



Ethiopia Menstrual Health Formative Research Report

2020



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Acronyms

AAEB	Addis Ababa Education Bureau
FGD	Focus Group Discussion
HEW	Health Extension Worker
IDI	In-depth Interviews
KII	Key Informant Interviews
MH	Menstrual Health
MHM	Menstrual health Management
NGO	Non-Governmental Organization
SRHR	Sexual Reproductive Health and Rights
WASH	Water, Sanitation and Hygiene

Executive Summary

Splash, Ethiopia in collaboration with Addis Ababa Education Bureau (AAEB) and signatories, is working to provide child-focused water, sanitation, hygiene (WASH), and menstrual health (MH) solutions for government schools. In order to inform its WASH and Menstrual Health program design, Splash undertook a formative research effort to investigate the experience of menstrual health in 10 government schools located in the 10 sub cities of Addis Ababa. The main objective of the research was to investigate the knowledge, attitudes, and practices associated with menstrual health among menstruating and premenstrual female students, male students, teachers, parents of female students, school cleaning staff, and school administrators.

The sampling and data collection methodology utilized was a cross-sectional school-based assessment that employed a mix of qualitative data collection activities and survey style demographics assessments. The assessment was conducted in a total of 10 schools, six primary and four secondary schools. The target population of the study included female students who had started menstruating, pre-menstrual female students, male students, school administrators, female focal teachers, janitors and parents of female students. A total of 96 data collection events including in-depth interviews, focus group discussions and school WASH infrastructure observations were conducted. A total of 20 in-depth interviews were carried out with a purposively selected sample of school administrators and female focal teachers in addition to 56 focus group discussions were undertaken with janitors, parents of menstruating girls (mothers and fathers), premenstrual girls, menstruating girls and male students. A total of 20 direct observations of WASH facilities, services and functionality of sanitation facilities and WASH infrastructure were also undertaken in the ten target schools.

1.1 Findings

1.1.1 Menstruating and pre-menstrual students

The study revealed that both menstruating and pre-menstrual female students understood menstruation as a natural physiological process which involves shedding of blood on a monthly basis throughout the female reproductive years. Menstruating and pre-menstrual students also linked the onset of menstruation with the physical and biological growth of a female. School curricula, family members, parents, school clubs and broad casting media (TV and radio) were reported as the main sources of information about menstrual health for all student audiences. However, the study showed that both menstruating and pre-menstrual female students across the ten schools have inadequate access to information regarding the management of menstrual health at school, in particular for students in primary school. Curriculum used in schools cover topics covered in the related to anatomic concepts of reproductive organs but did not expand to cover the experience of puberty or menstruation. Similarly, pre-menstrual students who are currently attending grade 5 and below have limited access to any information regarding female anatomy of menstrual health at school. Both menstruating and pre-menstrual students reported that they received very limited information on menstruation from their family members before the onset of their menses as it is not customary among parents of daughters to discuss the topics prior to the onset of puberty. Most of the premenstrual female students also reported that preparation for the onset of menstruation is not considered important by their families as menstruation is simply considered a normal and natural occurrence that requires minimal exposure to prior to the experience itself.

It was also found that there are large knowledge gaps regarding menstruation for male students. Some of the male student participants had misconceptions regarding the basic facts of menstruation. Teasing of menstruating students by their male peers was not consistently reported by female students, even though it was acknowledged as a common occurrence by the male students engaged in the study.

Menstruating female students stated that they have consistent access to commercially made sanitary products both at school and at home. Utilization of homemade options, such as use of ragged/used cloths was not reported in this study. Some menstruating students reported that they are comfortable in seeking and utilizing

sanitary products provided by their school, while others refrain from requesting school-provided products due to a fear of exposing menstrual status to the club representatives/teachers who manages the school product stock. Moreover, due to lack of dedicated room for changing sanitary materials female students reported not being able to change their menstrual health products as frequently as they needed, with many reporting that they often wait until they return home to do so. The majority of menstruating female students reported that, during menstruation, they reduce or avoid physical and sport activities that require heavy physical engagements for fear that such activities exacerbate menstrual pain, may result in their sanitary product falling out from their underwear, or risking a menstrual blood leak or stain on their school uniforms.

In all study schools, separate toilets are available for girls and boys though very often male and female students share latrine blocks. Poor sanitation infrastructure remains a critical challenge for menstruating students to adopt the recommended menstrual health practices in the majority of the study schools. Overall, the available female latrines in the study schools were at a sub-standard level compared to the “ideal” toilet facilities described by FGD participants. As a result, female students are not comfortable using the available latrines at school, especially during menstruation. Issues with latrine cleanness, a lack or shortage of water, inadequate size of female latrine stalls, a lack of the number of stalls, inadequate levels of privacy and security in stalls, and the proximity of female latrine to male latrines were reported as some of the main challenges menstruating female students face while at school. Girls reports lack of water as the most critical challenge in managing their hygiene at school. Lastly, the lack of a safe and convenient solid waste disposal solution inhibited menstruating girls from hygienically maintaining either own bodies along with the hygiene of the female latrines.

1.1.2 Parents of menstruating female students

Focus group discussions conducted with parents of menstruating female students revealed that the majority had basic knowledge around the facts of menstruation. It was noted that some parents harbored some misconceptions regarding menstruation, particularly that it is a disease or a curse from God. Overall, more mothers than fathers had accurate knowledge related to menstrual health. Parents knowledge and perception towards menstruation is largely influenced by the sociocultural norms that exist within their community, as well as their religious backgrounds. Parents of the Orthodox Christian and Muslim religions discourage girls and women from taking part in religious activities during menstruation. Almost all of the parents reported that menstruation indicates a girl could get pregnant anytime if she is sexually active has but that menstruation does not signify a readiness for sex or marriage. Some of the parents reported that they become more restrictive to their daughters’ social activities when they start menstruation due to a fear of pregnancy for their child.

The majority of mothers interviewed reported that their daughters do not come to them for advice about menstruation as they report being exposed to information regarding puberty and menstruation by friends and at school. The times they do seek support is in acquiring funds to purchase sanitary products. Mothers reported that the primary signal that their daughter has started menstruation is from their presentation of certain physical symptoms such as decrease in physical activity, swollen eyes and dark faces, reports of feeling of pain, dizziness, sleepiness and a preference to be alone. Some also reported that they notice a spot of blood on their daughter’s underwear when they are doing the household laundry. However, some mothers also reported that they don’t know when their daughters are on menses unless they tell them. Most of the fathers reported that they don’t have any way of knowing when their daughters are menstruating unless told by their wives. In most cases, it is the responsibility of the father to provide money for the purchase of sanitary products, but mothers are the ones who directly provide the money to their daughters. Some mothers also buy sanitary products for their daughters when they buy one for themselves. Mothers support their daughters by reminding them to keep extra products in their bag at all the time in the event they get their period unexpectedly while away from home. Mothers also report supporting their daughters during menstruating by doing their daughter’s usual household chores and encouraging them to rest. Mothers also provide menstruating daughters with additional care by providing them more fluids to drink and higher nutrient foods to help them recover from the toll of their menstruation. Most fathers perceive

that it is the responsibility of the mother to provide the support that their daughter needs during menstruation.

1.1.3 Focal teachers

Interviews conducted with focal teachers indicated that teachers are required to participate in one or more of the various clubs within their school, one of which is the Gender Club. However, most of these clubs are not active due to a lack of budget for club activities, as well as poor participation of member students. Most of the focal teachers interviewed reported that they received various types of short-term trainings from local implementors and non-governmental organizations (NGOs), such as Splash Ethiopia as well as government sector offices. However, the trainings were reported to be too short to meet the intended objectives. Focal teachers reported that they teach their students about puberty based on the formal textbook sessions and club activities, but none of the textbooks from Grade 1-5 cover issues related to reproductive system and related issues. According to them, there is a textbook lesson in grade six that focuses on reproduction and the primary and secondary sexual characteristics of boys and girls. This grade six lesson explains the pubertal changes for both sexes including menstruation. Teachers noted that it is only in grade eight that a detailed lesson about mensuration is provided. They reported a concern regarding this as many of their female students have already started menstruation by the time of this lesson and have gotten information from other informal sources. Focal teachers reported a lack the self-efficacy to discuss menstruation with their students and fellow teachers as discussing topics related to menstruation in class makes some students uncomfortable.

1.1.4 School Administration staff

Interviews conducted with school administrators revealed that the majority of them do not perceive menstrual health as one of the priority interventions and an integral part of school WASH program. Many school administrators mentioned toilets/latrines, soap, and water as the most important priority for WASH resources at school. Moreover, school administrators perceive menstruation as a natural phenomenon and the majority of them do not see its potential to negatively impact to the school experience for female students.

1.1.5 Janitors

The school janitors who participated in the study reported that they have extremely busy schedules due to the wide range of responsibilities they are assigned. Almost all of the janitors interviewed reported that they never received any training in relation to their work, except the short orientation they received during their recruitment, which mainly focused on their roles, duties, and responsibilities. Most of them learned their job skills from the experiences of their colleagues or first-hand experience in previous roles. Most of the janitors reported that they would never choose to be a janitor if they had other better job opportunities. Cleaning staff undertake activities that they do not feel physically able to do on a daily basis as a female. Some of these activities include carrying water from a water point found at a long distance, carrying heavy water containers to higher floors of the school building, moving or dragging heavy chairs and tables, and carrying stones and corrugated iron for construction activities in the school compound. The FGDs with cleaning staff revealed that they face several challenges on a daily basis outside of their control including issues related to a shortage of water, shortage of appropriate disposal containers, unhygienic use of sanitation facilities by students and some staff, limited supply and poor quality of some cleaning supplies, low salary for high workload, perceived health risks of their job duties, and poor perception of cleaning staff by the school community.

1.2 Conclusion

The results of this formative research provide new information about knowledge, attitudes, and practices associated with menstrual health in 10 government schools located in the 10 sub cities of Addis Ababa. Focus group discussions, interviews, and direct observation with key sub-populations including, menstruating and premenstrual female students, male students, teachers, parents of female students, school cleaning staff, and school administrators revealed nuanced findings. The findings indicate that while there have been gains in MHM inter-generationally, there are still major challenges. Each sub-population included in this research effort engages in the topic MH differently, but each has unique opportunities to contribute to the improvement of menstrual health for school-aged girls in Addis Ababa, Ethiopia. There is still much work to be done on the topics of MH education, infrastructure, stigma, product provision, and pain management. This formative research highlights many of these opportunities for increased focus for the purposes of evidenced-based implementation.

Background and Objectives

2.1 Background

Women and girls in Addis Ababa, Ethiopia continue to face a broad set of challenges that negatively influence their health, empowerment, and well-being, including barriers to menstrual health solutions. Girls do not consistently have access to education on puberty and menstrual health before the start of their menses. Furthermore, many do not have access to adequate sanitation facilities, sanitary products, or pain management methods to manage their menstruation at school.

Poor sanitation and toilet insecurity in schools disproportionately affects girls and may contribute to their absence from school. Studies have found that girls, especially when menstruating, need gender segregated toilets, privacy including doors that can be locked from the inside, water access (inside the stall or latrine), convenient facilities for product disposal, and clean toilets in school, otherwise they avoid school at least some of the time. The need for hygienic and discrete disposal of menstrual health materials is critical; yet this need is rarely taken into account in sanitation promotion programs and designs. Girls in school undergo the discomfort of not being able to change their product throughout the whole day because of poor toilet conditions. The inability to safely dispose of sanitary products leads girls to throw them into toilet bowls or pits. They may also abstain from drinking or eating during the day avoid using the bathroom. All of these activities interfere with girls' abilities to concentrate in the classroom, leading to lifelong consequences.

Menstruation remains a taboo in many societies and various negative cultural attitudes and beliefs are still associated with it. Menstruating women and girls are still often considered 'dirty' or 'impure' which may lead to forced seclusion, reduced mobility, and dietary restrictions. Some cultural beliefs around menstruation reinforce gender inequities and have negative impact on the dignity, health, and education of women and girls. Hence, menstruation is not just a sub-topic within the WASH sector but a Human Rights issue that affects the many lives of schoolgirls¹.

2.2 Objectives

The primary objectives of this formative research effort were to:

1. Collect information around the current menstrual health management practices among menstruating female students
2. Collect information around the level of knowledge that pre-menstrual female students have about menstruation
3. Explore levels of knowledge and self-efficacy among parents of female students
4. Explore levels of teacher self-efficacy to provide instruction to female students around topics related menstrual health
5. Assess barriers to ideal menstrual waste management in schools
6. Investigate current school administration knowledge and perception of menstrual health in their school

¹ Crofts, T. (2012) Menstruation hygiene management for schoolgirls in low-income countries. Leicestershire: Water, Engineering, and Development Centre, Loughborough University

Methods

3.1 Study Design

This research effort was a cross-sectional formative school-based assessment design that employed qualitative data collection techniques as well as demographic surveying. The research activities were conducted in 10 schools within the ten sub-cities in Addis Ababa, i.e. one school per sub-city.

3.2 Study Population And Targets

The study population for this research activity was the school community and parents of students in the urban center of Addis Ababa. The target population included female students who have started menstruation, pre-menstrual female students, male students, school administration, focal teachers, janitors, and parents of female students.

3.3 Sampling and Data Collection Methods

A total of 96 data collection events consisting of focus group discussions (FGDs), in-depth interviews (IDIs) and direct observations were conducted. A purposive sampling method was employed to select the FGD and IDI participants. The FGDs were conducted with pre-menstrual students, menstruating students, parents of female students, male students, and janitors. The IDIs were conducted with school administrators and female focal teachers. Direct observation of WASH related facilities and services were conducted using an observation checklist.

3.4 Data Analysis

The audio recordings of the FGDs and IDIs were directly translated and transcribed from Amharic into English for analysis. Before the beginning of the coding process, a code book was prepared. Using the NVivo software, a hybrid thematic coding approach was defined that was inclusive of both pre-set and emergent codes. Emerging themes were later developed and expanded upon during the analysis phase.

Findings

4.1 Menstruating Students

4.1.1 Background

A total of 89 menstruating students participated in the focus group discussions across the ten study schools. The mean age of students in this group was 15 years (SD ± 1.9) and the majority of them were attending primary level school (58.4%). Only 14 of the 89 (15.7%) were night shift students. Religious affiliation of the group was 73% Orthodox Christian, followed by Muslim (16.9%), Protestant (7.9%), and Catholic (2.2%). Both parents of the majority of participants had attended some formal education, while 13.5% of mothers and 5.6% of fathers had never attended formal school.

N=89	(%)
Grade level (n=89)	
5-8	58.4
9-12	41.6
Religion	
Orthodox	73.0
Muslim	16.9
Protestant	7.9
Catholic	2.2

TABLE 1 SOCIO-DEMOGRAPHIC PROFILE OF MENSTRUATING FEMALE STUDENTS, ADDIS ABABA, ETHIOPIA

4.1.2 Role models of menstruating female students

Menstruating students were asked to report who they look up to the most and consider as a role model. Role models were classified under three categories; family members, non-familial individuals, and “Icons” or popular individuals in the country. The majority of menstruating female students mentioned their parents (either their mother or father) as their positive role models indicating the importance of their parents in modeling the right behavior and practice in relation to their day-to-day life and future aspirations.

The most commonly reported reasons for modeling parents were their accomplishments and personality traits such as their work ethic, resilience, interest in the betterment of their children’s lives, loving nature, courage, and ability to effectively communicate.

“For me, my role models are my father and my mother because they teach me good lessons so that I can be a successful person when I grow up. So, they are an idol to me.”

“My role model is my mother because she is always open and patient to discuss any issue with me and ask me the reasons for doing anything before, she comments on the issues. She never shows me an angry face...”

“Yetneberesh Nigussie, because she endured through a very difficult situation when she grew up as a girl with visual impairment and now, she is one of the most successful women in the country helping needy children and women.”

“My role model is Sahlework Zewede because she is the first female Ethiopian president.”

“My hero is our School Admin because he gives adequate attention to students. He makes us admit our mistakes and mentor us in a good way. I really love him, and I wish him a long life.”

Some reported that they model non-familial individuals commonly teachers and school administrators. Among the popular people (“Icons”) in Ethiopia, politicians like Sahilework Zewudeie (Ethiopian President) , Abiy Ahmed (prime minister of Ethiopia) , Mupheriat Kamil (Minister of peace) and Takele Uma (Mayor of Addis Ababa) ; singers such as Teddy Afro and Ater Awoke; athletes such as Haile Gebressilassie and Meseret Defar and other popular individuals such as Yetnebersh Nigusse, Daniel Kibiret, Engineer Simegnaw, were reported as role models by female menstruating students who participated in the focus group discussions.

4.1.3 Menstrual Health Knowledge

Overall, FGD participants who had begun menstruation understood menstruation as a healthy and natural physiological process (natural shedding of uterine blood on a monthly basis) that will occur throughout their reproductive years. Menstruating female students attending both primary and secondary/preparatory schools had a similar understanding on the causes of monthly menstrual bleeding. Participants also understood menstruation as a sign of natural female biological development and growth during puberty (Akeme-Hewan in Amharic).

“There are eggs in our uterus and if it didn’t get male’s sperm, the egg will fall apart and move to the uterus to be cleaned and the process helps to produce another egg.”

“If a girl has started having her period, it is thought that she reached puberty (Akme-Hewan)”

“Before I had my first period, I had no idea what happens when period comes. Even when I had pain, people always told me that it is for a while or that it might just be some bacterial infection or food poisoning.”
“Before my menses came, my mother told me to take care of myself fully and since I am close to my mother , she told me everything before the onset of my menses.”

FGDs with menstruating female students revealed mixed findings regarding their level of knowledge prior to menarche with many reporting that they had limited knowledge about menstruation prior to its onset. Although, many participants reported a close relationship with their mothers, therefore more opportunity access to information about menstruation.

Experience of menstruation was perceived differently among menstruating female students as revealed in the FGDs. All FGD participants could confirm that menstruation is a primary indicator of one's ability to give birth. Some participants noted that menstruation is a means for excreting bodily waste and 'bad things' from the female reproductive system with this being the primary advantage of experiencing monthly menstruation. On the other hand, perceived disadvantages of starting menstruation were also reported by some menstruating female students during the FGDs including pain (lower abdominal cramp), fatigue, and overall discomfort during menstruation. Additionally, participants reported some psychological distress as a result of experiencing social exclusion and teasing by peers due to menstrual leaks/stains. Some menstruating female students also linked the disadvantage of starting their menses with restrictions from playing sports.

"Having menstruation has no disadvantage rather provides great advantages; for example, it is the way to give birth and most of the time the girl who doesn't see menstruation is not normal. So, having menstruation has greater advantage than its disadvantage." (FGD, Menstruating Student)

"Menstruation is a natural thing, but I don't like it. I hate it. When I have my period, I usually have a headache, cramp and fever. I couldn't even get out of home. Before I started seeing menstruation, I was so free. But now I became so restricted and sensitive to things. I was happy before my period came but I lost that happiness after."

"Menstruation has some disadvantage. For example, if a girl's dress gets stained with menses, people may laugh at her rather than helping her to go to the toilet. At that time, she may develop psychological stress." "The disadvantages are pain, discomfort, and abdominal cramp."

"I used to play with my friend at any time like jumping a rope before I start to see my menses. But now, I'm not that much comfortable to involve in such playing if I'm on menstruation."

(FGD, Menstruating Students)

The above FGD findings on the knowledge of menstruating female students were substantiated by the results found from the knowledge survey questionnaire administered to the same focus group discussants immediately prior to conducting the focus group discussion sessions. The results from the quantitative knowledge survey showed that 95.5 % of the respondents didn't consider menstruation as a disease and 82% of them do not perceive menstruation to be a curse from God. This is closely in alignment with the qualitative findings where all focus group participants perceive menstruation as a natural physiological occurrence. Around, ten percent of the focus group discussants also understand that pregnant women menstruate. The quantitative result indicated under in table 3 suggest the existence of significant knowledge gap on menstruation related concepts among menstruating female students; even though such significant knowledge gap was not much reflected in the qualitative findings. Conspicuously, sample size and methodological issues are crucial to generalize quantitative findings and therefore, it is important to cautiously interpret and use the result found in the quantitative survey.

4.1.4 Source of Information About Menstruation

"My mother told me about menses when I was 10 years old. She told me that menses is natural and then I told to my school friends too." (FGD, Menstruating student)

Participants mentioned several sources for information regarding menstruation accessible to girls prior to the age of menarche. Participants reported that they learned about menstruation at varied ages and from different information sources. The three main sources noted were family members, in particular mothers and older sisters, and schools.

They also noted that there are topics regarding menstruation and puberty in the different school curricula such as in environmental science and biology curricula. Specifically, menstruation and puberty related topics are covered during the "primary second cycle" (grade 5-8) and higher grades.

"In grade six, there is a lesson about reproduction. The topics mainly focus on primary sexual characteristics of boys and girls which describes biological and physiological changes occurring in boys and girls In grade 8, there is a lesson specifically on menstruation." (IDI focal teacher)

In addition to family members and teachers, school clubs, organizations such as the Red Cross, and broadcasting media outlets were also noted as a source for information regarding menstruation. In school clubs, particularly the Gender Club, student members organize events to increase awareness of sensitive topics such as HIV, menstruation, gender-based violence, among others. A group of menstruating students from Ginbot 20 School also mentioned community nurses (urban health extension workers) as source of information on menstruation.

“We teach them how to use toilet during menstruation, how to wash their underwear, how to put products under their underwear. Such issues were considered as secrets in our generation. We want them to know that menstruation is natural.” (IDI, focal teacher)

“Yes, there is an awareness creation program conducted by the gender club through which students access a lot of information and knowledge about menstruation.” (IDI, school administration)

“They start learning about puberty and related issues from grade five to eight. But there are some cases where we find older students at grade three or four who usually come from rural areas and join school late.” (IDI, Focal teacher)

However, as explained by focal teachers, there are students who started to menstruation even before reaching grade five. This situation occurs either because the student has reached puberty at an earlier than average age, or because she is an older student who has recently migrated from the rural areas and has been placed in a lower grade level to match her learning abilities.

4.1.5 Menstrual Health Management Practices

The focus group discussions with the menstruating students generated findings regarding their menstrual health management experiences and practices including topics related to the use of commercially made sanitary products, use of homemade reusable products, frequency of changing sanitary materials throughout the day, user experience as relates to school sanitation facilities, solid waste disposal, and hygiene habits of girls during menstruation.

As noted during the discussions, commercially made sanitary products are available in the majority of the study schools in Addis Ababa. Menstruating students reported that they have access to commercially made sanitary materials both in schools and at home. Some students are inclined to bring their own sanitary materials from their home rather than utilize school sanitary materials. The Red Cross and school gender clubs are largely responsible for providing sanitary products in schools for menstruating students. However, some students are not comfortable accessing sanitary materials from these clubs and would rather borrow from their friends. The primary concern is embarrassment/fear of asking a club representative or teacher for a product or fear of their peers learning of their menstrual status.

“We get sanitary products from a friend or the Red Cross club, but we mostly borrow pad to each other.”

“Now a days, there is enough available products both in schools and at home. But previously I used rag once.” (FGD, Menstruating Students)

“There are enough sanitary products in our school. We even give the girls too much pad so that it does not expire. We didn’t face any shortage of sanitary products so far.” (IDI, school administration)

“It is better to change menstrual materials at home. I never change here.” (FGD, Menstruating student)

“I bring two or three products with my bag just in case, but I never change at school.” (FGD, Menstruating student)

Changing of sanitary materials in the female latrines was mentioned as one of the primary challenges to proper menstrual health management at school. Some students reported that they prefer to change their sanitary materials at home because they are not comfortable to using the school latrines for menstrual health management. Girls choose to change their product less frequently than needed while they are at school and sometimes wait until they return home to do so.

Different homemade remedies for pain during menstruation were noted during data collection including drinking tea, soft drinks (coca cola and other soda drinks) and massaging the lower abdomen with plastic bottles filled with warm water. In order to avoid heavy menstrual bleeding, the girls noted that they do not participate in difficult tasks that involve a high amount of physical effort. The practice of taking pain medications at home was mentioned by a few of the participants to alleviate menstrual discomfort, however, students noted that there are no pain medications available at schools.

“There is water around our toilets, but the supply is interrupted very frequently... Since we are girls, we need water for washing. The janitors are not happy to clean the toilets because we don't have a basket inside the latrine that we can use for disposing used sanitary products. We put used sanitary products all over the toilet floor”

“We have four latrine blocks. They were renovated very recently, but the latrines have no lock and basket that is used for disposing used sanitary pad.”

“There is no soap ... there is open water container near the toilet ... but there is no jar that is used to draw the water from the open container.”
(FGD, menstruating students)

Menstruating students in all study schools reported that they have access to separate female latrines. However, they identified several factors inhibiting them from using the school latrines for menstrual health management. During the focus group discussions, menstruating students sketched their idea of their ideal school toilet. Several characteristics of the ideal toilet facility were explored through the ‘Ideal toilet activity’ and in subsequent discussions. The table below presents the commonly mentioned characteristics of an ideal toilet facility.

TABLE 2: DESCRIPTION OF "IDEAL TOILET" BY MENSTRUATING FEMALE STUDENTS, DECEMBER 2019, ADDIS ABABA

Dimensions (criteria)	Description of ideal female toilet
Location of the toilet	- Located at reasonable distance from the classrooms and male latrine blocks
Overall structure and situation of the latrine	- Roof with corrugated material - Floor with ceramic tiles to easily clean - Compartments with adequate space - Toilet seat with pour flush - Should be cleaned always without bad odor - The wall of the latrine should be painted either with white color or any other appropriate color
Hand washing amenities	- Should be available with water and soap - Must be located within close proximity to every toilet
Separate blocks	- Should have separate latrine blocks for girls
Changing rooms and showers	- Appropriate changing rooms and showers must be available within the same block - Available sanitary product in the changing rooms
Easy to use by female students with disability	- Disability friendly entrance and toilet seat
Privacy (Secured to use)	- Each compartment should have doors and inside locks
Availability of hygiene supplies	- Should have tissue paper and paper towel
Sanitary disposal bin	- Should have waterproof disposal bin with cover
Continuous water supply with genital washing facility	- Water bucket with cup - Bidet shower (sprayer)
Lighting inside the latrine compartment	- Should have adequate light at all times (both on the day and night times)
Availability of hook and mirror	- The hook is important for hygienically putting personal belongings - Mirror that is hanged on the inside part of the latrine wall

Challenges related to cleanliness of the latrine, lack of water at hand washing stations, unavailability of solid waste bins for sanitary material disposal, and a lack of soap were mentioned as major factors that negatively impacted girls’ ability to manage their menstrual health at school.

It was reported in Derartu Tulu school by the school principal, that female students sometimes miss school during their menstruation due to lack of water as they are unable to wash themselves as needed throughout the school day. This happens regardless of the cleanliness of the toilet. Additionally, an inadequate number of latrine stalls was also mentioned in Ginbot 20 and Dejazmach Zera Y School as one important factor that is affecting students during their menstruation. Moreover, in some schools' female students are not comfortable to using the available female latrines due to lack of adequate light and secured lock inside the stalls. In schools where students felt uncomfortable using the latrines, groups of female students would accompany each other off campus for their sanitation needs.

"Girls miss school because there is no water here. When they have their period, they had to change their pad and they can't do it here since there is no water. So, they go home and change." (IDI, school administration)

"They throw the used pad in the toilet pit. Some of them even leave it on the toilet floor because they do not have a place to dispose it properly."

"The students do not use latrine properly and the janitors always complain about it. In addition, girls are afraid to use the available toilet because of its darkness."

"It is mostly the night shift students who make the toilets dirty because since it is dark, they are not able to see the toilet hole." (FGD, menstruating students)

Moreover, the combination of improper use of latrines, a lack of water and solid waste disposal solutions results in the latrine stalls becoming unhygienic to the point of unusable. Due to lack of a solid waste disposal solution in the female latrine stalls, used sanitary products are disposed either on the toilet pit, clogging the drains or on the latrine floor. This issue was predominantly seen in secondary schools where there was a higher proportion of menstruating students. Lastly, due to poor lighting within the latrine at nighttime, the night shift students were unable to use the latrines hygienically.

Even though female students have access to separate latrines at schools, the close physical proximity of female latrines with that of the male latrines (in some cases they share the same male latrine blocks) was also identified as a key barrier to menstrual health management at school.

"Female students have a separate latrine, but they use the same block with the male latrine. As a result, male students easily watch them when using the latrine and laugh them. We will be happy if this all problems can be addressed." (FGD, menstruating student)

The experience and practice of taking a bath both at the onset of a girl's monthly cycle and each day throughout the menstrual bleeding is something that was discussed during data collection. As explained in the FGDs by the students, the majority of schools do not have a separate shower or bathing room dedicated for female students. In some of the schools, female students use the teacher's bath rooms during particular circumstances (such as when their cloths stained with menstrual blood). As a result, taking a daily body bath at school during menstruation is not practiced among the majority of female menstruating students. Menstruating students in fact mentioned that they wish to have access to female bathing and shower rooms.

The FGDs conducted with menstruating students highlighted that there are no specific school rules or policies that hinder the use of the school toilet. Often, students use latrine facilities at break time and at the end of the regular school session. However, permission is required to go to the toilet while a teacher is conducting school lessons, in which cases permission depends on the willingness of the teacher. In addition, it was reported that some cleaners do not permit female students to use the latrine while they are cleaning the toilet.

"Most of the time, there is a long queue at the toilet especially during break time. There are students who return without using the toilet because of the short break time they have."

"The toilet is too small and narrow to use. Besides, our break time is 15 minute and it is not enough to use the toilet because of its narrowness and some students wait longer to pee because of the crowd and the school bell rings and we get to rush to get in to class."

"Most of the teachers do not give permission to use the toilet during class hours. For example, when I was a 10th grade student, I asked permission but the teacher said, 'are you a child?' and refused to allow me to visit the toilet. Even if he gave permission, he used to insult us about it." (FGD, menstruating student)

“There is a gender club in our school, and we are members. To take a sanitary pad from the gender club, we must sign first and students become afraid to do so since their name is registered.” (FGD, Menstruating Student)

Similarly, in the majority of schools covered in this study, there are no specific rules or policies regarding the access to sanitary products from the respective clubs/units or focal teachers. But it was reported from Eyerusalem primary school that menstruating students are asked to sign a register when receiving a sanitary product from the club. This degree of identification is one of the factors that creates discomfort for students when managing their menstruation at school.

A designated space for rest, clothes changing, and menstrual health management during menses was not available in the majority of the schools covered in this study. During menstruation, female students often go to the teacher’s offices if they are experiencing severe menstrual pain to rest. But there are very few schools that have a dedicated room for these types of situation.

“They use the offices, staff cafeteria... If they feel sick, we even allow them to rest in teachers’ lounge... This year we believe that we will have a room where they could rest... We are going to have a room which is assigned for Red Cross and we will let them rest in this room” (IDI, school Administration)

“An organization called Tesfa gave us spare uniforms and we have it in store. If they need extra uniforms, we can give them from the store. The other day we gave extra uniform to one student.” (IDI Focal teacher)

Lastly, the availability of an extra uniform is absent in all schools except for one. In the school where an extra uniform is maintained, the sole purpose is to assist female students who have stained their uniform during menstruation.

4.1.6 Menstrual Health Norms

“I know that bleeding signals the onset of menstruation. My mother told me about it. I also learned about it from science books.”

“As my families and teachers told me, there is a feeling of abdominal cramp below our umbilicus. Girls also sweat when they are about to see their menses” (FGD, Pre-menstrual students)

Menstruating students who participated in the FGDs shared their experiences before and after the onset of menarche, as well as the challenges that they are currently facing during menstruation. Participants reported that their daily routine including activities outside of school such as playing sports and spending time with friends, changed drastically after the onset of menstruation. One particular change was their restriction from spending time with male friends in social settings without the supervision of an adult.

Some of the FGD participant menstruating female students reported that their dressing styles and their personal hygiene practices have also changed too after the onset of their menstruation.

There is a difference of course. For example, before the onset of my menstruation, I used to wear any dress I can get like shorts and t-shirts and I never even felt stressed when I am around everyone.” (FGD, Pre-menstrual students)

“You cannot get into the church and you should stay away from the temple. If you want to use the holy water in any way you should wait for 7 days, until your period cease to flow.” (FGD Menstruating Student)

“In our religion, Muslim women and girls cannot hold prayers during the time of menstruation.” (FGD, Menstruating student)

In addition, the practice of going to religious centers such as churches and mosques changed after the onset of their menarche for many girls. Muslim students explained that their practice of participating in the fasting period changed after they started menstruation as women are often forbidden to fast while on their period.

Furthermore, the roles and responsibilities of female menstruating students in the household changed after the onset of menstruation. Menstruating female students often link the onset of menstruation with an increase in household responsibilities. Families also perceive the onset of menarche as a sign of physical and psychological growth and maturity for their daughters. As a result, parents usually require their daughters to have their permission to go to any place after the onset of their menstruation as explained in the focus group discussions.

“There is of course an increase in household responsibility for me when my age increases. That is because I am physically stronger than before. Now they are telling me that my responsibility should include the household chore besides my education”

“Before the onset of my menstruation, I was free to go to different ceremonies like birthday parties. But now, my families would not be happy to leave me alone to go to this kind of places. Now I am not allowed to go to such parties.”

“After I started having my period, I am told not to carry heavy things as it may hurt my back in the future when I have a baby and they also supposed that it may create infertility. I am not also allowed to stay outside at the evening. Now my family worries if I may have communication with other adults.”

“I used to be given permission to go anywhere, before my menses. For example, I used to go to my friends’ home and play with them. But now, they remind me that I am old enough. I do not go to my friend’s house because my parents worry that some boy could do something to me.”

(FGD, Menstruating Female Students)

4.2 Pre-Menstrual Students

4.2.1 Background

A total of 31 pre-menstrual students with mean age of 12 years (± 0.8 years) participated in the six focus group discussions. The majority of them (57.1%) were 6th grade students, followed by grade five (14.3%), and grade seven (10%) students.

The premenstrual students reported that, on average, water for personal cleansing/hand washing was available at their home for approximately three days in the previous week (Avg. 2.8 days (± 1.2 days)). Over 60% of the participant’s access water in their home from piped water indwelling premises and around 66% use communal flush (pour) toilet.

Grade level	%
4	4.8
5	14.3
6	57.1
7	10.0
8	4.8
Religion	
Orthodox	57.1
Muslim	33.3
Protestant	4.8
Catholic	4.8

4.2.2 Menstrual Health Knowledge

TABLE 3 BACKGROUND CHARACTERISTICS OF PRE-MENSTRUAL FEMALE STUDENTS FGD

All Pre-menstrual students interviewed during the FGDs understood that menstruation is a natural physiological occurrence. The common perception among the group was that the onset of menstruation is a sign of growth and indicates a girl’s ability to conceive and give birth. They were able to explain the main signs of menstruation and were aware of the type of pain that is experienced during the onset of menstruation.

Pre-menstrual students reported various sources for information about menstruation; parents and schools were noted as the most common sources. The majority of FGD participants reported school clubs such as the Red Cross clubs, friends, local shops, and school administration as the main source for sanitary products at school. Most of the pre-menstrual students reported that preparation for the onset of menstruation is not considered important because, according to them, it is simply a normal and natural occurrence. They added that parents, family members, and teachers are not actively engaged in preparing female students for the onset of menstruation.

Many opinions were shared by pre-menstrual students regarding product preference for the management of menstrual health. The majority of them reported that commercially made sanitary products should be used as an absorbent during menstruation. Some students also mentioned wearing extra underwear and using 'ragged (used) clothes' as absorbents during menstruation. They also discussed the importance of maintaining one's personal hygiene during menstruation by washing one's body with water and soap regularly and changing underwear daily. The use of warm water during menstruation was perceived to be important to avoid or reduce the bad odor that is experienced from the onset of menstruation. Resting, staying home from school during menstruation, and drinking tea and soft drinks such as Coca Cola were also mentioned as solutions to menstrual pain.

"I think since it is her first time to see menstruation, she will take permission from her teacher and go to the rest room at school. She may also go to the lounge and her teachers may buy her some tea or Coke."

"A menstruating girl should keep herself clean by washing her body, cloths and pants with warm water. Because warm water reduces the bad odor from menstruation and easily cleans any dirt associated with menses."
(FGD, Pre-menstrual students)

A short questionnaire was administered to assess levels of menstrual health related knowledge among pre-menstrual student FGD participants. The results showed that a large majority of the participants (95%) do not consider menstruation a disease and over 85% of them do not believe menstruation is a curse from God. However, 43% of pre-menstrual FGD participants responded incorrectly that it is normal to experience menstruation during pregnancy and 48% of them believe that pain during menstruation means something is wrong and is not normal. (See **Annex 4** for more information about levels of MH knowledge among pre-menstrual students)

"I don't think I will engage in any play activity when I have menstruation in the future. My sport (physical education) teacher told us not to go out to the field for sport classes during menstruation because it may lead to an infection."
(FGD, Pre-menstrual students)

Even though the majority of pre-menstrual female students perceive menstruation as a natural and normal physiological process, they feel strongly that the onset of menstruation limits females from engaging in different activities such as sports, heavy labor, or activities requiring physical endurance.

4.3 Male Students

4.3.1 Background

A total of 68 male students with mean age of 16 years (± 2.4 years) participated in the FGDs conducted in target 10 schools across Addis Ababa. The majority of them (72%) were primary school-aged students from grade 5-8, with the remaining being secondary school-aged students.

Approximately 39% of male students reported using a water jug and bowl for washing hands (personal cleansing) at home followed by indoor tap with running water (17.5%) and water vessel (21.1%). The majority of male students mentioned piped water located outside dwelling (63.2%) as their main source of water at home while 31.6% of them reported that they commonly access water from piped in their household dwelling.

Grade level	%
5-8	71.9
9-12	28.1
Religion	
Orthodox	57.4
Muslim	19.3
Protestant	5.3
Catholic	18

TABLE 4 BACKGROUND
CHARACTERISTICS OF MALE STUDENT
FGD PARTICIPANTS,

4.3.2 Knowledge and Attitude towards Menstruation

Male students both from the primary and secondary schools demonstrated adequate knowledge about the causes and physiological occurrences of menstruation. In all male student focus group discussions, they explained menstruation as a natural and normal physiological process that begins at the time of puberty. It was also mentioned in the male focus group discussions that menstruation is a sign of growth and physical development for girls.

"I came across the issue for the first time when I was a grade 5 student. There was one girl in my class who used to sit in front of me. One day, we noticed that she was sleeping the whole time from the first to the third period(class) . Finally, we saw blood stain on her desk. We were shocked and thought she was raped but later we found out that it was her menses."

"I heard about it for the first time when I was a grade 4 student. My cousin was a grade 8 student at the same school. One day, during break time, I went to my cousin's class to visit him and saw a girl who was sitting alone at the corner of the classroom. I asked my cousin about what happened to her and he told me that she was not leaving for break because she is sick due to her menses. When I asked him what menses means, he said that I was too young to know about it and refused to tell me. After that I went home and asked my mother about it and she told me what it is."

"Mine is different from the others. I didn't have much knowledge regarding the issue. The first time I knew about it was when we were thought about reproductive health at grade 8."
(FGD, Male Students)

However, there was a wide range of responses when asked about the frequency of menstruation, as well as the age at onset for girls. Male students estimated that menstruation starts between age 9 and 16. In addition, male students also reported a wide range of cycle lengths, with some stating that menstruation occurs every two to three months and lasts for up to 24 days.

"She may begin menstruating when she is 14, 15 or 16 years old."
"It may start at age 9. The age at which they start menstruation is determined by their lifestyle. Otherwise it happens mainly within the age between 9-12."

"I think menstrual flow appears every two or three months..."
"Within one-month period, a girl menstruates from seven up to 24 days..."
(FGD, Male Students)

"It is not advisable to have sex during their period."
"It is not recommended to do heavy work."
"It is not recommended to do exercise/ sports."
(FGD, Male Students)

Male students also believe that doing heavy work, engaging in different sports or physical exercise is not recommended for girls during menstruation. The male students also stated that having sexual intercourse is forbidden during menstruation.

As stated by FGD participants, the main topics related to menstruation that are covered in their school are anatomy, physiological functions of reproductive organs, and physical signs of puberty. Topics regarding menstruation and puberty are mainly covered in the science and biology courses during grade eight. However, there is some dissemination of information related to menstrual health provided by NGO's, school clubs, and biology teachers.

FGD experiences regarding their first introduction to the topic of menstruation. Many reported family members and schools as the primary purveyors of information regarding menstruation. The majority of the focus group participants had very little knowledge about menstruation at early childhood age, before grade 4). In addition, FGD participants shared that their family members do not perceive providing information about menstruation to children as important, therefore discussion about menstruation among family members was also limited for most male students.

"As we are social science students, we learned about these issues before we were in grade 10. There are also some female friends who discuss this issue freely with me."

"We got information about menstruation from Splash Ethiopia. They trained us about how a menstruating girl should keep her hygiene, how to use menstruation related materials like sanitary pad and how to dispose used sanitary products."
(FGD, Male Students)

"I feel so bad for them. I don't like it when I hear the word menstruation"

"If someone mentions about menstruation, I would probably laugh. Honestly I would be embarrassed."

"I don't even like it when people say the word menstruation itself. When I think about menstruation, I become so thankful that I am a boy."
(FGD, Male Students)

Male students shared their reaction and feeling when they were first introduced to the topic of menstruation. Many participants reported that they considered menstruation to be a normal occurrence and were comfortable with the topic upon first learning of it, and others explained that their reaction was quite the opposite, with many still feeling uncomfortable talking about menstruation. Some boys even mentioned that they are proud and thankful not to have to experience menstruation.

Male students both from primary and secondary schools reported that they don't have any negative perception of menstruating female students. In particular, secondary and preparatory male students who participated in the FGDs reported that they are more supportive and caring of menstruating female students. However, they did report students teasing menstruating students, especially in primary school.

"Last year, when I was in grade 7, I saw some male students teasing a female student by brandishing sanitary products found from her purse to other class students. After reporting the situation, the students were penalized." (FGD, Eyerusalem school, Male student)
"My elder sister once told me that her friend who was on menstruation was playing when her sanitary pad slipped out. At that time, boys teased and insulted her."

The majority of male FGD participants believe that education and awareness about menstruation is important for male students, even though most male students don't discuss it openly. Many view menstruation as a girls' affair and not appropriate for male comment. They

"Not everyone is the same. But most male students feel bad or ashamed to learn about or discuss the topics related to puberty and menstruation. This all happened because of our cultural influence. But there is improvement now compared to the situation in the past."
IDI, Focal Teacher

reported that most girls are not comfortable discussing menstruation, which indirectly limits the level of awareness of male students. Participants stated that regular discussion of menstruation is not culturally acceptable in their school communities.

Lastly, FGDs with male students revealed that they use several names to refer to menstruation. Some of these names include: 'period', "Enten" (Amharic), 'something is coming' (English), 'monthly salary', and 'red aunt' (Keyuwa Akiste). Most boys learn these words from their female peers. Male students also use an Amharic term "fisash" which means 'leakage' to refer to menstruation with a negative connotation.

4.4 Parents of Female Students

4.4.1 Background

FGDs consisted of 61 mothers and 45 fathers of female students, with a mean age of 37 (SD ± 11.5) and 44 (± 8.2) respectively. For the mothers, 45.9% had completed primary school as their highest level of education, with 26% never having attended school. For fathers, 53.3% completed primary school, with 22% never having attended school.

The majority of mothers (44.4%) and fathers (55.6%) reported that they use water jug and bowl to wash hands, laundry or personal cleansing at home. Piped water outside of dwelling was reported as the main source of water in the home for both mothers (49.2%) and fathers (57.8%) followed by piped water in dwelling for mothers (37.7%) and piped water from public tap for fathers (26.7%).

Nearly 82% of both mothers and fathers reported that the water they use for handwashing/personal cleansing comes from the same source as their drinking water. The majority of mothers (41%) and fathers (37.8%) use a communal flush/pour toilet followed by those who use flush /pour flush toilet in dwelling (31% mothers and 28.9% of fathers). Over half of mothers (54%) and fathers (53.3%) wash their hands at home and 44.3% of mothers and 40% of fathers reported that they wash their hands outside of home, next to dwelling.

4.4.2 Menstrual Health Knowledge

Overall, the majority of participating mothers and fathers responded correctly to questions assessing their overall knowledge on menstruation. Some had misconceptions about menstruation, with 5% (n=3) of mothers and 15.6% (n=7) of fathers agreeing to the statement, “Menstruation is a disease.” Additionally, 13% (n=8) of mothers and 20% (n=9) of fathers responded that the statement “Menstruation is a curse from God” is true. About 11.5% of mothers and 13.3% of fathers responded that the statement “Pregnant women menstruate” is true. About 42% of mothers and 64.4% of fathers responded that the statement “Menstrual blood contains harmful substances” is true. About 24% of mothers and fathers also responded that the statement “Menstruation happens after you have sex” is true. Overall, more mothers than fathers provided the correct responses to most of the knowledge questions asked.

4.4.3 Menstrual Health Norms

Many FGD participant mothers reported they were not taught about menstruation prior to their first menses. Most learned about menstruation for the first time from friends or sisters who, while little information came from parents or teachers. FGD participant fathers also mentioned various sources for how they first learned about menstruation. Sources included, religious texts, older adults, sisters and fellow female students, and formal education.

FGDs revealed that knowledge and perception towards menstruation is generally improving. Participants felt this was due to better opportunities for receiving information about menstruation, and the improving culture of open discussion between daughters and their parents, especially in urban areas. Previously, there had been a dominant perception that menstruation indicates readiness for sexual intercourse, pregnancy and marriage. Almost all parents reported that menstruation indicated that their child was capable of pregnancy, but that that was not the same as being ready for sex or marriage. They stressed that a girl who starts menstruation should continue her education rather than getting married. Some mothers discussed that their parenting became more restrictive when their daughter began menstruation and was thus able to become pregnant.

“Once my daughter starts menstruation, we turn into more protective and restrictive ways of managing her and she will have more follow up visits from her brothers or anyone in the family. This is because, if something happens to her at this time (to mean sexual relations), she might get pregnant.” (FGD participant mother)

“Every time during menses, a girl or woman needs to change sanitary products (‘menses’). But this could be difficult as it may not come on the expected day. Sometimes it comes early or late and may be very hard to manage it in a safe and hygienic way. During menstruation, there could also be odor and a girl needs to change her inner cloths much often and need to wash”. (FGD participant father)

Most parents reported that a menstruating female needs to clean and wash herself, change her underwear and sanitary product frequently, rest, and eat good food. One of the FGD participant fathers also reported that MHM does not only refer to managing when menstruation occurs but it also involves prior preparation to be made and the support to be provided to a girl or woman to help her manage it properly.

4.4.4 Parental Support

The majority of FGD participant mothers reported giving money to their daughters to buy sanitary products, while some mothers, purchase sanitary products for their daughters when they buy for themselves. In most cases, fathers are responsible for providing money to purchase sanitary products. Funds may be given to mothers to give to daughters, or directly to daughters. Most fathers reported that their daughters prefer to talk to their mother about menstruation, and that fathers are only asked for money to purchase sanitary products when the mother is not available.

Few fathers reported buying menstrual products for their wife and daughters. Fathers described their daughter's preference to talk to their mothers about menstruation. Typically, fathers were only engaged when daughters needed money to purchase sanitary products and the mother was not available. A father also reported that he provides a special dish for his daughters during their menstruation as they lack appetite during that time.

"I have two daughters and I understand and support them when they are in menstruation. They don't eat that well. I bring them a different dish. I and my wife are clear to support the children; we provide them all the necessary modus" (FGD participant father)

"My daughter never asked my help regarding how to use sanitary products. She already discussed about this with her friends at school. I used to try to explain to her everything about menstruation and MHM. But she always laughs and says that it is ok, and she don't need it" (FGD participant mother)

Mothers whose daughters had not started menstruation spoke about anticipating the need to support their daughters by buying sanitary napkins and pain killers to help keep their daughters attending school. Mothers might also remind their daughters to keep extra products in their bag all the time. Most mothers reported that their daughters do not come to them for advice about menstruation and tell them they already know enough from school and friends. Instead, talking to parents was most common when requesting sanitary products. Few mothers also

reported that their daughters seek advice or talk about menstruation with their fathers as they are afraid to discuss such issues with their daughters.

Some mothers also reported that they support their daughters during menstruation by reducing their daughter's chores to allow them to rest. Mothers also provide menstruating daughters with additional care by providing them more fluids to drink including soft drinks and hot drinks such as tea, coffee, gruel etc. and by preparing higher nutrient foods to help them recover from pain and dizziness.

4.4.5 Impact of Menstruation on Girls Education

Female student's parents generally agreed that menstruation affects education. Parents felt that the degree in which education is impacted depends on a host of factors including girl's readiness to manage menstruation, and levels of discomfort. These factors can lead to distraction from learning, reduced engagement in class participation, and absences, thus affecting overall educational achievement. Some parents also reported that female students could face harassment from male students in the classroom when they have sudden menstrual flow where there is no MHM product available nearby.

Female students may be shy to ask their teachers permission to go out and change their sanitary product during active class hours. As a result, they prefer to stay at home during menstruation and miss class instead. All participants agreed that school absence due to menstruation is more common in rural areas where girls lack access to appropriate MHM products.

"Yes, menstruation has an effect on a girl's education because during menstruation girls experience unpleasant feelings such as congestion, headaches, abdominal pain, nausea, and others. Thus, they will not be active in class and attend their learning attentively like their classmates." (FGD participant father)

4.4.6 Beliefs about Menstruation

Most mothers reported that the culture has become much more open for daughters to tell their parents when they have started menstruating and require menstrual products. Mothers reported knowing their daughters were menstruating based on physical symptoms, mood and disposition, marks of blood in laundry, and their daughters directly telling them. Fathers reported knowing when their daughters are menstruating also from physical symptoms, and mood/disposition, as well as by learning from their wives.

"I don't think the perception that a girl who has started menstruation is ready for sex or marriage exists in Addis Ababa these days. Such a perception was common during the time and place we were born and grew up". (FGD participant mother)

"We say that a girl who started menstruation has reached puberty and can start to get pregnant. If a girl starts to see her period, then she will be taken in mind for marriage. However, she should complete her education and join university rather than getting married. Girls should be educated to protect themselves from unwanted pregnancy..." FGD participant mother)

FGDs undertaken with fathers and mothers of female students showed that, traditionally, there is a dominant perception in the community that when a girl experience menstruation, they assume that she will soon start sexual relationships, become pregnant and can bear a child. Some of the FGD participant fathers also perceived that if a girl starts menstruation, she is ready for sex, that she could get pregnant and is ready for marriage as she can bear child. The FGDs with parents also indicated that some community members perceive that menstruation is a curse from God.

Regarding what the Orthodox, Protestant and Muslim religions dictate about women during menstruation, FGD participants reported that menstruating girls and women are not allowed to go to church or the mosque during menstruation. They do not enter a place of worship, nor fast or bow. Some of the participants mentioned that these restrictions are stated in the old testament of the holy bible even though such restrictions are lifted in the new testament. Similarly, some FGD participants also stated that a menstruating Muslim woman/girl is not allowed to participate in mosque prayers (solat), read Quran and not expected to fast during menstruation.

"There is a common belief that prohibits girls/women to take holy water and enter the church during their menses. But I am not sure where this belief has come from. So, during these times our daughters and sisters usually do not get inside the compound of the church and take a holy water. So, they will usually stay behind or do their prayers at the gate of the church compound" (FGD participant father)

A belief elicitation exercise undertaken with FGD participant fathers indicated that the majority of fathers (77.7%) believe that there should be household funds allocated to the purchase of menstrual health products for their wife and menstruating daughters. About 85% of fathers also disagreed to the statement that "A father should not be involved in conversations about his daughter's menstruation". However, about a quarter of fathers believe that it is the mother's job to educate female children about menstruation (26.7%) and menstruation is not something that should be discussed openly (24.5%). Similarly, nearly 29% of fathers agreed that a girl does not need to attend school once she has her period.

4.4.7 Menstrual Health Generational Changes

"During our time, we didn't have the freedom that young girls have these days to discuss about menstruation. We always felt ashamed and worried if anyone knows that we had menstruation. Even for my mother, I used to get close to her ear and tell her about my menstruation so that nobody else knows about it." (FGD participant mother)

To understand the experiences that mothers had during their first menses, a "generational change" activity and follow-up discussion was undertaken with the FGD participant mothers.

Most FGD participant mothers reported that they never had any knowledge about menstruation before they experienced their first menses. Mothers also reported using homemade sanitary products in the past to manage their menses due to lack of access to sanitary products sold in the market.

Mothers reflected that when they were young, they used to feel too ashamed to talk about menstruation with their mothers. However, in present day, they feel comfortable talking about menstruation openly with their daughters. Additionally, their daughters have friends who they can openly discuss menstruation and other personal health topics with. Mothers spoke to previously lacking proper toilet or

"I was shocked when I had my menstruation for the first time. My menstruation came for two days and it suddenly stopped. Then, I thought that I was pregnant. I didn't forget the way I pressed my abdomen to check whether I was pregnant or not. [laughing]" (FGD participant mother)

"Everything about menstruation is now obvious but before it was all hidden that you can't even talk about it with your mother. Our old families might know about menstruation, but they don't talk about it because they were afraid of it. I really appreciate the time that our daughters are living today" (FGD participant mother)

bathroom facilities to manage their menstruation growing up, as well as access to clean water, but indicated that sanitation facilities have improved since then.

4.5 School Teachers

4.5.1 Background

A total of 10 focal teachers (mean age 34(\pm 9.4)) were interviewed to assess knowledge on menstruation. The majority (60%) of teachers had over 12 years of teaching experience, with the other 40% having 3-9 years' experience. About 40% of teachers interviewed reported previously receiving training from Splash Ethiopia. Most teachers responded correctly to the knowledge questions, however there were some false answers.

4.5.2 School Clubs and Menstrual Health

"The school should avail more sanitary products to the students. The government is not giving adequate focus to availing sanitary pad because the officials consider MHM as a minor issue, but we know it is not. Most of the time we get sanitary products from NGOs". (IDI, focal teacher)

Interviews with focal teachers indicated that teachers regularly participate in the management of one or more school clubs. Existing clubs cover topics such as civics, ethics, mathematics, science, health, charity, environment, gender, art, music, sports, among others. However, at the time of the interviews, most of the clubs were inactive due to lack of budget for training and activities, lack of space, shortage of human resources, and limited commitment by teachers and school administration. Teachers are typically assigned to coordinate one or more clubs and as expected there is range in commitment levels among teachers and the students within each club.

The club that is the most relevant to menstrual health is the gender club. While teachers are typically assigned to lead clubs, the gender club functions on a solely volunteer basis. Additionally, the club is open to students of all grades. Focal teachers reported that the majority of members are girls in grade 9-10. Gender club teachers skewed female. The number of male students participating in gender clubs is marginal. Gender clubs are particularly constrained by many focal teachers' lack of expertise in the topic of gender and associated issues, such as menstruation. Therefore, many Gender Club focal teachers lack self-efficacy to effectively lead students in club related activities.

Health education begins in Kindergarten, where students learn about personal hygiene and handwashing. Sexual and reproductive health education is not taught until grade 6. In Grade 6, students are taught via textbooks about the sexual characteristics of males and females and bodily changes during puberty. While puberty education begins in grade 6, it is not until grade 8 that students are engaged in a lesson about menstruation. In interviews, teachers mentioned their concern that some girls start menstruation earlier and may not receive information on menstruation provided in Grade 8, unless informed by their family or other sources. Most focal teachers reported that boys and girls are taught about these topics to reduce stigma and harassment perpetrated by boys due to lack of awareness. The lessons encourage awareness-building and respect.

Most of the focal teachers interviewed reported that they received various types of short-term trainings from NGOs, such as Splash Ethiopia, as well as government sector offices in WASH topics, sometimes including menstrual health. While these trainings were helpful, and informative, teachers felt that often times they were too short to meet the intended objectives. Teachers requested more extensive trainings so that they can tailor what they learn to their students.

"I received training on hygiene from Splash Ethiopia. This training has supported me to be able to do my job effectively. Therefore, I suggest every teacher receives related trainings. We always try to maintain our facilities by ourselves using our own resource as a result of the training we received. We would not inform them as long as the maintenance can be managed with our resource" (IDI, Focal teacher)

While many teachers had received some sort of training, some teachers, reported never having been provided a training, except for peer-to-peer education sessions. The provision of teacher training was reported as essential for teachers to be successful in their jobs, especially if they are mandated to provide education to students around sensitive issues, such as menstrual health. Focal teachers suggested that menstrual health training should be given in order to best support students during puberty.

Focal teachers reported that some teachers do not feel comfortable discussing menstruation with students or fellow teachers. However, it was reported that biology teachers are able to teach the topic comfortably given their background and expertise. A focal teacher also stated that discussing topics related to menstruation may cause feeling of shyness and shame among students, which may in turn make teachers uncomfortable to discussing these issues further.

4.6 School Janitors

4.6.1 Background

Janitors that participated in the FGDs reported that they have very busy schedules throughout the school day/ They are tasked with a range of responsibilities including but not limited to cleaning toilets and bathrooms, cleaning classrooms and the larger school compound, from moving class chairs and tables, and delivering messages from the school to other government offices.

"We arrive early in the morning at 6:30 -7:00 AM. We start our day by cleaning offices. We then check if there are any messages to be delivered. Then after that, we proceed to clean students' toilets. During class break we clean the compound as student may litter many objects. At 2:00 in the afternoon, we also clean the compound and student toilets again. After class ends, we will again clean the class so that they could be readied for the next day" (FGD, Janitor)

"Our job is actually tiresome; I mean we work both as a messenger as well as janitor. We are supposed to travel a long distance to deliver school messages, sometimes using taxi and other times by walking on foot regardless of the heavy rain and strong sun. Our job is not rewarding enough. We are here because we do not have an option" (FGD, Janitor)

Janitors are responsible for delivering messages, letters, and magazines from the school administration to different woreda-level offices and other places outside of the school. Some janitors reported that they also water the plants in the school compound and take care of the school garden as well. Most of the responsibilities performed by the cleaning staff are the same every day except for larger cleaning tasks such as cleaning the compounds and library which is conducted only once or twice per week. There can be some tasks required on the janitorial staff on weekend, such as when the school auditorium is renting out by community groups. Generally, Janitors felt that there is shortage of

cleaning staff in most schools.

Most of the janitors reported that they would never choose to be a janitor if they had other better job opportunities as they do not feel there is anything pleasant about their job responsibilities. However, the comradery between janitors was noted as a positive. Often fellow janitors cover one another's shifts if there is an absence of illness. FGD participants also reported that helping the students to have a better learning environment is a motivator.

Almost all the janitors reported that they never received any training in relation to their work, except the short orientation they received during their recruitment. This orientation training is informal and mainly focuses on their roles, duties, and responsibilities at that particular school. Most of them learned job skills from the skill their colleagues or came into their role with previous experience working as janitor.

"I have not taken any training but as a woman we all know the basic of cleaning. Nobody gave us any information or a kind of training. When we were new, we were very eager to learn and to do our jobs and have done it successfully." (FGD, Janitor)

FGD participants indicated that the janitors are organized in to the 1:5 government structure. Each group has a group secretary and chairperson that host meetings to discuss any challenges they may be feeling in their role. The chairperson provides advice and input to address stated challenges and is able to report issues to the janitorial supervisors. The immediate supervisor of the janitors is called ‘midire giby’ (Chief of Compound). This person is responsible for human resources and providing supervision to the school guards and gardeners. The “midire giby” supervises, manages janitor schedules, conducted quality assurance checks, and provides feedback to the janitors on a daily basis. All janitors report to the ‘midire giby’. In the schools where there is no ‘midire giby’, the janitors report to the general service manager or to the finance officer of the school.

Some FGD participants reported that they do not have storage rooms to properly keep their cleaning supplies and tools and that there are times when such equipment and supplies are taken away or broken by students as they put their mopping materials outside.

“We don’t have a store for cleaning materials; we keep them in one small room which we use to take rest and eat food. We store mopping materials out of the room, and they can be taken and damaged by students. The room is so congested, and we have no space to take rest and eat food other than this. In short, you eat food while also smelling the cleaning chemicals and we are becoming ill due to the effect of these chemicals. It is also disgusting. How can you sit with cleaning equipment that you just cleaned with? I believe we must have separate rooms to store cleaning stuffs and to rest for staff.” (FGD, Janitor)

4.6.2 Janitor ability and challenges

During the FGDs with janitors, it was indicated that cleaning staff undertake activities that they do not feel physically able to do. One of the most physically challenging tasks they undertake on a daily basis is carrying water from a water point found outside of the school compound to the cleaning sites and facilities as well as to each classroom, office, and toilet. Cleaners are also expected to carry water containers upstairs to the higher floors.

Additionally, Janitors are required to move classroom furniture such as students’ desks, chairs, books, and corrugated iron sheets throughout the school grounds. These job responsibilities are particularly difficult for the older janitorial staff. FGD participants reported feeling physically challenged on a daily basis in their role as a school janitor.

- **Shortage of toilets/stalls and small size of changing rooms**

The janitors interviewed indicated that the number of stalls and size of toilets and changing rooms available is inadequate compared to the number of students using the facilities on a daily basis. As a result, the toilets are usually overused and become difficult to clean and manage. They also indicated that all of the students use the toilet facilities during class break time resulting in long lines, hurried/incorrect use of facilities, and improper disposal of sanitary products. Students also throw used sanitary products directly to the toilet when the baskets are full resulting in damaged pipes and septic issues. These conditions make the works of janitors difficult by complicating the collection and disposal of the used sanitary products and maintenance of the school sanitation facilities.

“What turns me off is when it comes to toilets cleaning. It makes me hate my job. It would be better if there are additional and larger toilets and pad changing rooms. I don’t blame the children because the current infrastructure is not suitable for them. If the toilets were large enough, they could have used them as changing rooms. Besides, they are also shy and very afraid.” (FGD, Janitor)

Data gathered through direct observation of toilets in the 10 schools covered in the study also showed that 6 of the 10 schools had flush/pour flush toilets, one school has a pit latrine with slab toilet and the remaining three schools had pit latrine without slab (open pit).

- **Shortage of water**

Water shortage was reported as the key constraining factor by janitorial staff in performing their job duties. Without consistent water access, cleaning staff duties are made much more difficult.

Data gathered through direct observation showed that water sources were available in toilets for only 3 of the 10 schools observed, and only one school had a toilet with a functional water source inside.

- **Shortage of appropriate disposal containers**

FGD participants also identified shortage of appropriate disposal containers in toilet stalls as a challenge. Interviewed janitors suggested that the dust bins/ garbage baskets placed in the student's toilets are too small to contain the menstrual waste that students dispose of and become full very quickly. Misuse of the disposal bins also results in menstrual blood contaminating the floor and surrounding areas within the stalls. These unhygienic conditions make cleaning inconvenient and unsafe for the janitorial staff. FGD participants recommended larger containers with a lid to address this challenge.

Direct observations of the disposal facilities of the ten schools covered in this study showed that only five of the ten schools had a centralized waste/trash disposal system. In three of the five schools with a centralized waste /trash disposal system, the trash receptacles/ waste pits were too full or overflowing at the time of the visit. In only one out of the ten schools visited, a pit for burning sanitary towels was seen and there was an incinerator for burning sanitary towels at the time of the visit. Three of the ten schools visited had a burning pit for waste disposal, one school has incinerator and the remaining six schools have a large trash dumpster for collection. It was in only one of the schools visited that the disposal system was located inside the toilets or latrine blocks to the girl's toilet.

- **Limited supply and poor quality of some cleaning supplies**

Most FGD participants reported that they have their own cleaning supplies such as broom, bucket, liter pickers, work gown, etc. The majority of them reported that they receive adequate supply of most of the cleaning materials they need but complained about short supply of cleaning chemicals and tools such as water pails and mops. In some cases, the cleaners use the same brooms to clean for toilets to clean other facilities around the school compound. In some schools, cleaning chemicals were reported to be provided for

"Water is becoming a big problem. We have good supply of other cleaning tools. We face a problem when there are water shortages. Even when there is water, there are only few water points (taps) and we are forced to carry water from such water points located at a long distance in the school compound using plastic containers." (FGD, Janitor)

"There is a problem with quality of cleaning chemicals like 'berekena' and 'Dettol'. There is a lot of 'Dettol' delivered every year with ample supply even for the next year. But it is of lower quality and lacks the aroma that usually helps to get rid of the unpleasant odor in the toilets" (FGD, Janitor)

cleaning office facilities

only, not toilets. Waste bins/baskets were also reported to be lacking or in short supply in some of the schools surveyed. Data gathered through direct observation of the toilets in the target schools showed that only six of the ten schools targeted in the study had dust bins inside their toilets. Some of the cleaning staff also complained about poor quality of the cleaning materials and chemicals they use.

Data gathered through direct observation of supplies used by janitors showed that cleaning materials were provided to janitors in all the ten schools. In eight out of the ten schools it was observed that janitors were wearing a protective garment while performing their job responsibilities. The observation team noted a bucket, broom, hypochlorite solution, disinfectant jell, and mop as the primary cleaning supplies and tools used by school janitors during their shift.

- **Low salary for High workload**

Almost all of the FGD participants reported that their job is labor intensive and their salary insufficient to cover their daily subsistence let alone to compensate them for their work. Cleaning staff agreed that their benefits and salary are disproportionately low when compared to the toll of their daily activities. They shared frustration that they are not paid enough to cover medical expenses if they get sick due to the nature of the work they do.

“There is no problem regarding the work that I do. It is my obligation and my source of daily subsistence. However, my salary which is 900 birr is too low compared to the work that I do. One person could get this in a day. What can you do with 900 birr? And even comparing it with the job burden that we have, it is nothing and incomparable” (FGD, Janitor)

- **Perceived health risks of the job**

“There is risk to our health. For example, we don’t have good quality mask to cover our mouth and face; it is made of a very small piece of cloth. It doesn’t cover us well. If you look at our skin [indicates her face] it is like this, it is affected; but what can we do?” (FGD, Janitor)

Some of the janitors reported that the dust and the chemicals they use during their cleaning tasks made them to develop allergies and, in some cases, long-term health problems. They also reported that the gloves and masks they use are off low quality and when they are damaged, they do cleaning activities with their bare hands causing potential health risks.

- **Human Resource Shortage**

FGD participants reported that a shortage of human resources for cleaning staff in their school is a critical problem. Janitors felt frustrated that there is no backfill for when they are sick and that there are not enough staff to cover the expansive school grounds.

- **Perceptions of cleaning staff**

Some FGD participants reported that there is generally lack of respect to janitors by the school community due to the nature of job they do as janitors.

“Other staffs have wrong perception about cleaners, and they downgrade our works or don’t value it. No one wants to come and see or check the difficult conditions in which we undertake our work. No one is concerned about us or asks us while we carry and transport water from distant places to clean a dirty latrine that has a terrible odor to use and even cause diseases to students and staff”

“Not only the payment, they also undermine our job as well as the janitors themselves. We are not treated like other citizens; we do not have the chance to speak loudly about the problems”. (FGD, Janitors)

4.7 School Administration

4.7.1 WASH Resources in Schools

In-depth interviews with school administrators revealed that the majority of administrators do not perceive menstrual health as a high priority intervention in their schools. Often, administrators mentioned toilets/latrines, soap, and water availability as their more critical concerns. Water was reported by the majority of school administrators as the most integral part of WASH, followed by latrine/toilets, and soap. Most administrators did connect the importance of water availability to menstrual health. Some school administrators emphasized the importance of water availability in schools especially for female students to properly manage their menstruation and added the importance of sanitary product availability.

4.7.2 Impact of Menstruation on Girls Education

School administrators perceive menstruation as a natural phenomenon. Many do not see menstruation as a negative impact on girl’s attendance, performance, or overall experience in school.

Most school administrators believed that as female students mature and become accustomed to menstruation, it has less impact on their school attendance. Overall, school administrators did not feel that menstruation was a cause of school unattendance but felt that female they did report that sudden onset of menstruation could result in a student needing to leave in the middle of class time to manage their menstruation. Some administrators noted that students may also miss class due to pain related to menstruation.

4.7.3 WASH Services in Schools

Interviews with school administrators revealed poor water accessibility in schools for drinking and basic hygiene. In WASH facilities, some school administrators reported availability of soap and water for keeping personal hygiene. Administrators explained that students also have access to sanitary products in school, covered by school budgets, teacher contributions, and in some cases NGO support. However, some school administrators explained that the supply of sanitary products can be inconsistent throughout the school year. A lack of private and comfortable places for students to change sanitary products was also discussed as a challenge since the ratio of students to toilets is often quite large.

“We provide free modes for female students when they experience menstruation. Here the challenge is that the provision of modus is not consistent. Sometimes we get it for free from NGOs and other times we don’t. Actually, I am trying my best to contact NGOs and get their support.”

“It is better if they can get water with soap in their toilet. Since the school has no budget to fulfill all required supplies, it is at least better if they keep their hygiene with water. It is also a must to have a place to change sanitary pad and wash for girls.”
(IDI, School Administration)

Conclusion

The results of this formative research provide new information about knowledge, attitudes, and practices associated with menstrual health in 10 government schools located in the 10 sub cities of Addis Ababa. Focus group discussions, interviews, and direct observation with key sub-populations including, menstruating and premenstrual female students, male students, teachers, parents of female students, school cleaning staff, and school administrators revealed nuanced findings. The findings indicate that while there have been gains in MHM inter-generationally, there are still major challenges. Each sub-population included in this research effort engages in the topic MH differently, but each has unique opportunities to contribute to the improvement of menstrual health for school-aged girls in Addis Ababa, Ethiopia. There is still much work to be done on the topics of MH education, infrastructure, stigma, product provision, and pain management. This formative research highlights many of these opportunities for increased focus for the purposes of evidenced-based implementation.

Annex I: Socio-Demographic Profile of Study Participants

TABLE 5 SOCIO-DEMOGRAPHIC PROFILE OF MENSTRUATING FEMALE STUDENTS, ADDIS ABABA, ETHIOPIA, DECEMBER 2019

Grade level (n=89)	(%)
5-8	58.4
9-12	41.6
Religion	
Orthodox	73.0
Muslim	16.9
Protestant	7.9
Catholic	2.2
Head of the HH	
Father	51.7
Mother	33.7
Employer	6.7
Relative	3.4
Self	4.5
Mothers education level	
Never attend school	13.5
Primary(1-8)	29.2
Secondary(9-12)	25.8
Technical/Vocational	6.7
Higher (diploma /degree)	12.4
Don't know	9.0
No response	3.4
Father's education level	
Never attend school	5.6
Primary(1-8)	20.2
Secondary(9-12)	25.8
Technical/Vocational	4.5
Higher (diploma /degree)	16.9
Don't know	22.5
No response	4.5

TABLE 6 BACKGROUND CHARACTERISTICS OF PRE-MENSTRUAL FEMALE STUDENTS FGD PARTICIPANTS, DECEMBER 2019

Grade level (n=21)	(%)
4	4.8
5	14.3
6	57.1
7	10.0
8	4.8
Religion	
Orthodox	57.1
Muslim	33.3
Protestant	4.8
Catholic	4.8
Head of the HH	
Father	47.6
Mother	42.9
Relative	9.5
Mothers education level	

Never attended school	19.0
Primary(1-8)	38.1
Secondary(9-12)	19.0
Higher (diploma /degree)	9.5
Don't know	14.3
Father's education level	
Never attended school	4.8
Primary(1-8)	33.3
Secondary(9-12)	33.3
Technical/Vocational	4.8
Don't know	23.8

TABLE 7 BACKGROUND CHARACTERISTICS OF MALE STUDENT FGD PARTICIPANTS, DECEMBER 2019

Grade level (n= 68)	%
5-8	71.9
9-12	28.1
Religion	
Orthodox	57.4
Muslim	19.3
Protestant	5.3
Catholic	18
Mothers education level	
Never attended school	17.5
Primary (1-8)	38.6
Secondary(9-12)	21.1
Technical/Vocational	1.8
Higher (diploma /degree)	12.3
Don't know	8.8
Father's education level	
Never attended school	10.5
Primary(1-8)	19.3
Secondary(9-12)	31.6
Technical/Vocational	7.0
Higher (diploma /degree)	14.0
Don't know	17.5

Annex 2: Household WASH

TABLE 8 HOUSEHOLD HAND WASHING AND TOILET FACILITIES RELATED INFORMATION OF MENSTRUATING FEMALE STUDENT

N=89	%
Use to wash hands/laundry/ personal cleansing at home	
Water jug /bowl & vessel	61.8
Indoor tap with running water	25.8
Outdoor tap with running water	9.0
Other	3.3
Water source in the home	
Piped water (in dwelling)	36.0
Piped water (outside dwelling)	58.4
Piped water (public tap)	5.6
Water you use for hand washing/personal cleansing come from the same source as your drinking water	
Yes	55.1
No	44.9
Toilet type at home	
Flush/pour toilet (in dwelling)	19.1
Flush/pour toilet (community)	33.7
Ventilated pit latrine (indwelling)	22.5
Ventilated pit latrine (compound)	21.3
Other toilet type	3.3
Share your most commonly used toilet with another family	
Yes	50.6
No	47.2
Don't know	2.2
Where do you wash your hands at home	
In home	53.9
Outside of home, next to dwelling	43.8
Not on dwelling premises	2.2

TABLE 8 HOUSEHOLD HAND WASHING AND TOILET FACILITIES RELATED INFORMATION OF NON-MENSTRUATING FEMALE STUDENT

N=21	%
Use to wash hands/laundry/ personal cleansing at home	
Water jug ,bowl & vessel	61.9
Indoor tap with running water	23.8
Outdoor tap with running water	14.3
Water source in the home	
Piped water (in dwelling)	61.9
Piped water (outside dwelling)	28.6
Piped water (public tap)	9.5
Water you use for hand washing/personal cleansing come from the same source as your drinking water	
Yes	57.1
No	38.1
I don't know	4.8
Toilet type at home	
Flush/pour toilet (in dwelling)	9.5
Flush/pour toilet (community)	66.7
Ventilated pit latrine (in dwelling)	14.3
Ventilated pit latrine (compound)	9.6

Where do you wash your hands at home

In home	61.9
Outside of home, next to dwelling	38.1

TABLE 9 HOUSEHOLD HAND WASHING AND TOILET FACILITIES RELATED INFORMATION OF MALE STUDENT

N= 68	%
Use to wash hands/laundry/ personal cleansing at home	
Water jug , bowl & vessel	59.7.
Indoor tap with running water	22.8
Outdoor tap with running water	17.5
Water source in the home	
Piped water (in dwelling)	31.6
Piped water (outside dwelling)	63.2
Piped water (public tap)	3.5
Borehole	1.8
Water used for hand washing/personal cleansing comes from the same source as drinking water	
Yes	80.7
No	15.8
I don't know	3.5
Toilet type at home	
Flush/pour toilet (in dwelling)	22.8
Flush/pour toilet (community)	43.9
Ventilated pit latrine (indwelling)	15.8
Ventilated pit latrine (compound)	17.6
Where do you wash your hands at home	
In home	61.4
Outside of home, next to dwelling	29.8
Not on dwelling premises	8.8

Annex 3: Proposed Interventions by Audience

Participants were provided with a list of proposed hardware and software candidate interventions and they were asked to select five interventions that they think should be prioritized for intervention at school level to improve their menstrual health. The following tables summarize the top five prioritized hardware and software interventions (ranked) along with reasons behind the selection of these interventions.

Proposed interventions by menstruating female students

Proposed Hardware Intervention

Interventions	Reasons for selection
Large stall size latrine	<ul style="list-style-type: none">- Improve comfort and motivation to use latrine while female student on menstruation
Sanitary product Vending Machine in Bathroom Block	<ul style="list-style-type: none">- Make schoolgirls confident to use school sanitary product without fear- Improve access to sanitary product at any time in school
Stall shower in Bathroom Block	<ul style="list-style-type: none">- Increase access to bathroom at any time while female students are on menses
Full length Mirrors in bathroom block	<ul style="list-style-type: none">- Increase the confidence of menstruating female students after using bathrooms (latrine)- Gives opportunity for female students to check their cloths whether or not stained by menstrual blood
Extra school uniform	<ul style="list-style-type: none">- Improve access to extra dress at the time of accidental staining of uniform by menstrual blood- Female students have no other options and not comfortable to wash their uniform if it gets stained by menstrual blood

Proposed Software Interventions

Interventions	Reasons for selection
Establishment of MH club	<ul style="list-style-type: none">- Facilitate open and informal discussions about menstruation- Facilitate experience sharing between students about menstruation- Create opportunity to easily facilitate boy student's engagement on menstrual related matters- Improve the confidence of female students and increase their life skill related to menstruation- Improve the knowledge of students on how to use sanitary product properly
Training of Boys	<ul style="list-style-type: none">- Improve understanding of boys on menstruation so that boys are encouraged to support female students- Clear negative attitude and perceptions of boy students on menstruation
Big Sister/Little Sister Program	<ul style="list-style-type: none">- Easy and comfortable approaches to discuss about menstruation among menstrual and pre-menstrual female students- Age proximity between students facilitate open discussions- Create opportunities to share ideas and facilitate peer support at the onset of menstruation

Janitors training	<ul style="list-style-type: none"> - Improve their awareness and also avoids fear of female students to use school latrines - Improve the cleaning practice of latrines including proper disposal of used sanitary product
Increase in break time in class schedule	<ul style="list-style-type: none"> - Avoids entering classrooms lately as a result of long latrine queue

Proposed interventions by premenstrual female students

Proposed Hardware Interventions

Interventions	Reasons for selection
Extra Uniform	<ul style="list-style-type: none"> - Improve access to extra dress at the time of accidental staining of uniform by menstrual blood - Female students have no other options and not comfortable to wash their uniform if it gets stained by menstrual blood
Sanitary Product Vending Machine in Bathroom Block	<ul style="list-style-type: none"> - Make schoolgirls confident to use school sanitary product without fear - Improve access to sanitary product at any time in school
Stall shower in Bathroom Block	<ul style="list-style-type: none"> - Increase access to bathroom at any time while female students are on menses
Full length Mirrors in bathroom block	<ul style="list-style-type: none"> - Increase the confidence of menstruating female students after using bathrooms (latrine) - Gives opportunity for female students to check their cloths whether or not stained by menstrual blood
Provision of soap in the bathroom	<ul style="list-style-type: none"> - Necessary for personal hygiene during menstruation

Proposed Software Interventions

Interventions	Reasons for selection
Establishment of MH club	<ul style="list-style-type: none"> - Facilitate experience sharing between students about menstruation - Improve the knowledge of students on how to use sanitary product properly - Prioritize the issues of menstruation in school among students and teachers
Parent MH training	<ul style="list-style-type: none"> - Because some parents do not have awareness on menstruation - Also facilitate discussion about menstruation between parents and their daughters
Big Sister/Little Sister Program	<ul style="list-style-type: none"> - Create opportunities to share ideas and facilitate peer support at the onset of menstruation
Sanitary Product Drive	<ul style="list-style-type: none"> - Improve access to sanitary product in particular for these who do not afford to buy - Make it easy to access sanitary product in school
MH reference materials for teachers	<ul style="list-style-type: none"> - Make teachers focus on menstruation (rather than focusing on anatomy of reproductive organ) - Most of the time menstruation is covered in higher grade levels. If teachers get references materials, it will be easily included for lower grades too.

Proposed Interventions by Parents

Proposed Hardware Intervention

Intervention	Reasons
Sanitary Product stock in school administration	<ul style="list-style-type: none"> - The administration office is always open and active while the store is usually locked, and students may not find it easy to access sanitary product from the store. However, care must be taken as some girls may be afraid of asking sanitary product from the administration office.
Changing rooms	<ul style="list-style-type: none"> - The toilets may not be convenient for girls to change sanitary products as almost every school member uses the toilet during class break and lunch time. Besides, changing rooms will be much cleaner and more comfortable than toilets.
Sanitary Product vending machines in bathroom block	<ul style="list-style-type: none"> - This is important when the administration office is closed, and girls are in urgent need of sanitary products. - Girls will not be afraid or shy to collect sanitary product from this source and they can manage themselves without visiting the administration office. Girls can go there freely and can get it at any time.
Incinerator in bathroom	<ul style="list-style-type: none"> - It helps to reduce the practice of throwing used sanitary products directly to the toilet but the incinerator needs to be close to the toilet block. - It is good to have incinerators as the baskets can be filled easily and girls don't find a place to dispose of used sanitary products. - Incinerators should be near bathrooms because they are easy to use, and all the rubbish can easily be removed.
Extra school uniforms	<ul style="list-style-type: none"> - There is a chance that drops of menstrual blood appear on a girl's uniform and they have to change. Availability of extra uniform at school helps students not to worry about such issues. - The provision of extra uniform for girls is of urgency as they could not get any additional cloth to cover their bottom during their periods. The previous uniform, unlike the one recently introduced by the government, has a sweater that girls use to cover their bottom when they experience such incidents during their period.

Proposed Software Intervention

Intervention	Reasons
Provision of MHM training to parents	<ul style="list-style-type: none"> - Everything regarding menstrual health management and support provided to girls starts from parents at home thus parents need to know how to treat and support their daughters during menstruation - Parents are the key actors in showing a better path to their children thus their capacity should be enhanced through trainings. - Parents, especially mothers should be training on school and peer mentoring programs for the girl's sake. - Training to parents about menstruation is important as they participate in a lot of associations and meetings and such opportunities can be used to educate them about MHM.
Establishment of MHM clubs	<ul style="list-style-type: none"> - MHM clubs play a key role in awareness raising and education about MHM. They can facilitate trainings organized by female teachers and students

MHM reference materials	<ul style="list-style-type: none">- It does not mean that all teachers have adequate knowledge of menstruation and proper menstrual health management. Thus, reference materials can help in enhancing their knowledge about menstruation. They can also use such reference materials to educate girls and boys as well about proper MHM.
Janitors training	<ul style="list-style-type: none">- Female students knowingly or unknowingly throw used sanitary products to toilets and the janitors are the ones who remove such waste with their hand and dispose to the incinerators. Thus, the janitors need to have adequate knowledge and skill to do this in a safe way without any health risk by using gloves and other techniques.- Janitors should also be trained on how to clean the WASH facilities appropriately and safely
Multi product training	<ul style="list-style-type: none">- There is still varying level of knowledge and skill about MHM. Thus, multi product trainings on how to utilize different MHM products need to be provided to students and female teachers as well.



Proposed Interventions by focal teachers

Behavioral Setting	Intervention idea
Classroom	<ul style="list-style-type: none"> - Assign sometime during class period for teachers so that they can provide key message on MHM after they received proper trainings. - Prepare some drawings (illustrations) that depict structural and reproductive body parts of girls and boys and post them in the classroom. There should be no picture about menstruation as it may be offensive for male students - Science teachers should use some reference materials to provide information and guidance to girls about menstruation - During biology class, supportive materials can be used to educate girls about menstruation and MHM - Additional educational materials that also address the needs of married female students, those who already have boyfriends need to be available for guidance and education.
Home	<ul style="list-style-type: none"> - Parents need to have better understanding about MHM issues and provide necessary support to their daughters. - Promote open discussion and communication between parents and children on issues such as menstruation - Promote availability of proper WASH facilities at home - Some girls may be living with extended families and may have a lot of pressure or lack of support at home. Thus, such girls need to be given special attention for home environment support - Educate parents to avail sanitary products to their daughters as needed
Bathroom	<ul style="list-style-type: none"> - Availability of clean ,adequate and convenient WASH facilities such as bathrooms and toilets need to be promoted at school level - Separate toilets should be available for male and female students - Availability of water should be improved as such constraints force students to wait until they go home to change their sanitary products - Put educational materials and key messages about menstrual health in girls' bathrooms (toilets) or changing rooms
Common hangout spots/Social Environments	<ul style="list-style-type: none"> - Avail separate hangout spots for girls different from boy students so that girls can discuss about menstruation and learn from each other without the discomfort of the presence of boys. - Design and implement strategies to promote constructive engagement of boy students during discussions on menstruation in common hangout spots

Proposed Intervention by school administration staff

Behavioral setting	Interventions	Reasons for selection
Classroom	<ul style="list-style-type: none"> - Allocating time for teachers in between class sessions to provide key messages on menstruation and MHM - Posting posters in the classrooms that provide key messages on menstruation and reproductive organs - Colorful stickers (posters) and guideline on MHM that are posted in class including messages on how to support menstruating female students 	<ul style="list-style-type: none"> - Provide opportunities to informal discussions with students about menstruation and MHM - Easy for students to capture concepts e.g. signs of menstrual onset - Students easily grasp information about menstruation and stimulate discussion in the classrooms among boy and girl students - Enhance knowledge and awareness on MHM - Improve the support given for female students while they are on menstruation
Bathroom	<ul style="list-style-type: none"> - Constructing adequate number of toilet compartments for female students - Separate male and female latrines & male and female latrines should be located at reasonable physical proximity - Clean toilet, enough sanitary products and availing changing room - Ensuring continuous availability of water 	<ul style="list-style-type: none"> - Avoids discomfort while female students are on menstruation - Important for reducing the impact of menstruation on female students' education
Common hangout spots (social environments)	<ul style="list-style-type: none"> - Availing different edutainment's that provide messages and information on menstruation through mini media and clubs - Establish MH peer groups 	<ul style="list-style-type: none"> - Enhance open discussion among the school communities - Improve the involvement of male students on menstrual related issues
Home	<ul style="list-style-type: none"> - Initiate discussions about menstruation and MHM among families (between daughters and parents) - Providing flyers with key messages on menstruation and MHM to parents (can be provided through students) 	<ul style="list-style-type: none"> - Parent need to have more understanding about MHM issues and easily provide support to their daughters - Promote frank discussion with parent and children on issues such as menstruation

Annex 4: Menstrual Health Knowledge Assessment

TABLE 10 MENSTRUATING STUDENT KNOWLEDGE ABOUT MENSTRUATION AND RELATED ISSUES

Menstruating Female Students (N=89)	Percent (%)		
	True	False	No resp.
Menstruation is a disease	3.4	95.5	1.1
Menstruation is a curse from God	13.5	82.0	4.5
Pregnant Women Menstruate	10.1	80.9	9.0
Menstrual blood comes from the stomach where food is digested	19.1	62.9	18.0
Menstrual blood comes from the womb	78.7	7.9	13.5
Menstrual blood contains harmful substances	37.1	44.9	18.0
Pain during menstruation means something is wrong and is not normal	30.3	48.3	21.3
Women/girls should not run or play while menstruating because it will be bad for their health	38.2	49.4	12.4
You cannot become pregnant during menstruation	48.3	30.3	21.3
Menstruation happens after you have sex	20.5	60.2	19.3

TABLE 11 PRE-MENSTRUAL STUDENT KNOWLEDGE ABOUT MENSTRUATION AND RELATED ISSUES

Females students' (Non- menstruation) knowledge of MH (N=21)	Percent (%)		
	True	False	No resp.
Menstruation is a disease	4.8	95.2	-
Menstruation is a curse from God	14.3	85.7	-
Pregnant Women Menstruate	42.9	57.1	-
Menstrual blood comes from the stomach where food is digested	14.3	81.0	4.8
Menstrual blood comes from the womb	85.7	4.8	9.5
Menstrual blood contains harmful substances	23.8	71.4	4.8
Pain during menstruation means something is wrong and is not normal	47.6	42.9	9.5
Women/girls should not run or play while menstruating because it will be bad for their health	52.4	38.1	9.5
You cannot become pregnant during menstruation	28.6	71.4	-
Menstruation happens after you have sex	23.8	76.2	-

TABLE 12 NIGHT SHIFT FEMALE STUDENT KNOWLEDGE ABOUT MENSTRUATION AND RELATED ISSUES

Females students' (Non- menstruation) knowledge on MH (n=18)	Percent (%)		
	True	False	No resp.
Menstruation is a disease	5.6	94.4	0.0
Menstruation is a curse from God	27.8	66.7	5.6
Pregnant Women Menstruate	11.1	66.7	22.2
Menstrual blood comes from the stomach where food is digested	22.2	66.7	11.1
Menstrual blood comes from the womb	88.9	5.6	5.6
Menstrual blood contains harmful substances	44.4	50.0	5.6
Pain during menstruation means something is wrong and is not normal	38.9	55.6	5.6
Women/girls should not run or play while menstruating because it will be bad for their health	22.2	50.0	27.8
You cannot become pregnant during menstruation	61.1	22.2	16.7
Menstruation happens after you have sex	5.6	83.3	11.1

TABLE 13 FOCAL TEACHERS KNOWLEDGE ABOUT MENSTRUATION AND RELATED ISSUES

Teacher knowledge of MH (n=10)	Percent (%)	
	True	False
Menstruation is a disease	-	100
Menstruation is a curse from God	-	100
Pregnant Women Menstruate	10.0	90.0
Menstrual blood comes from the stomach where food is digested	-	100
Menstrual blood comes from the womb	90.0	10.0
Menstrual blood contains harmful substances	60.0	40.0
Pain during menstruation means something is wrong and is not normal	50.0	50.0
Women/girls should not run or play while menstruating because it will be bad for their health	10.0	90.0
You cannot become pregnant during menstruation	70.0	30.0
Menstruation happens after you have sex	10.0	90.0

TABLE 15 PARENTS KNOWLEDGE ON MENSTRUATION AND RELATED ISSUES

Parent Knowledge of MH Mothers (n=61), Fathers (N=45)	Percent (%)					
	True	False	Decline to respond	True	False	Declined to answer
Menstruation is a disease	4.9	93.4	1.6	15.6	80.0	4.4
Menstruation is a curse from God	13.1	85.2	1.6	20.0	75.5	4.4
Pregnant women menstruate	11.5	86.9	1.6	13.3	86.7	-
Menstrual blood comes from the stomach where food is digested	19.7	75.4	4.9	11.1	84.4	4.4
Menstrual blood comes from the womb	90.2	3.3	6.6	86.7	13.3	-
Menstrual blood contains harmful substances	42.6	49.2	8.2	64.4	31.1	4.4
Pain during menstruation means something is wrong and is not normal	67.2	29.5	3.3	75.6	17.8	6.7
Women/girls should not run or play while menstruating because it will be bad for their health	45.9	52.5	1.6	68.9	26.7	4.4
You cannot become pregnant during menstruation	75.4	21.3	3.3	62.2	35.6	2.2
Menstruation happens after you have sex	24.6	65.6	9.8	24.2	75.6	-