In recognition of the positive impact on girls’ school attendance and achievement, initiatives around the world are now addressing adolescent girls’ menstrual hygiene management (MHM) through “WinS” programming. Water, Sanitation, and Hygiene (WASH) in Schools – WinS – fosters social inclusion and individual self-respect. By offering an alternative to the stigma and marginalization associated with hygiene issues, it empowers all students, and encourages girls especially. This case study presents MHM activities undertaken at a project level through a school health promotion intervention of the Health Promotion and System Strengthening Project in empowering adolescent girls in MHM in the Dodoma region, central Tanzania. The objective of the case study is to share the project’s experience and lessons learned, and to highlight the impact in empowering adolescent girls in target schools.

Key findings. Effective MHM is essential for women and girls to participate in society with dignity and comfort. Qualitative and quantitative work has suggested that poor MHM results in school absenteeism, distraction, and disengagement. Many female students encounter challenges in managing their menses en route to, and within, the school environment.

Key lessons. The combination of adequate facilities, correct behavioral practices, and education is necessary to have a positive impact on the health and hygiene conditions of the community as a whole. The mere provision of facilities does not make them sustainable or capable of producing the desired impact. It is the use of the facilities and related appropriate behaviors that provide benefits for the community.

Key recommendations. Standard guidelines for integration of a minimum package for MHM into existing WinS programs should be developed. The guidelines should include policy guidance on implementation, design of facilities, and monitoring and evaluation of the MHM programs. The multisector involvement and coordination in implementing the MHM programs should be advocated and included in all WinS policy guidelines and strategies. MHM is a social issue that cannot be addressed by working in schools alone.

Introduction

The onset of menstruation is a key indicator in pubertal development, serving as a biological and social measure of a girl’s healthy transition from childhood into adolescence or young adulthood. From a physiological perspective, the age of menarche serves as an important clinical indicator of a girl’s physical maturation, nutritional status, and reproductive health. From a social perspective, particularly in many African countries, the onset of menses has traditionally served as a symbol of fertility, sexual readiness, and marriageability,
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depending on the local culture (Sommer 2013). Girls who enter menarche after reaching 14 years old and those who have older sisters or close older female relatives are likely to have some understanding of menstruation.

A growing evidence base from South Asia, Sub-Saharan Africa, and other low-income regions indicates that many girls reach menarche with inadequate guidance and information on this important development stage and physiological change, or on how to manage their menses and body hygiene with confidence (Sommer 2011a).

Added to this, many female students encounter challenges in managing their menses en route to and within the school environment. Such challenges include: inadequate water and sanitation facilities, with many schools having too few private, safe, and clean latrines; lack of access by schools to clean water within or near the latrine or toilet facilities for washing menstrual stains from clothes and uniforms; and inadequate mechanisms in schools for the disposal of used menstrual materials or menstrual waste. Adequate disposal facilities include those within the latrine or toilet block itself (such as a trash can) and a system for safe, culturally and environmentally appropriate disposal of the collected waste (such as an incinerator or burying pit) (UNDP 2005). The United Nations Children’s Fund (UNICEF) has estimated that about one in 10 school-age African girls do not attend school during menstruation or drop out at puberty because of lack of clean and private sanitation facilities in schools (UNICEF 2005).

Effective MHM is essential for women and girls to participate in society with dignity and comfort (Sommer and Sahin 2013). Studies in low- and middle-income countries have reported that more than 50 percent of girls have inadequate MHM, with higher proportions reported in rural areas (Dasgupta and Sarkar 2008; Khanna et al. 2005; El-Gilany et al. 2005; Adinma 2009). Health and social research has only recently sought to address the neglect of MHM as a significant development issue and barrier to achieving gender equality. Qualitative and quantitative work has suggested that poor MHM results in school absenteeism, distraction, and disengagement (Lloyd and Young 2009; Grant et al. 2013).

WinS fosters social inclusion and individual self-respect. By offering an alternative to the stigma and marginalization associated with hygiene issues, it empowers all students and encourages girls especially. Recognizing the positive impact on girls’ school attendance and achievement, initiatives around the world are now addressing adolescent girls’ MHM through WinS programming (Water Aid 2009).

Definition of MHM

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 menstruation. MHM also includes using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials (WHO-UNICEF 2012).

Acceptable MHM facilities

- Privacy for changing materials and for washing the body with soap and water.
- Access to water and soap in a place that provides adequate privacy for washing stains from clothes/reusable menstrual materials.
- Access to disposable facilities for used menstrual materials (from collection point to final disposal) (WHO-UNICEF 2012).

What is school health promotion?

This is any intervention that constantly strengthens the capacity of the school setting as a healthy setting for living, learning, and working (WHO-UNICEF 2012).
African regional instruments in MHM

At regional level, there is recognition of gender equity, and efforts are made through different plans of action and strategies to ensure that girls and women are empowered. MHM issues have been integrated but not directly addressed in wider plans of action or strategies on sexual reproductive health rights or in education. The focus has been on interventions of advocacy for policies, capacity building, and service delivery.

At the African Union level, the Maputo Plan of Action for operationalizing the Continental Policy Framework for Sexual Reproductive Health and Rights (2007–2010) advocated for African governments, civil society, the private sector, and development partners to join forces and redouble efforts, so that together the effective implementation of the continental policy, including universal access to sexual reproductive health by 2015 in all countries in Africa, is achieved.

One of the key strategies of the plan of action was to address the sexual reproductive health needs of adolescents and youth by providing youth-friendly sexual reproductive health services with the goal of empowering youth development and well-being (African Union 2006). The Southern African Development Community Sexual and Reproductive Health Strategy (2006–2015) is firmly anchored on the Maputo Plan of Action for Sexual Reproductive Health and Rights (SADC 2008).

Given the lack of achievement of the goals of the first African Union Decade of Education Plan of Action (1997–2006) by member states, the Assembly of Heads of State and Government of the African Union adopted a resolution to launch a Second Decade of Education for Africa (2006–2015). This regional instrument reinforced the commitments that the Heads of State had made under the African Charter on the Rights and Welfare of the Child (1999) (Conference of Ministers of the African Union II). These commitments supported the Millennium Development Goals, particularly targets to achieve primary education and to promote gender equality, and girls’ and women’s empowerment, while enriching the system with positive aspects of African cultural values.

Introduction to the case study

This case study presents MHM activities that are undertaken at project level through a school health promotion intervention of the Health Promotion and System Strengthening Project (HPSS) in empowering adolescent girls in MHM in the Dodoma region, central Tanzania. The objective of this case study is to share the project’s experience and lessons learned, and to highlight the impact of the intervention in empowering adolescent girls in target schools. The case study has also reviewed the literature and shares global practices and evidence on MHM.

MHM interventions

Interventions to address MHM are categorized into two groups: “hardware” interventions to address material deprivations such as the provision of absorbents, or improved water, sanitation, and hygiene facilities; and “software” interventions that address deficits in knowledge of menstruation and management, by providing education.

Hardware interventions

The cost and availability of sanitary products, and underwear in which to wear them, are fundamental barriers to MHM (Pillitteri 2011; House et al. 2012; Montgomery et al. 2012). Commercial absorbents are frequently unavailable or too expensive (Dasgupta and Sarkar 2008; Pillitteri 2011; House et al. 2012; Montgomery et al. 2012; Crofts and Fisher 2012; Garg et al. 2012). The provision of clean sanitary products (such as commercial or homemade pads) addresses this material deprivation and is hypothesized to reduce both discomfort and concerns over the soiling of outer garments. Improved management and comfort may also curtail associated stigma, ridicule, and embarrassment, which deter women and girls from attending school or work. In Ghana, Dolan et al. (2013) found that over
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three-quarters of schoolgirls surveyed reported soiling outer garments during their last menses. Montgomery et al. (2012) found that school attendance improved by 9 percent after five months with the provision of disposable sanitary pads.

Inadequate WinS represents a barrier to MHM, particularly the ability to clean absorbents, and the body, in private (Das et al. 2015). The design of toilets often fails to meet women’s physical and psychological needs (Dolan et al. 2013; Fisher 2006). Latrines lacking doors or locks may threaten safety and cause embarrassment (Lloyd and Young 2009). Hygiene guidelines recommend changing absorbents every two to six hours dependent on blood flow, requiring facilities at home and at school or work (House et al. 2012).

Improvements to WASH access may enable women to clean reusable absorbents and genitals hygienically, and to reduce discomfort and embarrassment. Open pit toilets or toilets without disposal facilities mean blood or used sanitary products reveal when a woman is menstruating, resulting in embarrassment and stigma (Fisher 2006; Mahon and Fernandes 2010). “Girl-friendly” changes such as gender-separate latrines, locks on toilets, and discrete facilities for changing absorbents or washing may also improve MHM.

Software interventions

Adolescent girls in a range of countries lack knowledge of the physiology and management of menstrual bleeding (Adinma and Adinma 2009; Chothe et al. 2014). Ali and Rizvi (2010) reported that in Pakistan, fewer than 50 percent of girls surveyed received information about menstruation prior to menarche, and only 15 percent information about MHM. Cultural beliefs and taboos may also contribute to poor MHM through the perpetuation of misinformation or unhygienic customs. Studies across contexts have reported taboos around the disposal of menstrual blood, and practices including restrictions to bathing and participation in social activities (Sommer et al. 2014; Santina et al. 2012).

Improving understanding of menstruation, such as knowledge of cycle length and requirements for hygiene, is likely to improve MHM practices and self-efficacy, and to reduce anxiety (House et al. 2012; Kirk and Sommer 2006; McMahon et al. 2011; Sommer 2011b). In this way, education interventions may facilitate school attendance and engagement in the classroom through improved MHM and greater confidence in MHM methods. This education may also reduce negative psychosocial consequences by normalizing society’s attitudes to menses and dispelling myths (Montgomery et al. 2012; Dolan et al. 2013).

Empowering adolescent girls in MHM

The HPSS project is a project of the Swiss Agency for Development and Cooperation, managed and implemented by the Swiss Tropical and Public Health Institute in collaboration with the seven districts of the Dodoma region. HPSS is implementing a School Health Promotion project in all the primary schools in the region as a component of a bigger program.

The School Health Promotion project looks to address many health issues, including MHM of female students, working with the Ministry of Education, Science, Technology and Vocational Training; the Ministry of Health, Community Development, Gender, Elderly and Children; the President’s Office for Regional Administration and Local Government; and the surrounding communities.

Rationale of school programs

Schools present an opportunity to reach thousands of children with safe water and hygiene, and with health messages. They provide unique opportunities for awareness raising as they bring large groups of people together and usually have systems for producing and disseminating educational materials.

Schools can also provide an entry point to the community as a whole—for example, introducing latrines and hygiene education at schools, sometimes using the Child Hygiene and Sanitation
Training approach, which may trigger improved hygiene norms in households, with children taking back to their families concepts and practices on water and sanitation (De Vreede 2004).

**HPSS project interventions in empowering adolescents in MHM**

The provision of safe water and sanitation facilities in schools is a first step toward a healthy physical learning environment. However, the mere provision of facilities does not make them capable of producing the desired impact, nor sustainable. It is the use of the facilities and appropriate behaviors that provide the benefits. It is in schools where education aims to promote those practices that will help prevent water- and sanitation-related diseases, and will promote the wise use of water and favorable hygiene behavior in the future generation of adults. The mix of adequate facilities, correct behaviors, and education aims to have a positive impact on the health and hygiene conditions of the community as a whole (Snel 2003).

The success of a school hygiene program is therefore not determined only by the number of latrines and handwashing facilities built, but simply by what children know and practice. A good school campaign will find an optimal combination of different objectives and a balance between provision of safe water and sanitation facilities, and educational, behavioral, and promotional aspects, such as including the issue in the school’s curriculum (Schaap 2001).

The HPSS project has achieved results in the following four areas.

**Building and rehabilitating sanitary infrastructure**

The project has constructed 20 new blocks (of five holes each) and rehabilitated 68 WASH facilities in 88 primary schools in the Dodoma region. The infrastructure includes separate off-pit latrines for boys and for girls. Improvements in the WASH infrastructure includes toilets with doors, water in the toilet (stored in a bucket), handwashing facilities, and a bathroom for every school where the girls can clean themselves and change their sanitary materials. As there is no running water in most of the schools, every student is required to bring one or two liters of water every day to school, which is then emptied into one big water tank. The water collected is distributed for different uses at the school, including for cooking (where schools have school feeding programs), for hygiene (mainly handwashing and the toilets), and for drinking. Both modern and local handwashing facilities (kibuyuchirizi—tippy taps) have also been put outside the toilets to promote handwashing after toilet use.

Participation in planning at schools is not only related to construction, but also to maintenance, use, and management. Those directly concerned are teachers, girl and boy students, school heads, parents, school management committees, and parent organizations. Participation is important because it can help ensure that facilities are used and maintained, and to gain new insights (IWSC 2007). Participation in decisions also makes children and adults prouder of and feel more responsible for what they have created. For its part, community involvement may enable a program to have a broader impact (ACPHD 2004).

To ensure ownership and sustainability, the HPSS has involved communities surrounding the schools in construction, from plan, design, and implementation to monitoring and maintenance. Community contributions have been in kind and in cash.

**Empowering young people as promoters: School health clubs**

Many school programs for water, sanitation, and hygiene have formed special children’s groups. They have many names, such as school health clubs, health scouts or hygiene rangers, or special hygiene subgroups in children’s parliaments and school councils. One reason for having such clubs is that they can provide more opportunities for participation than traditional classroom learning (World Bank 2001).

The HPSS project has established 760 school health clubs in the Dodoma region, which aim to empower
schoolchildren to be health promoters and health peer educators in various health topics, including MHM.

One aim of the clubs is to involve children as advocates for hygiene and sanitation practices in the school and the community, as children can be powerful advocates for change among their peers, families, and the wider community. Being in these clubs has helped children develop leadership skills and helped them determine their own priorities for health and hygiene activities.

The health clubs have been important in ensuring that schools’ water and sanitation facilities are used, cleaned, and maintained as intended. MHM is one of the topics discussed, and information is provided to female students. The older female students who have started menstruation (11–14 years old and usually in higher classes) are peer educators to the female students of the same age group who have not started menstruating, in a bid to prepare them in the basics of menstruation and MHM. The school health clubs are also involved in disseminating information and education materials.

**Training school health club coordinators**

A school health club coordinator is responsible for coordinating school health education (Scott et al. 2009). The HPSS project has trained two of them (one male and one female) in each of the 760 schools with school health clubs. Beyond facilitating the clubs, coordinators provide information and resource materials to the club leaders for club members.

The coordinators are tightly linked to the health facilities around the school and they use the health workers from these facilities to provide different health services. They are very important in giving female students basic information on menstruation and MHM. It is the responsibility of every female health coordinator to provide guidance and counseling to the female students. They are also the ones who keep and provide the emergency sanitary materials and pain killers for use at school. They also act as confidants to female students for any menstruation or MHM problems.

**Celebrating menstrual hygiene week**

The HPSS project, with other WASH actors, has engaged the primary schools in the region in celebrating Menstrual Hygiene Day (every May 28). The 2015 celebration was marked by a week-long awareness program in schools through the school health clubs and facilitated by school health coordinators. The object of the one-week program was to create awareness among students, male and female, on safe and hygienic practices during menstruation. More than 1,000 female students were oriented on these practices, through expert sessions, a video documentary, and quiz programs.

**Outcomes and overall assessment**

The HPSS project has implemented school health promotion for four years (2011-2015). It has involved many actors at different levels (WASH actors, communities, district and regional authorities, and other sectors including health and education and community development).

At regional and district levels, the HPSS intervention has elevated the visibility of WASH, particularly MHM, at community, district, and regional levels. Thanks to the project’s advocacy efforts, districts are now allocating resources in their Comprehensive Council Health Plans for building new school WASH infrastructure with MHM facilities where there is none, or rehabilitating existing facilities. Through the coordinated efforts of WASH actors, spearheaded by the HPSS project, the supervision checklist of the District School Health Inspectors now includes the supervision of MHM facilities. To further elevate the visibility of MHM in WASH, the project is now identifying a high-level political champion in the region to ensure that WASH is given the priority that it deserves in every school.

At school level, the project has contributed to behavior change by reducing open defecation, because schools now have more holes. Thanks to the HPSS project, more than half the schools with newly
constructed toilets have increased the number of holes from four to 10–12. Menstruating girls now enjoy privacy as the toilets have doors, they are clean, and there is water. Availability of bathrooms has enhanced menstrual hygiene as menstruating girls can now change their sanitary materials and clean themselves in the school environment.

Participation of the schools, districts, and other WASH actors in the region has generally improved knowledge on MHM. The school health coordinators have reported that female students now have positive attitudes toward menstruation as the school clubs openly discuss this topic.

Though some schools have reported that their rate of absenteeism among female students has declined, the HPSS cannot attribute this to its intervention as there are many other factors that lead to absenteeism during menstruation.

Conclusions and policy implications

Conclusions

- WASH has a fundamental role in creating school environments that make it easier for girls and female teachers to manage menstrual hygiene. MHM interventions like that in the HPSS project contribute to providing a more comfortable and conducive learning environment for female students by making available WASH infrastructure with MHM-appropriate facilities and hygiene promotion activities that include MHM topics.
- Resources for WASH infrastructure and MHM facilities in schools are still inadequate in most low- and middle-income countries.
- The literature review shows that globally, there is an increasing interest in exploring and removing MHM barriers facing schoolgirls in the education setting. Significant recent events, including discussions on including MHM in the post-2015 Sustainable Development Goals, have contributed to investment by governments to support MHM research and programming through multisector approaches.

Policy implications

- The implementation of WASH programs calls for a very well-coordinated multisector approach or partnership. Suggested sector involvement includes Ministries of Water, of Education, of Health, and of Community Development. To assure that MHM is addressed at all levels, the multisector partnerships require collaboration in synthesizing the available evidence and identifying gaps in the knowledge needed for effective and efficient responses.
- MHM activities need to be focused and designed with a view to going to scale. Best practices, knowledge, and gaps need to be well documented and disseminated. Global, regional, and national events, including discussions on MHM, provide a good platform for sharing experiences. The effort by UNICEF and Columbia University in co-hosting the MHM in Water, Sanitation, and Hygiene in Schools Virtual Conference is one such platform.
- Attention should be given to the communities surrounding the school system, as their engagement helps foster an enabling environment for MHM implementation. Community involvement brings a sense of ownership and ensures sustainability of the activities and achievement of outcomes. The HPSS project experience of involving the communities should be further explored and the lessons learned should be documented.

To meet the post-2015 goal 6.2 of the Sustainable Development Goals—by 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations—the following policy issues should be addressed:

- Standard Guidelines for integration of a minimum package for MHM into existing WASH in school programs should be developed. The
Guidelines should include policy guidance on implementation, design of the facility, and monitoring and evaluation of the MHM programs.

- The multisector involvement and coordination in implementing the MHM programs should be advocated and included in all WASH policy guidelines and strategies. MHM is a social issue that cannot be addressed in schools alone.
- Current MHM practices and the barriers girls face in various contexts should be well documented. Countries should strengthen evidence-based studies to understand these barriers at school. These experiences should be consolidated and shared.

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Acknowledgments

This knowledge series intends to summarize good practices and key policy findings on managing for development results (MfDR). African Community of Practice (AfCoP) knowledge products are widely disseminated and are available on the website of the Africa for Results initiative, at: http://afrik4r.org/en/ressources/.

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