project's main stakeholders.
- Grow and Know conducted the research and developed the puberty book. Grow and Know has also published puberty books in Ethiopia, Ghana and Tanzania.
- The Kingdom of Cambodia's Ministry of Education, Youth and Sport (MoEYS) supported the project throughout the process. The ministry approved the puberty book as supplementary educational material and an official letter is included in each book.
- Gender, education and WASH experts provided the research team with valuable advice and information.
- International and local agencies, including UNICEF, the United Nations Population Fund (UNFPA), Save the Children and Room to Read, distributed the books.

Activities

Knowledge and education

The research found that adolescent girls in both rural and urban settings in Cambodia lack pragmatic knowledge around MHM. The puberty book serves as a resource to help address this gap.

WASH facilities addressing MHM needs

During the research phase, girls provided suggestions on improving their school environment to allow them to comfortably manage their monthly menses.

Availability and accessibility of absorbent materials

Observations in local markets found that sanitary pads were available for approximately \$0.50 in both peri-urban and rural sites. Girls in peri-urban sites typically have more money to purchase absorbent materials and live closer to such markets than girls in rural sites.

Achievements

With support from the MoEYS, UNFPA, UNICEF and a number of partners have distributed 132,000 puberty books, reaching adolescent girls all over Cambodia. Research findings have been published in two articles in academic journals. A puberty book for boys is currently being developed.

Monitoring and evaluation

A process evaluation was conducted during the distribution of the initial 15,000 books to confirm that girls and adults involved in girls' lives found the book appropriate and useful. Feedback was overwhelmingly positive, and many organizations expressed a desire for an additional book to address the need for guidance for boys during puberty, including around body changes, peer pressure and violence.

Plans for scale up

To achieve the goal of reaching every pre-adolescent Cambodian girl with a copy of the girls' puberty book, Grow and Know provides the soft (electronic) copy of the book at no cost to any organization interested in publishing it.

Challenges and facilitators for scale up

Although many Cambodian schools have a school library where girls can read books on-site, the girls' puberty book is intended to be read at home in private. Additionally, if girls bring the book home, it is likely to be shared with mothers, sisters and girls who are out of school. As a result, the programme aims to print one book per Cambodian girl, not just one book per school. To achieve this goal, additional rounds of printing and distribution are needed.

Opportunities and challenges

Opportunities

Gender, education and WASH experts expressed a high level of interest in increasing knowledge on MHM. In addition, the MoEYS provided the support and approvals necessary to facilitate research in schools.

Challenges

Grow and Know is not based in Cambodia, a fact which may have delayed the project to some extent. While the field research team was in Phnom Penh during the research and development phase, ministry approval and additional rounds of printing required brief visits to the country by the lead investigator (based in New York) and research coordinator (based in the Philippines). Without the capacity to follow up on a daily basis, this process may have taken longer than if the project had been permanently based in Phnom Penh.

Recommendations

The research team provided frequent project updates to the MoEYS and solicited feedback on the draft publication and distribution plan. This partnership was essential as ministry approval was needed before international organizations would consider printing and distributing the book. This partnership also ensured that the book complemented government priorities for girls' education.

In order to efficiently distribute the book to all Cambodian pre-adolescent girls, local organizations should integrate the book into their existing programming with girls.

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India

Psychosocial factors and gender norms around menstruation and their effects on girls' self-confidence

UNICEF India

Overview

Background

Of the 120 million adolescent girls in India, 22 per cent receive no education, 30 per cent are married, 24 per cent have begun childbearing and 55 per cent live in households without a toilet. In this environment, girls face remarkable barriers to making a healthy transition to adulthood. In August 2011, India's Ministry of Health launched a scheme to build girls' self-esteem, increase access to and use of high-quality sanitary napkins and ensure their disposal in a safe and environmentally friendly manner. Under the scheme, Accredited Social Health Activists (ASHAs) and community health workers sell subsidized sanitary napkins to adolescent girls in villages in selected districts.

To support these efforts, UNICEF and the IKEA Foundation sought to develop a demonstration project to enhance knowledge and change attitudes around MHM and to increase adolescent girls' participation in school. An initial formative study gathered evidence on the significance of menarche in an adolescent girl's life. This was followed by a baseline study in three districts to establish a benchmark from which to measure the effect of the planned intervention. The baseline study assessed various factors related to adolescent girls' experiences of menstruation, including prevailing myths and misconceptions.

Setting

The study was conducted in rural villages in three districts in Uttar Pradesh: Mirzapur, Sonbhadra and Jaunpur. Over 6,700 interviews were carried out. The primary respondents were girls 10-19

years of age, the majority of whom had reached menarche. Other respondents included mothers and fathers of adolescent girls, community leaders, female teachers, shopkeepers and frontline health workers.

The study used a two-stage stratified sampling design. In the first stage, 50 villages in each of the three districts were randomly selected using a probability proportionate to size (PPS) sampling method. In the second stage, respondents were selected using a house listing exercise. Researchers then visited up to 200 households in each of the sampled villages. If a household included an adolescent girl, it was considered eligible for sampling. Villages with less than 200 households were treated as a single segment and listing was done in the complete village. Villages with more than 200 households were divided into multiple segments of 100. Two segments



A block coordinator discusses MHM with a mothers' group in Vaishali, Bihar.

© UNICEF India/2014



A girl in Vaishali, Bihar reads a story on MHM from the *Paheli Ki Saheli* flipbook.

© UNICEF India/2014

were then randomly sampled and the listing was conducted in those two segments.

The impact of menstruation on girls was assessed in terms of the restrictions on their mobility, diet and school attendance. The study also gathered data on MHM practices.

Stakeholders

- The study was commissioned by UNICEF, conducted by Nielsen India Pvt. Ltd. and funded by the IKEA Foundation.
- Additional stakeholders include health workers, communities, parents and adolescent girls in the three districts.

Activities and findings

Knowledge and education

The initial formative study found that girls had low levels of knowledge about and unfavourable attitudes around menstruation and

reproductive health. Boys, who tend to learn about menstruation only after marriage, had even more limited knowledge. Overall, the formative study highlighted the need for interventions that address the ‘culture of silence’ that surrounds menstruation.

The baseline study confirmed and expanded on the findings of the formative study. The results identified critical gaps in knowledge around the physiological process of menstruation and related hygiene practices. For instance, although 100 per cent of girls who had reached menarche reported having discussed the management of menstruation, fewer than 25 per cent were following safe hygiene practices for managing absorbent materials. Further, only 8.5 per cent of girls could name the internal changes taking place in their bodies at the time of menstruation, and 88 per cent of post-menarche girls did not know that menstrual blood comes from the shedding of the uterus lining. Perhaps unsurprisingly, 86 per cent reported feeling completely unprepared for the onset of menstruation.

The baseline study’s findings underscored the influence of social norms, such as the pervasive belief that menstruating girls and women are unclean, which in turn served to restrict girls’ activities. While many girls reported feeling isolated, depressed and irritated during menstruation, 69 per cent stated that they consider mobility-related restrictions to be “fair”. Among the girls, mothers and health functionaries surveyed, none stated that they believed that restrictions, such as not being allowed to go out of the house or interacting with boys, were unfair restrictions. Significantly, respondents reported that girls who sought information on menstruation are often labelled ‘bad girls’, and mothers reported that they felt it was inappropriate for girls to seek such information.

The study’s findings highlighted the importance of providing platforms for dialogue around the

problems experienced by adolescent girls. As girls are most comfortable interacting with their peers, a peer-based approach was identified as a way to reduce embarrassment and augment confidence when discussing menstruation. It is thought that girls' agency (i.e. confidence to speak and act independently) and ability to discuss issues that concern them and negotiate within the family will be augmented once girls understand and are comfortable with the changes occurring in their bodies.

WASH facilities addressing MHM needs

The baseline study found that the lack of adequate facilities at both home and school pose challenges for menstruating girls. The overwhelming majority (86 per cent) of adolescent girls lived in households without toilets. Few respondents lived in households with private space where girls and women could change absorbent materials and clean themselves. The study further found that 91 per cent of girls reported missing school an average of one to two days each month. Difficulties in managing menstruation at school were identified as a key cause of absenteeism. Sixty per cent of girls reported missing school during their monthly period, with many citing pain and fear of staining clothes as reasons for missing school. While 88 per cent of girls reported that their school had separate toilet facilities for girls, only 56 per cent reported using the toilet in school for changing and cleaning menstrual cloths. Girls cited several reasons for the non-use of toilets for changing absorbent materials, including lack of practice, dirty facilities and a lack of appropriate means for managing disposal.

Availability and accessibility of absorbent materials

While the study found that girls were advised to use cloth for the management of their period, it also showed that they knew little about how to safely maintain reusable cloths. Of the 87 per cent of the girls who reported using cloth, 90 per cent

were unaware of the importance of washing the cloth with soap and drying the cloth in the sun to kill germs. Thirty-seven per cent reported that they reused menstrual cloths multiple times between washing them. Many of the girls reported that it was important to hide cloths from male household members and other community members, suggesting that taboos may inhibit the appropriate treatment of absorbent materials.

Disposable sanitary pads were not widely regarded as an option because they are highly priced and supplies are not guaranteed. More than half of the respondents reported that sanitary napkins were not locally available despite the government's programme to provide affordable sanitary napkins. Sixty-nine per cent of girls had heard of a sanitary napkin but had never used one. Girls also reported feeling embarrassed and intimidated buying sanitary napkins from male shopkeepers.

Plans for scale up

The research informed the development of a three-pronged programme that emphasizes communication and knowledge around menstruation and MHM, including:

- Interpersonal communication within small groups of girls, mothers and fathers to help increase knowledge and break taboos around menstruation and MHM.
- Community dialogue and mass media campaigns to build a common base of knowledge and foster conversation at the community level. Given the 'culture of silence' around menstruation, the idea of menstruation as a *Paheli* (riddle) has been used to develop a communication package called *Paheli ki Saheli* (friends of riddles). The package aims to help peer educators and community health workers initiate dialogue and discussion on menstruation and build knowledge around the physiological process of menstruation and

hygienic MHM practices. In addition, a series of films are being developed to engage girls, boys, mothers and fathers.

- Training and capacity building to equip community health workers, teachers and others with communication and counselling skills around menstruation and MHM.

These activities will be tested through a pilot project, the results of which may be used to advocate for the government to take the interventions to scale. Further, as part of the project's 'exit strategy', the communication packages and training modules prepared under this project have been made available to the government and other development partners.

Monitoring and evaluation

Concurrent monitoring will be undertaken by an independent third party, which will use a mixed methods approach to conduct biannual assessments of the programme. The goal is to assess the programme's impact on cognitive, emotional and social factors and identify changes in key practices, including girls' MHM-related behaviours and restrictions on movement during menstruation.

Opportunities and challenges

Local NGOs and community-based groups understand local cultures and nuances and are therefore well positioned to communicate with girls and their mothers around sensitive topics such as MHM. These groups also have the ability to engage with frontline workers at the village level. To take advantage of this opportunity, there is a need to build their capacity to undertake effective interpersonal communication and to address technical challenges for promoting girls' health. However, building this capacity is time consuming and resource intensive.

Recommendations

The baseline study underscored the need for a holistic approach to normalizing menstruation and highlighted several important priorities for future programming and policy. A holistic approach will need to address constraints related to social norms, as well as weaknesses in knowledge and education. In short, the provision of sanitary napkins alone is not the solution. Developing and implementing behaviour change communication strategies for adolescent girls and parents is essential. As part of these efforts, it will be important to focus efforts on ensuring that girls are prepared for menarche and to counter restrictions on girls' mobility and schooling.

Priorities for future efforts include expanding mass media communication and capacity building for frontline health workers, teachers and community leaders. Such approaches can be implemented within ongoing interventions to promote girls' health and education.

The inconvenience of disposing of menstrual absorbents has emerged as an important barrier to healthy MHM. There is a clear need to invest in research and development technologies such as incinerators for menstrual absorbents.

Finally, further efforts should be undertaken to examine the influence of improvements in girls' knowledge, attitudes and self-confidence related to MHM on practices surrounding girls' mobility in rural India, as well as on norms related to menstruation.

The communications materials developed through the programme are available on the UNICEF India eWarehouse: www.unicefiec.org.

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India

The health impact of menstrual hygiene management on women of reproductive health and its implications for schoolgirls

London School of Hygiene and Tropical Medicine

Overview

Background

In India, between 43 and 88 per cent of girls wash and reuse cotton cloths rather than use disposable pads during their menstrual cycle. Materials are often cleaned without soap or clean water. In addition, social factors lead many girls to dry cloths indoors, away from the sunlight and open air that aids in sanitation. This is most common in rural areas and amongst girls in lower socio-economic groups.

Poor MHM may increase a woman's susceptibility to reproductive tract infections (RTIs). A limited body of evidence suggests that bacterial vaginosis (BV) may be more common in women with unhygienic MHM practices. If BV is more common, women with unhygienic MHM practices may also be at greater risk for urinary tract infections (UTIs) and, if pregnant, preterm birth of a low-birth-weight infant.

A group of researchers conducted a study to describe how poor WASH conditions impact hygiene and sanitation practices among Indian girls and women during specific life-course experiences and to examine whether behaviours and conditions influence mental, physical and reproductive health. The study's primary research question was: "Are MHM practices (including type of absorbent material used, cloth hygiene practices and women's WASH practices) risk factors for BV and UTIs?"

Setting

This case-control hospital study was carried out in two hospitals (Bhubaneswar and Rourkela) in Odisha, India. All women 18-45 years of

age attending the hospitals' obstetrics and gynaecology outpatient departments were eligible for the study. Women were recruited if they gave consent, were not pregnant and not menstruating when visiting the clinic, and were willing to provide a vaginal swab and urine sample. A total of 486 participants were recruited. The study was conducted from October 2013 to March 2014.

Stakeholders

- This research was funded by the SHARE Research Consortium and the Water Supply and Sanitation Collaborative Council (WSSCC). The study was a collaboration



A disposal unit for sanitary napkins at a high school in Tamil Nadu, India.

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Women produce sanitary napkins in Jharkhand, India.

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between the Asian Institute of Public Health (AIPH), Emory University and the London School of Hygiene and Tropical Medicine (LSHTM).

- The research is one component of a broader project that is led by Padma Das (AIPH) and Belen Torondel (LSHTM), the main aim of which is to explore the health impact of different menstrual hygiene practices.

Activities

WASH facilities addressing MHM needs

The project explored the association between different MHM practices and associated health impacts (BV and UTIs). The researchers recognized that WASH facilities are a major factor in women's ability to practice healthy MHM behaviours and, in turn, may affect women's risk of RTIs.

Availability and accessibility of absorbent materials

As with WASH facilities, the type of absorbent materials women use, and the ways that reusable materials are maintained, are important elements of MHM. The research therefore gathered data in this area.

Findings

Data collection is complete and preliminary primary outcome analysis has been conducted.

Major findings include:

- Approximately 60 per cent of women diagnosed with BV and UTIs were found to use reusable cloth.
- Women who reported using reusable cloth were 1.5 times and 2.0 times more likely to experience BV and UTIs, respectively, compared to women who use disposable pads.
- When adjusting for other factors, analysis showed that protective factors for BV include increased wealth and increased space for personal hygiene in household latrines.
- When adjusting for other factors, analysis showed that education was the key predictor for UTIs, while frequency of body washing during menstruation was not statistically significant after adjustment.
- Some practices, such as washing reusable cloths with soap and water and drying them in an open space, can improve users' health.

Plans for scale up

The researchers hope to develop an approach that will allow them to define cases and controls based on reported symptoms rather than laboratory diagnosis. This would make it easier to collect evidence on the relationship between menstrual hygiene practices and RTIs. It would also create the possibility of collecting data in settings and among populations where the reliance on vaginal swabs and laboratory tests is currently prohibitive (e.g. girls in school or women living far from a health clinic or laboratory).

Factors that may influence the quality of research

As with other studies where sensitive topics are tackled, the researchers recognized the potential

for participants' reluctance and sought to provide a comfortable environment to facilitate data collection. Further, researchers worked only with female nurses, interviewers and doctors in an effort to make data collection easier and improve participants' comfort. However, the clinics provided inadequate privacy for women. Therefore, the researchers revised their approach and sought private rooms and provided curtains.

Data provide clear information on the association of various menstrual hygiene practices and health outcomes among women 18-45 years of age who sought treatment in a hospital setting. However, younger women refused to participate, and researchers determined that taboos related to virginity were too strong to permit young unmarried women to participate in a study that involved vaginal exams. As a result, the data do not reflect findings about the full range of women of reproductive age.

If the research is to be expanded, researchers should first explore the context in-depth. Researchers should then investigate how to provide appropriate solutions for potential barriers to data collection.

Opportunities and challenges

- Asking questions about this sensitive topic requires a private environment, which may be difficult to secure in many clinic settings. However, accommodations made to improve privacy in the study helped to change health facilities' practices to improve privacy.
- Data collection methods presented a challenge. It was not possible to collect vaginal swabs from women under 18 years of age and/or not married, and laboratory-confirmed diagnosis was necessary to confirm suspected RTI cases. Therefore, it would be useful if a sufficient classification, based on reported symptoms, could be developed. This would enable researchers

to explore the health impact of MHM practices in settings where social-, cost- or quality-related constraints make laboratory diagnostics a challenge.

- This study offers insights for advancing a holistic understanding of MHM by underscoring the importance of going beyond simply identifying the type of absorbent material used to study the health implications of menstrual hygiene practices and suggest that key lessons may be applied to populations not included in the study, including girls under the age of 18.

Recommendations

- The study provides insights that programmers should use to develop recommendations for how girls and women of reproductive age should manage menstruation and how this can help to avoid RTIs.
- The research should be expanded beyond BV and UTIs to study the associations between specific menstrual hygiene practices and other pathogens causing RTIs or UTIs.
- Research is needed to determine whether classifying cases based on reported symptoms is sufficient to explore the health impact of MHM practices in settings where laboratory diagnostics pose a challenge for data collection.
- Similar studies should be conducted in additional countries in order to determine whether the results found in this study, which were obtained in one state in India, are similar in other parts of the world.

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Kenya

Menstruation, school attendance, spatial mobility and wider gender inequalities

University of Nottingham

Overview

Background

Research was undertaken to investigate schoolgirls' 'lived experiences' of menstruation and puberty in Kisumu, Kenya, and explore how these influence school attendance and broader life chances. The research explored four key themes:

- The reasons why girls sometimes miss school and the extent to which this is influenced by menstruation;
- The influence of menstruation and the onset of puberty on girls' spatial mobility and school attendance;
- The sexual exploitation of post-pubescent girls; and
- The responses of schoolgirls and teachers to schemes promoting reusable sanitary products.

Setting

The research was conducted in Kisumu, Kenya. A primarily qualitative research design was used to elicit the feelings and opinions of schoolgirls and encourage them to share their lived experiences and aspirations. Seventeen semi-structured interviews were conducted, along with seven focus group discussions involving 53 participants. Nine schools were visited in an effort to obtain data from different socio-economic and age groups. Four of these were located in Kisumu and five were located in surrounding rural areas.

The use of participatory tools during the group discussions provided detailed information on girls' impressions of the WASH facilities available in schools, the problems they experience in MHM

at school as well as their preferred MHM facilities. Information on absorbent materials, specifically reusable sanitary towels, was also obtained during participant observation and interviews.

Interviews were also conducted with teachers and staff from existing initiatives that are providing reusable sanitary towels. Some of these initiatives combine training on the small-scale production of reusable sanitary towels with the provision of basic reproductive health education.

Stakeholders

- Schoolgirls (whose school attendance, mobility and broader life chances may be affected by menstruation, the onset of puberty and the reduced spatial mobility that may accompany puberty and menstruation) are the primary stakeholders.
- Teachers, whose attendance rates and performance statistics may be affected if girls miss school, are also important stakeholders. At a more personal level, teachers (especially female teachers) often find themselves helping girls to overcome MHM-related challenges (and the 'cultural silence' surrounding menstruation when such support is not forthcoming from family members).
- Other stakeholders include organizations promoting the production and sale of reusable sanitary products. In addition to providing training on how to make these products, some provide valuable

reproductive health education to girls who take their training courses.

Activities

Knowledge and education

The research explored menstruation as an influence on school attendance and mobility. The findings revealed that many girls had low levels of knowledge around and preparation for menstruation. This reflects the role of wider cultural taboos/etiquette that inhibit open discussion of menstruation and puberty in many Kenyan families. Only two out of the 53 girls who participated in the focus groups reported that they had learned about menstruation from their mothers.

The ‘cultural silence’ surrounding the topic resulted in many girls regarding menstruation – and puberty in general – as something shameful that they should not discuss with anyone. Although the girls reported being taught about menstruation in school, many received this information only after they had started menstruating. Several girls reported being very frightened when they first started menstruating, as they had no idea what was happening to them. Many girls reported struggling alone to manage their menses, often using unhygienic materials to absorb menstrual fluid, because they felt too ashamed to ask anyone for advice or help. Two schools that hired female teachers and made it known that they were available to help girls with such problems reported better attendance figures. Participant observation and interviews with staff from schemes promoting reusable sanitary towels further underscored girls’ lack of knowledge around puberty, menstruation and sexual health.

WASH facilities addressing MHM needs

One focus group activity asked girls to sketch their existing school WASH facilities and then to sketch what they thought would be a perfect school toilet. These exercises highlighted a range



Students at a primary school in Kenya draw pictures of their “perfect toilet” as part of a participatory appraisal exercise.

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of interesting features that would help girls with their MHM needs. These included secure lockable doors, private locations away from boys’ toilets, water and soap for hand washing, a light source and sanitary towel disposal facilities. Washrooms were another common desire, reflecting girls’ preference for bathing as a form of MHM, along with their desire for a private space to wash soiled uniforms, underwear or reusable sanitary towels or rags.

Availability and accessibility of absorbent materials

The research involved participant observation and interviews with staff from two initiatives promoting reusable sanitary towels in Kisumu, as well as discussions around these products



Reusable sanitary towels, made from locally sourced materials by the Tektwenyo Women's Group, Maseno, Kenya.

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during focus groups. Most girls were enthusiastic about reusable towels and much preferred them to alternative sanitary materials such as rags and tissues. Project Mwezi's bikini-style towels, which can be used without underwear, were particularly popular. Nevertheless, many girls expressed a preference for disposable towels, if affordable, on the grounds that disposable towels offer better protection from leaks, do not need to be washed and stay in place better.

Findings

The research suggests that poor school attendance is linked to menstruation (especially menstrual cramps) and poor sanitary towel access, which often make it easier for girls to manage their menses at home rather than attend school.

Menstruation was linked to restrictions (often self-imposed) on girls' spatial mobility, which

further affected school attendance, as well as girls' movements in and around schools. The latter were often curtailed as girls sought to conceal (or reduce the chances of getting) menstrual stains on their uniforms and being teased. Further, data from focus group discussions indicated that some girls resort to transactional sex in order to obtain money to buy disposable towels to enable them to attend school.

There are several schemes promoting reusable sanitary towels in Kisumu. These products are broadly well received, although girls maintain an underlying preference for disposable pads if they can afford them.

Overall, the data suggested that there was a general 're-patterning' of girls' movements when they reached puberty. This was partly a result of MHM, but also reflects parental fears about pregnancy, which can result in pressure on girls

to drop out of school and marry or help at home. Such restrictions on girls' education limit their life chances, especially in terms of employment opportunities, and perpetuate gender inequalities.

Plans for scale up

A lack of resources, particularly limited financial support and time, is the major factor preventing larger scale research on this topic.

Opportunities and challenges

The key challenge for conducting the research was the 'cultural silence' surrounding menstruation. This makes menstruation a very difficult topic for girls to discuss. In addition, limited time and resources made it impossible to conduct a detailed comparison between the status of WinS in rural and urban areas or examine the extent to which MHM preferences varied amongst different socio-economic groups.

The existence of several ongoing reusable sanitary towel initiatives, two of which also provided reproductive health education, presented an opportunity to gather additional data.

Recommendations

While improved access to sanitary products could address some significant problems underlying girls' school absenteeism, such as reducing fear of leaking and making it easier to walk to school when menstruating, they can do little to overcome the 'cultural silence' surrounding menstruation unless they are linked with strong sexual and reproductive health and rights education. As beliefs, taboos and etiquette are culturally, socio-economically and spatially-specific, there can be no 'one size fits all' solution to improving girls' MHM-related experiences.

There is an urgent need for more detailed empirical work on a wide range of geographical contexts to determine how practical and cultural

MHM barriers can be overcome. Participatory approaches investigating locally specific MHM preferences can be particularly helpful in designing WinS infrastructure.

Finally, feminist political ecology approaches present a useful framework for examining how girls' experiences of menstruation vary in different cultural settings and to what extent MHM-related restrictions on female spatial mobility both reflect and help to reproduce gender inequality.

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Kenya

Research on menstrual hygiene products: Inferences for WASH in Schools programmes following an acceptability, use and safety study

Liverpool School of Tropical Medicine

Overview

Background

Adolescent girls struggle with MHM while at school. Items that girls traditionally use, such as old cloth or paper, may leak, while the lack of WASH facilities or alternate hygienic solutions in schools can cause additional problems for girls.

The Liverpool School and Tropical Medicine (LSTM) conducted a cluster-randomized controlled feasibility study to evaluate the acceptability, use and safety of menstrual cups and commercial sanitary pads compared with traditional items among girls enrolled in primary school in rural Kenya. The study also sought to explore the potential impact of introducing the cups and pads. Findings will be used to develop a large-scale randomized controlled trial, and methods and findings may inform MHM programme implementation.

Setting

The feasibility study was conducted in Gem District, Siaya County, in rural western Kenya, where it was nested within a health and demographic surveillance system (HDSS) survey. Thirty schools were randomized into three MHM provision arms: pads; menstrual cups; and usual practice. Community randomization ceremonies were held with Ministry of Education officials and head teachers. Schoolgirls were eligible to participate if they were locally resident, 14-16 years of age, in classes 5-8, had experienced at least three menses, had parental consent and had given their own assent. Of 965 girls recruited, 766 were eligible and assigned to an MHM provision arm (229 cups, 294 pads and 243 usual practice); 644 girls (188 cups, 256 pads, and 200 usual practice) were monitored to the end of the study.

Stakeholders

- Officials from the Ministry of Education and the Ministry of Health advised on the research at all stages and are supportive of plans to conduct a large-scale trial.
- School leaders liaised with field staff, participated in school meetings and the community randomization procedure, ensured provision of detergent for hand washing in schools during the study, facilitated study team access to registers and supported research activities, such as the screening of participants by nurses.
- Girls, parents and community members also advised the researchers on their needs, on the perceived positive and negative aspects



Girls use new toilet facilities at Kenamkemer Primary School, Lodwar, Kenya.

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of the research and on improvements for future research.

- NGOs and research partners supported the WASH-related research activities and provided independent study oversight.
- The UK-based Joint Global Health Trials funded the research and ensured research rigour.

Activities

Knowledge and education

Focus groups on attitudes around MHM were held before, during and after programme implementation with girls, parents and teachers. Data collected at baseline informed the design of pre-intervention education activities and identified key gaps in knowledge to be addressed in the intervention.

In schools assigned to the menstrual cups and pads arms of the study, girls received training from nurses on their use and hygiene. Further training on how to use menstrual cups was provided by 'champion' secondary schoolgirls who had previously used charity-provided menstrual cups.

WASH facilities addressing MHM needs

At baseline, a WASH survey was conducted at all primary schools in the district to evaluate WASH conditions, including the number, type, gender-specificity and condition of latrines, as well as facilities for the disposal of menstrual waste and the presence of water and soap for hand washing. Data were used to define a threshold which schools had to reach to be eligible for the study and to stratify schools by pupil-latrine ratio during block randomization, which ensured school WASH level was equally distributed across the three arms.

Unannounced school visits were made twice per term to evaluate the same WASH parameters. Data were collected through observation and interviews with school informants. To help maintain hygiene, eligible schools were provided with a guidance document on best practice for

WinS. Each month, schools also received a supply of detergent soap for hand washing, and girls were provided with bar soap.

Availability and accessibility of absorbent materials

For girls in schools assigned to receive pads, the research study provided each girl with two packs (16 pads) of a popular commercial brand of sanitary pads each month.

In schools assigned to the cup arm of the study, eligible girls were provided with one menstrual cup (Mooncup®, size B for girls), a reusable cup made of medical grade silicone that collects menstrual flow.

Face-to-face interviews were conducted twice per term by programme nurses to regularly gather data on girls' use of MHM products, hand washing, dropping and other hygiene issues in schools. Girls answered the same questions separately (and confidentially) in personal surveys administered via netbooks. The survey included questions on issues such as leaking, comfort and disposal (or emptying) of the menstrual item used and sharing, loss or dropping of items.

Nurses also visually inspected girls' menstrual cups to record changes in the cups and to identify the need for replacements due to damage or soiling. Lab tests were used to monitor contamination of cups (with *E.coli*) in relation to duration of use.

Programme nurses conducted screenings of RTIs in girls reporting symptoms, with subsequent lab confirmation, twice per term. At the end of the study, a cross-sectional survey on RTIs (including sexually transmitted infections) was conducted, with lab confirmation of suspected infections.

Achievements and findings

The feasibility study has been completed and data analysis is ongoing. Several academic

papers have been published, presented at conferences, submitted for peer review or are under development.

The researchers created a 'composite endpoint', combining outcomes that can be robustly measured: lab-confirmed sexually transmitted infections, girls' dropout from school, pregnancy and marriage. Preliminary analyses of the impact of menstrual cups and pads suggest that the intervention had a positive effect on the composite endpoint. Assessment of the influence of MHM on a range of other outcomes, including absenteeism, attainment and wellbeing, is ongoing.

As requested by UNICEF, the tools and instruments will be revised and may be made available for other research studies and programme monitoring.

Plans for scale up

From an academic perspective, the feasibility study findings are robust enough to warrant a larger scale study. The intent is to conduct a large-scale cluster-randomized controlled trial in a similar setting and follow girls over two full school years to evaluate the impact of an MHM intervention (menstrual cups) on girls' sexual and reproductive health and completion of schooling.

International donors have expressed interest in reviewing the findings when they are finalized, and there is interest in using study outcomes to guide MHM programme development for wide-scale implementation. As such, data will provide information on the benefits of MHM programming and the risks and costs associated with weak support for MHM within the context of WASH in impoverished rural schools.

The research experience suggests that the following behavioural and structural factors are relevant to future interventions involving MHM materials:

- There is a need for intense training, including refresher training, for girls to enable them to correctly and safely use menstrual cups. This is likely to be a barrier to scale up of the intervention, and it may be necessary to develop a MHM mentorship system for schoolgirls.
- Study nurses provided training and guidance on MHM product use, which ensured good hygiene practices, such as hand washing prior to emptying cups and cleaning cups after menses. The nurses also monitored dropping of items and judged if cups required replacement due to soiling or loss (i.e. if they were shared or stolen). Such close monitoring may not be possible in regular intervention contexts.
- In the context of the research, schools were provided with detergent and girls with bar soap to maximize hygiene and minimize contamination of cups. Observations from the research suggest that consistent provision of soap for hand washing will be a barrier for large-scale programmes.
- Girls often dropped menstrual products in the latrine due to confined space and the limited time to change during breaks (forcing them to rush). This barrier to hygiene will be important to address during scale up and will require improvement in the number and quality of latrines for menstruating girls. Improvements may include additional space in latrines, shelves in latrines for holding MHM items and adaptations of the school curricula, such as scheduling staggered breaks to ensure girls have time to safely and securely undertake MHM at school.

Opportunities and challenges

Opportunities

- Officials from the Ministry of Education and the Ministry of Health recognized the challenges that girls face and were

supportive of evaluating MHM interventions among schoolgirls.

- In focus group discussions with girls, parents and teachers, participants expressed positive views of the intervention. Participants also noted positive effects on girls' school experiences and expressed support for an expansion of the intervention and further research.

Challenges

- Researchers encountered barriers to accessing schools and pupils due to holidays, strikes, travel distances, interference with pupils' class activities and teachers' reticence to let girls out of class to complete surveys.
- Girls required at least six months to become familiar and comfortable with inserting cups. This required intense training and counselling support from nurses, 'champion girls' and peers.
- Even though the study provided soap for hand washing, soap stocks were not always reliable. Further, while all schools reported access to water, during monitoring visits the researchers found that supplies were inconsistent. Girls also reported bringing their own bottled water from home for MHM purposes. This suggests that limited accountability at the school level may be at least partly responsible for suboptimal WinS facilities.

Recommendations

Intervention recommendations

- It is important to collect data on a range of factors related to WinS, including the ratio of latrines to pupils and the availability of essential supplies and facilities such as soap, locks and disposal facilities. Ongoing monitoring of facility maintenance and support for healthy practice should also be implemented.

- Development of local delivery systems and financing is needed to ensure affordable access to MHM materials.
- Systematic support, including hygiene guidance, the provision of advice on the use of menstrual cups and pads, and social support for cup adoption, familiarization and safe practice, is important to promote healthy MHM practices.

Research recommendations

- Baseline data should be used to control for factors that can influence outcomes.
- It is important to be able to merge data from different sources to capture relevant evidence.
- Participants should be followed for a sufficient amount of time (more than one year) to allow for familiarization and full use of the intervention prior to assessing outcomes.
- Collecting household data would help facilitate ascertainment of school dropout and would enable household information, such as socio-economic status, to be controlled for during analysis.
- Data generated from in-person interviews of girls by adults should be treated with caution, as this research illustrates that desirability bias may distort findings on hygiene questions.

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Pakistan

Learning, acting and learning research on menstrual hygiene management in schools

UNICEF Pakistan

Overview

Background

Government policy in Pakistan supports schooling for adolescent girls. However, social norms and a lack of capacity within the education system discourage girls' education, resulting in low rates of school attendance and retention. Given this context, very little attention is given to MHM in schools.

As part of ongoing efforts to gather and use qualitative research on MHM in schools, UNICEF Pakistan developed the Learning, Acting and Learning (LAL) project to:

- Develop in-depth understanding of girls' MHM needs and preferences;
- Understand different factors influencing MHM in girls' schools; and
- Design and test appropriate MHM activities in schools.

Initial findings from the first 'learning' phase were used to inform the development and testing of various interventions aimed at improving MHM in schools (the 'acting' phase), which were then assessed in the second 'learning' phase.

Setting

The LAL project was conducted from July 2013 to April 2014 in the provinces of Punjab and Khyber Pakhtunkhwa, Pakistan. In-depth interviews and focus group discussions were conducted at six government girls' secondary schools (three from each province). The schools were all located in rural areas, with some of them situated more than 30 kilometres from a major road.

The research focused on rural areas for two reasons: the availability of WASH facilities in

schools is usually lower in rural areas when compared to urban areas; and female students from rural schools are likely to share key characteristics, which means that study findings are likely to be generalizable to girls in similar settings. Interviews and focus group discussions were conducted with girls in Grades 6 and 7 who had reached menarche, female teachers, head teachers and sanitation workers. Representatives from the Rural Support Programmes Network (RSPN), the local NGO that served as implementing partner, were also interviewed.

Interviews and group discussions were supplemented with direct observations of school facilities. The researchers gathered information on a range of influences on girls' ability to practice healthy MHM, including societal, environmental/ infrastructure, interpersonal, personal and biological factors.

Stakeholders

- UNICEF commissioned the research and contracted a lead researcher to conduct the study.
- RSPN acted as UNICEF's implementing partner and led the 'action' portion of the project.
- Government education authorities participated in the research and have been provided with key research findings and recommendations.
- WASH sector partners were invited to provide feedback to ensure that the research and programme design were

appropriate and have been provided with research findings and recommendations.

- Girls, teachers and other school staff acted as research participants and were engaged in the implementation of effective and appropriate MHM activities. All three groups are expected to benefit from project activities.

Activities

Knowledge and education

Qualitative data highlighted significant knowledge gaps among all groups of participants. This finding was used to inform the development of the following materials for use in schools:

- Booklets for girl students, including messages aimed at building knowledge to support healthy MHM practices;
- Guidance and materials for training teachers; and
- A toolkit for implementing and monitoring MHM interventions in schools.

WASH facilities addressing MHM needs

Teacher-student WASH clubs were established. The clubs' tasks included ensuring that MHM supplies were available, disseminating information and operating and maintaining WASH facilities.

Upgrades were made to WASH facilities, including improving water supplies, ensuring that schools had functioning hand-washing stations and providing *lotas* (traditional water vessels used for anal cleaning) and dustbins to schools. Arrangements were also made to ensure that girls' facilities were equipped with adequate light, functioning locks and full-length mirrors.

Availability and accessibility of absorbent materials

Schools were supplied with standard MHM packs (including sanitary napkins, underwear, brown bags and soap), which were sold to students who



Members of the school council check general cleanliness of students during morning assembly at a girl's primary school in Punjab province, Pakistan.

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experienced MHM emergencies (items were also made available on credit). Sales were promoted and monitored by designated teachers who also acted as sources of MHM-related information.

Achievements

The research conducted as part of the first 'learning' phase provided an in-depth understanding of girls' needs and preferences around MHM-related issues. During the 'acting' phase, these findings were used to inform the design and implementation of a number of school-based interventions to improve MHM.

The results of the research conducted after six weeks of the intervention (the second 'learning' phase) suggested that there had been significant improvement in MHM conditions in girls' schools. The follow-up research also enabled UNICEF to identify areas that require improvement before taking these interventions to scale. Significantly, girls and teachers expressed their support for the initiative.

Monitoring and evaluation

As action research, the LAL project did not entail a traditional monitoring and evaluation approach. Instead, it used qualitative research conducted at the beginning of the study to identify, prioritize and inform the design of activities included in the pilot intervention. Follow-up qualitative research activities were used to assess the intervention's acceptability and effectiveness and to identify areas for refinement.

Plans for scale up

The activities tested in the LAL project will become part of UNICEF Pakistan's WinS programme, which is being implemented in schools across the country. UNICEF is using project findings in its advocacy efforts with the government. The findings and materials are also

being shared with other partners, a number of whom remain involved in activities initiated under the LAL project.

Challenges and facilitators for scale up

The social acceptance of MHM-related activities remains to be determined. Acceptance is likely to vary from community to community. This challenge can be mitigated by improving the skills, knowledge and confidence of training facilitators around addressing taboo topics. The regular teacher trainings offered by the government's training institute offer a potential opportunity for building facilitation skills. Importantly, this approach would communicate the government's commitment to supporting MHM programming to teachers and community members.



A specially trained teacher provides health and hygiene education to a group of young children at a government primary school in Quetta, Pakistan.

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Opportunities and challenges

Opportunities

- Girls involved in the project expressed keen interest in the information materials provided. This suggests that girls have a strong desire for accurate information on MHM-related topics.
- Pakistan has a vibrant private sector, which offers many possibilities for developing and distributing low-cost MHM materials.
- Media outlets play an important role in raising awareness around various issues in Pakistan and have substantial capacity to increase the visibility of MHM.
- ownership of MHM in schools.
- Development partners should develop and demonstrate models for ensuring that MHM supplies are available in girls' schools.
- The private sector should be encouraged to be engaged around the development of low-cost MHM supplies and the development and dissemination of educational materials.
- Efforts should be undertaken to develop strategic partnerships with media and academic institutions.

Challenges

- As the education department had never considered policies on MHM, it was challenging to engage government officials in the initial research. However, once engaged in the project, government officials expressed interest in policy measures supporting MHM education and facilities.
- Working with conservative segments of society, such as religious leaders and village elders, may pose a challenge for the scale up of MHM interventions in schools. Modifying the intervention design may help to overcome this challenge. For example, conservative community members and religious leaders may be more willing to support interventions if they were implemented by public and private sector leaders rather than NGOs.

Recommendations

- MHM-related training for teachers, headmistresses and education department officials should be integrated into regular trainings offered by government institutes.
- Advocacy for policy reform is necessary to ensure that government duty bearers take

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Rwanda

SHE28 - the intersection of innovation, health, WASH and economic development for girls and women

Sustainable Health Enterprises (SHE)

Overview

Background

The SHE28 Initiative was developed to respond to the challenges and opportunities around MHM in Rwanda. Resources supporting MHM are insufficient in the country. Public sanitation budgets do not include adequate funding for 'hardware', such as menstrual pads, hand-washing facilities, and safe, private toilets, or 'software', such as puberty education and teacher training to improve knowledge and reduce practices that restrict menstruating women's and girls' activities. The lack of affordable menstrual pads is exacerbated by the 18 per cent value-added tax (VAT) levied on feminine hygiene products in the country. As a result, only 10 per cent of girls 10-14 years of age who are newly menstruating and enrolled in the basic education system use pads for their entire cycle.

The SHE28 Initiative centres on the manufacture and distribution of affordable, eco-friendly menstrual pads made in local factories from locally available raw materials (banana stem fibres). SHE28 employs a multi-pronged strategy of business development, education and advocacy in order to improve access to menstrual pads, contribute to local economic development and establish a supportive policy environment.

Setting

The SHE28 community factory is located in Ngoma in eastern Rwanda. The raw material (banana fibre) is sourced from two rural cooperatives, made up of approximately 600 women in the Gatsibo and Ngoma districts in eastern Rwanda. The pads are being distributed

to 10 rural schools in the Kayonza district, which is located near the factory.

Stakeholders

- Adolescent girls drive the design of the pads and are the intended focus of the programme.
- Teachers and school administrators deliver the curriculum (beginning in February 2015), buy pads wholesale for distribution to students and support girls (and female teachers) to successfully manage their menstruation at school.
- Cooperative farmers cultivate the raw materials for the pads and gain extra income from the sales.
- Community factory workers manufacture the pads and earn a full-time income.
- Partner organizations, including American and Rwandan technical schools, help hone the manufacturing process and transfer the required technology to local entrepreneurs.
- SHE champions, including Rwandan ministers and parliamentarians, advocate for expanded budgets for MHM and the elimination of the VAT on menstrual health products.
- SHE Rwanda country staff distribute pads, provide technical assistance and advocate for MHM.
- SHE global staff raise awareness of SHE's social enterprise model, influence funding avenues, instigate campaigns, provide capacity building and technical assistance

to country staff and cultivate partnerships to promote SHE's global expansion.

Activities

Knowledge and education

In 2013-2014, SHE28 produced national radio programmes in cooperation with the Rwandan Ministry of Health and reached over 1,000 students through awareness workshops.

SHE28's manual for training of trainers (TOT) in MHM and an MHM teacher/student manual have been approved by the Rwandan Education Board. The manuals include guidance for teachers to advocate for improved WinS and provide information on the skills needed to support girls in schools. The modules use a variety of participatory methodologies to engage students on this taboo subject. Through after-school health clubs, teachers help students understand that menstruation is a normal part of adolescent development and to develop the knowledge and skills for healthy MHM practices.

In November 2014, SHE28 launched Phase B of the educational programme, training 50 trainers in 10 schools to deliver skills-based MHM training to 6,000 students (3,000 girls and 3,000 boys).

WASH facilities addressing MHM needs

In 2010, SHE28 led the "Breaking the Silence around Menstruation" campaign. In partnership with the ministries of gender, education and health, the campaign secured the mandate that schools include girls' rooms. Girls' rooms are equipped with bathing basins/buckets, soap, towels, sanitary pads and hooks to hang undergarments, as well as an area for girls to rest. The campaign also led to an increase in the budget for the provision of menstrual pads at schools.

Availability and accessibility of absorbent materials

SHE28 has developed (with support from technical partners) an affordable, locally



Schoolgirls with SHE LaunchPads at SHE's production site in Ngoma, Rwanda.

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manufactured, eco-friendly menstrual pad (the SHE 'LaunchPad') for girls and women, with banana stem fibres forming the chemical- and polymer-free absorbent core. The product is branded as the 'go!' pad in Rwanda. During large-scale manufacturing, 180,000 pads will be distributed to 3,000 girls in 10 rural districts.

SHE28's approach prioritizes 'the three As' in the design, production and sale of pads:

- **Availability:** Market-based MHM solutions must exist in the community and pads must be sold and distributed where women and girls can buy them.
- **Accessibility:** The use of readily available materials allows the LaunchPads to be priced lower than multinational and regional brands. SHE28's goal is to sell the pads at 40 per cent less than the price of the regional brand and 70 per cent less than the global brand.
- **Acceptability:** Menstrual products and packaging must be culturally appropriate and tailored to girls' lifestyles and preferences. Products must also be coupled with skills-based knowledge so women and girls feel comfortable using them.

SHE28's pads feature superior absorption (as reflected in lab testing) and use natural materials that provide a soft, cloth-like comfort. SHE28 is currently completing testing of menstrual pads with school-aged girls and female cooperative farmers.

Achievements

Since SHE28's launch in 2009, it has established a system to design, manufacture and distribute high quality menstrual pads. In 2010, SHE28's first advocacy campaign, "Breaking the Silence around Menstruation", led to the inclusion of a new sanitation line item (\$35,000) in the Rwandan government's budget to procure pads for schools. In 2013, SHE28 successfully advocated for the inclusion of MHM in after-school health programmes as part of the national school health and nutrition strategy.

SHE28 is currently implementing Phase B of the project, during which 180,000 pads will be distributed to 3,000 girls in 10 rural districts.

By locally sourcing an inexpensive, eco-friendly raw material, SHE28 has generated jobs along the value chain and income opportunities for 600 smallholder farmers (mostly female farmers).

Finally, anecdotal evidence, including teachers' reports, suggests that girls' rooms and the availability of subsidized pads have made girls more comfortable going to school during their menstrual period.

Monitoring and evaluation

SHE uses both qualitative and quantitative data collection methods to ensure the validity and reliability of information collected from girls and women. Along with on-site visits and focus group discussions with partner organizations and schools, SHE reviews data collected from consumers on a monthly basis. Methods for product and curriculum evaluation include surveys

and focus groups. SHE has developed detailed logical frameworks to assess project impact.

The results of project monitoring and evaluation efforts will be analysed and used to strengthen SHE28's delivery models to ensure an affordable, effective product and high-quality programme design. Best practices will be shared with Rwandan ministries to promote sustainability and scalability on a national level.

Plans for scale up

SHE28 will go to scale via wholesale pad distribution and will launch a retail model in 2016. A mobile platform to support SHE28's MHM product and services will also be launched in 2016. In parallel, SHE28 will continue to conduct global, regional and national advocacy efforts to instigate policy change and influence multi-sectoral collaboration and funding.

By 2017, SHE28 will have a replicable model that will deliver affordable, eco-friendly menstrual pads to 250,000 girls, create 1,200 jobs and launch 15 profitable franchises in Rwanda.

Challenges and facilitators for scale up

The long-term success of SHE28's approach depends on effective partnerships among actors in the education and health sectors, as well as with communities, youth and parents. Cultivating strong partnerships is necessary to ensure that the puberty and MHM education programme is incorporated into the training curricula for teachers, nurses and community health workers. While Rwanda's national School Health and Nutrition Strategic Plan includes MHM in its after-school components, SHE28 will continue to serve on the Ministry of Education's School Health and Nutrition Task Force. Participation in national advocacy committees will ensure that this integration is completed. SHE28 will also rely on its partners to adopt and take ownership of the go! pad businesses.

The 10 schools participating in Phase B of the SHE28 programme have girls' rooms, which provide a more optimal environment for MHM education and pad delivery. However, the national policy governing girls' rooms has not been implemented in all schools, and many have not yet improved their WASH facilities.

National policies must be in place at the ministry level to provide adequate budgets for WASH and MHM education. By repealing the VAT on sanitary pads, the cost of the LaunchPad would be substantially reduced, providing more buying power for schools with limited budgets for pad purchasing.

Opportunities and challenges

Opportunities

- Local and international technical partnerships have helped improve SHE28's production facility.
- Partnerships with ministries and agencies such as UNICEF Rwanda, Plan Rwanda, WaterAid Rwanda and VSO Rwanda have helped to enable scale up.
- Working closely with the Ministry of Education contributed to advantageous policy changes.
- The SHE28 team's combination of business acumen, technical expertise, policy experience and topical knowledge of WASH, public health and international education facilitated the necessary multi-sectoral approach.

Challenges

- A sustainable supply chain and efficient internal operational systems, including manufacturing processes and distribution channels, had to be created.
- In order to access start-up funds for small businesses, individual entrepreneurs are expected to have significant collateral, and

the women involved in the business lacked such funds.

- There is weak inter-sectoral collaboration in Rwanda, which limits funds and inhibits the establishment of a unified MHM strategy.
- Long-term investments are needed to integrate interventions at all levels and to secure long-term funding.
- Limited access to water and insufficient supplies of MHM-related products persist in schools.

Recommendations

- Girls should be the central designers of products developed to meet their needs.
- Utilizing an abundant local resource can help maintain affordability, create a new value chain and generate income for farmers.
- Monitoring and evaluation is critical for strengthening the SHE28 programmatic model, facilitating national collaboration and enabling global replication.
- Working across specializations, such as education, WASH, adolescent sexual and reproductive health, and finance, as well as across the public and private sectors, is critical for addressing the multidisciplinary aspects of MHM, particularly in schools.
- While efforts to break taboos and supply pads are important, girls in school also need clean, safe and private toilets and girls' rooms, disposal facilities and soap and water.
- A holistic approach, including business development, education and advocacy, is necessary to establish a supportive, girl-friendly and equitable learning environment.

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Overview

Background

Sri Lanka has an unmet need for healthy MHM. The country's ethnic and religious diversity and a range of taboos inhibit open discussion on the subject. As MHM is absent from existing school curricula, adolescent girls instead receive information from their mothers, sisters or other family members. This information may be incomplete, inaccurate or untimely. However, little research has been conducted on MHM in Sri Lanka and there is a dearth of reliable data on the topic.

To help fill this gap, a cross-sectional descriptive study was conducted among 740 Grade 10 girls from 47 schools in Kalutara District. The survey assessed knowledge, attitudes and practices around menstruation and menstrual hygiene. The findings were used to develop a school handbook on MHM.

Setting

The Kalutara District reflects the diversity of Sri Lanka. It includes urban, rural and estate sectors, and is multi-ethnic and multi-religious. This diversity makes the district a suitable setting for exploring issues and testing interventions around MHM.

The cross-sectional study was conducted in 47 of the district's 301 secondary schools, surveying 740 of the 6,833 Grade 10 girls in the district (the mean age among participants was 15 years). Subsequent stages of the project, including the development and piloting of the handbook, also took place in secondary schools in Kalutara District.

Stakeholders

- Principals, teachers and students in Kalutara District are the primary stakeholders.
- Other stakeholders include national and sub-national institutions engaged in health and education, as well as those directly engaged in the research, including the National Institute of Health Sciences, the Kalutara Department of Public Health, the University of Kelaniya's Faculty of Medicine, the National Institute of Education, the Ministry of Education, provincial education ministries and zonal education directors.

Activities

Knowledge and education

A handbook was developed to improve education around menstruation and MHM in response to the cross-sectional study's findings on the current state of girls' knowledge and practice. It was developed through a four-stage process. First, a literature review was conducted and expert consultation held to determine content and to ensure that the handbook would be both accessible and appealing. A draft handbook was then prepared and reviewed, after which it was field-tested and revised. The handbook was written in Sinhala (a local language) and called '*Sinidu Suwa*'. It was subsequently translated into English as '*Soft Comfort*'.

The handbook includes information on puberty, menarche, the menstrual cycle and menstrual hygiene in schools. The book also includes

instructions on how to prepare a low-cost detachable sanitary towel holder.

Achievements

A limited number of handbooks (300) have been distributed to girls and teachers have been trained to provide MHM-related health promotion activities. Education authorities at the central, provincial and zonal levels have granted approval to disseminate the handbook to a larger group of girls participating as the intervention group in a study on MHM education (see below). Notably, health and physical education instructors, principals and teachers have extended their full co-operation to implement the programme.

Monitoring and evaluation

The need for appropriate puberty- and MHM-related education was established in the cross-sectional study. In the baseline survey, only 25 per

cent of participants scored more than 50 per cent for knowledge. While two-thirds (67 per cent) of participants met the 60 per cent threshold around positive attitudes, only 17 per cent indicated that they practiced healthy MHM behaviours (i.e. achieved a score of at least 60 per cent around appropriate practice).

Monitoring and evaluation of the handbook was incorporated into a quasi-experimental intervention study with intervention and comparison groups. In the intervention sites, each girl received a copy of the handbook and teachers received training on how to deliver the book's five modules. A pre-assessment was conducted using the self-administered questionnaire used in the initial cross-sectional study. Post-intervention assessment was conducted after six months, using the same questionnaire.

Based on a comparison of pre- and post-assessment scores in intervention and



Distribution of the handbook on MHM among teachers and girls in the district of Kalutara, Sri Lanka.

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Launch of the MHM handbook at the National Institute of Health Sciences, Kalutara, Sri Lanka.

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comparison sites, the assessment found evidence that the book was effective in improving knowledge, attitudes and practices related to menstruation. Statistically significant ($P < 0.001$) improvement was observed in relation to overall knowledge and attitudes and on a majority of variables related to practices around menstruation. The researchers also found that 93 per cent of students had prepared the detachable sanitary towel holder.

Plans for scale up

The handbook has been introduced to the National Institute of Education, which is responsible for developing school curricula, to be considered as supplemental educational material.

The handbook is currently available in Sinhala and English. In order to achieve its intended reach, translation into Tamil is also needed. National-level distribution of the book depends on securing additional financial resources.

Opportunities and challenges

Opportunities

School authorities and teachers recognized that education around menstruation and MHM was an important unmet need. They were cooperative and enthusiastic in implementing the intervention.

Challenges

Shortcomings in physical facilities and the absence of psychosocial support for MHM presented challenges. Facilities tended to have inadequate disposal mechanisms for sanitary waste and lacked changing facilities and resting places for use during school hours. Further, prior to the intervention, teachers, counsellors and other staff were not equipped with the appropriate training to support students.

Several of the challenges were addressed through the intervention, which included supplying sanitary materials at schools, installing proper disposal mechanisms for used sanitary materials, training teachers and counsellors to handle menstruation-related problems and the promotion of sustainable mechanisms to supervise and monitor facilities.

Recommendations

- In-depth research with adolescent girls on their preferences and concerns is crucial in the development of MHM-related interventions.
- A baseline assessment should be conducted before developing MHM-related education materials.
- Open forum discussions are useful in gathering valuable insights from experts and identifying priority intervention areas.

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Tajikistan

Using puberty research to better inform menstrual hygiene management interventions

Save the Children and Emory University

Overview

Background

Puberty education provides students with the critical skills they need to confidently face the changes that take place during puberty. Yet in many countries, including Tajikistan, puberty is a taboo topic that is rarely addressed at home or in school. Save the Children identified this educational gap while working with schools in the Khatlon province of Tajikistan.

To address this gap, Save the Children is developing gender-specific puberty books for both girls and boys. Separate focus group discussions were held with adolescent girls and boys around their experiences, knowledge and perceptions of puberty. The ultimate aim of the project is to integrate the books into the national school curriculum.

Setting

Research was conducted at 11 rural schools in five districts of Khatlon province, which is located in the southwest of Tajikistan, near the Afghanistan and Uzbekistan borders. Focus group discussions were conducted with adolescent girls and boys 12-19 years of age, as well as teachers and parents.

Stakeholders

- The Ministry of Education advised on book development and provided approval of the contents.
- The Ministry of Health advised on and fact-checked book contents.
- Khatlon province school administrators and regional education officials organized

logistics for research and the piloting of the book and acted as valuable supporters of the programme as a whole.

- Parents and students took part in the research and pilot testing of the books, and, as the primary audience for the book, provided support for the programme as a whole.

Activities

Knowledge and education

This programme addresses the need for puberty education in Tajikistan by developing books based on research with adolescents, mothers and



A focus group participant presents on the behalf of her group about the body and life changes that take place as girls become adults.

© Save the Children Tajikistan/Sclar/2014



Ilhom Boltaev, Save the Children staff member, provides examples of body changes to boys as they work on a “Becoming an Adult” activity.

© Save the Children Tajikistan/Tavakol/2014

teachers. The girl-specific book includes content on menstruation, while the book for boys includes information on gender equality, something that affects girls’ experience of menstruation at school.

Achievements

The programme is still in its initial stages. Focus group discussions were completed in July 2014, data from the girls’ focus groups have been analysed and the girls’ puberty book has been written and translated from English to Tajik. The data collected from the boys’ focus groups are still being analysed.

An illustrator is designing pictures to be included in the book and Save the Children is maintaining communication with Ministry of Education and Ministry of Health officials to obtain feedback on the books’ content. The programme team also organized a committee composed of various

stakeholders to collect feedback on the puberty books when they are completed.

Monitoring and evaluation

Save the Children plans to conduct a pilot test of the books once they are completed. This will be accompanied by a survey to collect feedback from students, parents and school staff. Save the Children anticipates that it will design a monitoring and evaluation plan to measure the impact of the puberty books once they are produced on a large scale and utilized in various programme activities.

Plans for scale up

Save the Children plans to work with the Ministry of Education to ensure that the books are integrated into the national school curriculum of Tajikistan. If this cannot be achieved due to government restrictions and/or financial

limitations, Save the Children plans to utilize the books in its own programming. While this would not achieve the sort of national coverage that would be possible if the books were integrated into school curriculum, it would mean that the puberty books could reach as many as 150 schools in Khatlon province.

Challenges and facilitators for scale up

Save the Children has identified the following as critical considerations with regard to the distribution of the book at scale:

- The need to balance the educational value (i.e. quality) of the puberty books with Ministry of Education content restrictions (necessary to receive approval of the book).
- There remains a need to identify a funding source (or sources) to ensure that the books can be produced at a mass scale.
- Pilot tests are needed in various settings to address context-specific needs in different parts of the country. For instance, given that northern Tajikistan is more conservative than southern Tajikistan, there are likely to be different concerns from officials, parents and others in the two regions.
- Adequate teacher training will be needed for the books to have their intended effect.
- If formal approval is granted, follow-up work will be needed to ensure that the Ministry of Education follows through with plans to scale up distribution.

Opportunities and challenges

The project team's biggest concern was whether or not the girls and boys would talk about sensitive issues, such as body changes and menstruation, during group discussions. However, thanks to the skill of the facilitators, this did not present a significant barrier, and both girls and boys participated.

One challenge in conducting the research was that audio recording was not possible. Not only were girls sceptical of the audio recorder during the pilot test, but resources and time constraints meant that the transcription and translation process needed for proper analysis was not feasible. To address this challenge, the focus groups were designed to incorporate writing-based activities. The participants' written work was then translated into English and analysed. This turned out to be an effective method, providing sufficient information to inform the design of the puberty books.

Recommendations

As the development and refinement of the books continue, adequate feedback is needed from all parties involved, including government officials, school administrators and, most importantly, parents and students.

This programme demonstrates how interactive focus groups that involve writing activities can be used to design context-appropriate puberty education materials. Save the Children and other agencies can utilize the lessons learned from this programme to conduct their own puberty research in other contexts.

This project further demonstrates the importance of working with both boys and girls. Currently, projects that target girls are a major focus among development organizations. Boys are often left behind as a result. This may have a detrimental effect on the quality and impact of puberty programmes, as many of the challenges that adolescents face in relation to puberty, including those surrounding menstruation, revolve around normative gender roles and gender inequities.

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Uganda

Improving sanitation facilities through human-centred design

Water for People

Overview

Background

Public silence around MHM influences engineers' lack of attention to the design of MHM-appropriate sanitation facilities. Most systems utilized to capture used sanitary pads and other absorbent materials are improvised and not user friendly. This imposes pressure on other structures and creates inefficiencies within sanitation systems. For example, current calculations used in the design of pit latrines do not account for the accumulation of non-biodegradable MHM-related materials. However, in most areas such waste composes a large proportion of pit contents. Excessive non-biodegradable waste reduces the quality of sludge, increases filling rates and makes emptying more difficult and costly. Therefore, there is an urgent need to incorporate the safe disposal of absorbent materials into the design of sanitation systems.

The Water for People SaniHub project is using a human-centred design (HCD) approach to develop and pilot a latrine facility with a system to separate non-biodegradable waste from night soil at the source and manage this waste with minimal environmental impact. The resulting technologies will be used to develop businesses to provide sanitation services to low-income households.

Setting

The pilot project is being conducted in informal settlements in Kampala, Uganda. Of Kampala's 1.8 million residents, only 7 per cent are connected to sewers and over 86 per cent use on-site sanitation facilities such as pit latrines, ventilated improved pit latrines, Ecosan toilets and

septic tanks. With current disposal mechanisms, the dumping of non-biodegradable waste, such as sanitary pads, causes latrines to fill up quickly. This problem is most evident in settings such as schools, where many girls and women share sanitation facilities.

While recent developments, including an MHM conference held in August 2014, suggest that MHM is increasing in priority in Uganda, the issue has historically received little attention.

Stakeholders

- Community members are taking part in HCD exercises to identify sanitation challenges and to contribute to the improvement of facilities and technologies for managing the disposal of used MHM materials.
- Engineers and architects are designing sanitation facilities and technologies to address the challenge of disposing of used MHM materials, ensuring that designs incorporate the needs and preferences identified by communities.
- Civil society organizations are organizing workshops to disseminate and share information and to promote efficient MHM technologies.
- Government stakeholders are responsible for approving and promoting technologies for waste disposal.



Young girls use tippy taps (a locally made hand-washing facility) to wash their hands with soap after using the latrine at a primary school in Uganda.

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Activities

WASH facilities addressing MHM needs

The project has a primary focus on improving the quality of WASH facilities to better manage the disposal of MHM materials. HCD exercises are being conducted to gather community input into design preferences. Engineers are developing and piloting the use of technologies that manage disposal of MHM materials effectively and efficiently. The resulting technologies will be used to develop businesses to provide sanitation services to low-income households.

Achievements

The project is currently piloting a technology that includes semi-mechanical pit emptying devices called 'gulpers', a treatment system for faecal sludge and 'capture structures', such as modular latrines. The project is now focusing on the design and development of technologies that separate and treat solid waste at collection points (once developed, this technique will be piloted at a local school).

Monitoring and evaluation

Monitoring and evaluation activities for the pilot project focus on assessing how effective and efficient the new technology is in managing waste. Monitoring will rely primarily on the Field Level Operations Watch (FLOW) tool, a system to collect, manage, analyse and display geographically-referenced monitoring and evaluation data that is used in Water for People's programmes around the world.

Plans for scale up

Water for People uses a consistent approach in developing new water and sanitation technologies. This includes a process of research and development, piloting/field testing, customer feedback and refinement. Once these steps are completed, technologies move to the market stage. At the market stage, the organization supports local entrepreneurs in using a market-based, profit-driven approach to take technologies to scale. This procedure will be used to scale up the technologies developed through this project.



A sign outside a high school in Uganda.

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Challenges and facilitators for scale up

The primary challenge for scaling up the use of sanitation technologies within the private sector is entrepreneurs' lack of access to capital, which creates high demand for funding support from Water for People.

Opportunities and challenges

Opportunities

The Water for People Sanihub project was designed to ensure adequate community involvement in the design of sanitation facilities. The project will thereby help to improve public awareness of the challenges related to managing non-biodegradable waste and highlight the need to invest in more effective/efficient technologies. In addition, the project's human-centred approach will help mitigate challenges related to the use and maintenance of the technology.

Challenges

Low levels of sensitization and awareness around MHM have consistently posed a challenge to

the efficient disposal of MHM-related materials. Even as attention to MHM has grown, the issue of disposal is often neglected. The pilot project will help to demonstrate an alternative approach to current facility design.

Recommendations

- HCD, which involves communities/users in the development of interventions, should be used to ensure technologies are appropriate to communities' needs and capacities.
- Approaching WASH from a business perspective helps to improve quality and sustainability.

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Zambia

SPLASH - Schools Promoting Learning Achievement through Sanitation and Hygiene

FHI 360 and United States Agency for International Development (USAID)

Programme overview

Background

Zambia's schools fall short of acceptable standards and ratios for access to safe drinking water and improved sanitation. In fact, the girl to toilet ratio can be as high as 200 to 1. These shortfalls are believed to be a key factor in the high rate of school dropout among girls, many of whom do not finish primary school. As in other low-income contexts, dropout rates for girls in Zambia appear to increase after puberty. Menstruation and MHM involve a range of negative cultural taboos and myths. Many girls are kept home from school for as long as one month at their first menses.

Schools Promoting Learning Achievement through Sanitation and Hygiene (SPLASH) is a four-year programme within Zambia's Ministry of Education, funded by USAID. The programme is managed by FHI 360 and CARE Zambia. SPLASH impacts schools and communities by building latrines and installing boreholes, water tanks, drinking water facilities and hand-washing stations. SPLASH also helps to foster healthy habits through behaviour-focused activities.

Setting

SPLASH works in four districts of Eastern Province, Zambia, improving WASH facilities and services in nearly 400 primary schools (with a population of 250,000 school children). Most of the schools are rural, although some (no more than 10 per cent) are in peri-urban areas.

Pupils in these primary schools range in age from normal primary ages (6-12 years of age) to 17 years of age and higher. Therefore, many girls reach menarche while in primary school.

Stakeholders

- District education board secretaries set local policy and manage the development of strategic plans.
- Building officers contract the labour for latrine construction and assure the operation and maintenance of facilities.
- Standards officers support WASH/MHM through school monitoring. School heads, teachers, and members of parent-teacher associations (PTA) are also key stakeholders. Some of these adults are nominated as school health and nutrition coordinators and guidance teachers. They are responsible for hygiene education, MHM and the operation and maintenance of WASH facilities.
- District in-service teacher training centres assure that WASH/MHM is part of the school curriculum. These centres are the responsibility of district resource centre coordinators, who work closely with SPLASH staff and are fundamental to the sustainability of the programme.

Activities

Knowledge and education

A number of activities are being implemented in relation to knowledge and education, including:

- In-service training for teachers and other school staff;
- School-community meetings on MHM in school;
- MHM activities in student WASH clubs;

- MHM-themed events (e.g. MHM mini-exhibitions with information booths and activities); and
- Placement of MHM materials, activities and games in district resource centres.

WASH facilities addressing MHM needs

Most newly constructed latrines under SPLASH have washrooms for girls. Schools are responsible for making sure water and soap are available. Girls use reusable pads and tend to take them home in plastic bags. In some schools, menstrual pads, soap and other supplies are bought by the PTA, and in some schools these are part of the school budget.

Availability and accessibility of absorbent materials

Sewing of reusable pads is a growing activity in WASH clubs, teacher training, PTA meetings and other venues. The patterns for locally sewn pads are being adapted and refined.

SPLASH has a memorandum of understanding (MOU) with a local pharmaceutical company that has developed a reusable eco-pad that they will produce and distribute to SPLASH schools as a micro-enterprise for local women.

Achievements

SPLASH's efforts have contributed to a number of changes in policy and practice by Ministry of Education institutions, while also engaging community members (including boys) and the private sector in a range of practices that place MHM in a broader social and economic practice:

- Advocacy by SPLASH led to the adoption of a girls' washroom as part of the province's official school latrine design.
- MHM indicators are now included in the government's school monitoring instrument for the Eastern Province.



Girls in Zambia talk about challenges faced around menstrual hygiene management.

© FHI360/2014

- A successful MHM mini-exhibition for pupils and teachers was held in one district and is being replicated in the other three districts. The exhibition successfully included boys and demonstrated that boys are eager for involvement in pad making and other MHM activities.
- SPLASH developed a set of teacher support materials for teaching MHM and making schools MHM friendly.
- SPLASH-branded MHM activities and materials have established a recognizable identity that helps raise the visibility of MHM.
- SPLASH forged a partnership with Yash Pharmaceuticals for the production of reusable pads and microenterprise development that will eventually cover the whole country.
- The Ministry of Education has approved an official school latrine design for Eastern Province that includes washrooms for girls.

Monitoring and evaluation

To date, quarterly project reports have been the primary monitoring tool for tracking project activities. However, a project database has been developed and is now in place. The database includes MHM-related indicators and makes it possible to collect data on a regular basis.

SPLASH is currently conducting a longitudinal outcome study that will measure the impact of improved WASH and MHM facilities and activities on attendance, enrolment and teacher-pupil contact time.

SPLASH and its partners have informally monitored progress and changes in schools and communities. Anecdotal evidence suggests that girls' enrolment has increased in schools with improved facilities, improved school-community linkages and an improved psychosocial environment.



Boys sewing reusable sanitary pads in Mambwe, Zambia.

© FHI360/2014

Plans for scale up

From its establishment, SPLASH's work in Zambia's Eastern Province has been envisioned as a model for the national Ministry of Education, and this remains a goal in its final year. Through activities in Eastern Province, SPLASH seeks to demonstrate the following: integration of WASH and MHM into the school curriculum; development and use of monitoring instruments; establishment of teacher training activities; and implementation of efforts to establish school-community links. SPLASH will provide the technical resources to document this work, with the aim of encouraging national scale up.

Challenges and facilitators for scale up

Thanks to efforts by SPLASH and the national Ministry of Education, MHM has been integrated into the new national curriculum. As a result, aspects of MHM will be taught in schools outside SPLASH's sphere of influence.

Once completed, SPLASH's MHM formative research will be an important source of evidence that can be used in advocacy activities. Another facilitating factor to scale up is the current use of existing systems and personnel to develop, carry out and refine the WASH/MHM programme. In this way, MHM is already embedded in the schools and systems in one province and will be seen as replicable to other provinces.

The main challenge to scale up is likely to be the downshift in resources once the SPLASH project is completed. To mitigate this challenge, the final year of the project is strongly centred on institutionalization of MHM within the Ministry of Education.

Opportunities and challenges

Opportunities

- Teachers (both male and female) are generally willing to be involved in MHM education.

- The fact that MHM indicators are integrated in the school monitoring tool used by district and provincial school inspectors provides an opportunity for MHM to be an integral part of the education system.
- Engaging stakeholders at district and school levels helps to break the taboos and myths around MHM.

Challenges

- As much as SPLASH has helped to break the silence around MHM, openly discussing the topic remains a challenge.
- Access to products remains the most critical challenge. Included in this challenge is the provision of menstrual pads to girls who cannot afford underwear and finding the materials for making reusable pads.

Recommendations

- In order to promote a ready supply of low-cost pads, measures are needed to support and encourage the production of reusable pads at the school level. Home economics classes could act as resources for this purpose.
- A national Ministry of Education-sponsored, SPLASH-supported MHM event for all provinces would provide a means to introduce the rest of the country to the concept of mainstreaming MHM.

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MENSTRUAL HYGIENE MANAGEMENT IN SCHOOLS CASE STUDIES

Global: Puberty education and menstrual hygiene management booklet

Global: Strengthening research capacity on menstrual hygiene management in schools through an e-learning course

Global (Bangladesh, Bolivia, China, El Salvador, Kenya and the Philippines): Menstrual hygiene management operational guidelines

Bangladesh, India and Kenya: “Knocking down menstrual taboos” - a game-based menstrual hygiene management curriculum

Bolivia: Using games to research menstrual hygiene management

Cambodia: Development of a girls’ puberty book

India: Psychosocial factors and gender norms around menstruation and their effects on girls’ self-confidence

India: The health impact of menstrual hygiene management on women of reproductive health and its implications for schoolgirls

Kenya: Menstruation, school attendance, spatial mobility and wider gender inequalities

Kenya: Research on menstrual hygiene products: Inferences for WASH in Schools programmes following an acceptability, use and safety study

Pakistan: Learning, acting and learning research on menstrual hygiene management in schools

Rwanda: SHE28 - the intersection of innovation, health, WASH and economic development for girls and women

Sri Lanka: Menstrual hygiene handbook for adolescent schoolgirls

Tajikistan: Using puberty research to better inform menstrual hygiene management interventions

Uganda: Improving sanitation facilities through human-centred design

Zambia: SPLASH - Schools Promoting Learning Achievement through Sanitation and Hygiene

For more information on menstrual hygiene management as part of WinS programmes, contact Murat Sahin at UNICEF, msahin@unicef.org, or Marni Sommer at Columbia University, ms2778@columbia.edu.

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