



# WASH in Schools Empowers Girls' Education in Freetown, Sierra Leone:

An Assessment of Menstrual  
Hygiene Management in Schools



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Global Safe Water



**WASH in Schools** fosters social inclusion and individual self-respect. By offering an alternative to the stigma and marginalization associated with hygiene issues, it empowers all students – and especially encourages girls and female teachers. In recognition of the positive impact on girls' school attendance and achievement, initiatives around the world are addressing adolescent girls' menstrual hygiene management (MHM) needs through WASH in Schools programming. Such interventions are increasingly implemented in both development and humanitarian emergency contexts.

In 2012, UNICEF and the Center for Global Safe Water at Emory University initiated a programme to support collaborative research focused specifically on exploring the MHM challenges faced by female students in Bolivia, the Philippines, Rwanda and Sierra Leone. The project includes developing or strengthening MHM-related programming in schools in those countries.

Emory University sent research fellows to work with UNICEF and its in-country WASH in Schools partners on the programme. The assessment activities conducted and themes explored were guided by an ecological framework that covers societal, environmental, interpersonal, personal and biological factors. Questions for qualitative data collection were created to investigate and understand the personal challenges and needs girls have during menstruation in the school setting. The results are now published as a series of reports, including 'WASH in Schools Empowers Girls' Education in Freetown, Sierra Leone: An Assessment of Menstrual Hygiene Management in Schools'.

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## Contents

<b>Acknowledgements</b> .....	<b>ii</b>
<b>Executive Summary</b> .....	<b>1</b>
<b>Introduction</b> .....	<b>2</b>
Assessment background .....	2
Country context .....	3
<b>Methods</b> .....	<b>5</b>
Research setting.....	5
Data collection .....	6
<b>Findings</b> .....	<b>9</b>
Challenges girls face during menstruation .....	9
Impacts on and risks to education and health .....	10
Determinants of menstruation-related challenges .....	16
Discussion of key findings .....	27
<b>Recommendations</b> .....	<b>30</b>
<b>References</b> .....	<b>35</b>
<b>Abbreviations</b> .....	<b>35</b>

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# Executive Summary

From June through July 2012, Emory University and UNICEF collaborated in research aimed to understand the range of challenges faced by girls during menstruation in urban Freetown, as well as the determinants of those challenges. This report presents the methods, findings and key programmatic recommendations to address menstruation-related challenges among girls. More than 100 participants were engaged in eight schools and two communities, including teachers and girls, both in school and out of school.

Common challenges during menstruation discussed by girls included: pain; teasing and shame related to revealing menstrual status; leaks, stains and menstruation-related odour; lack of understanding of menstruation; lack of preparedness for menstrual onset; and inability to effectively manage menstrual flow at school. Participants discussed how coping with challenges had negative impacts on education, such as missing or leaving school to manage menses, reducing participation in class, distraction and missed educational opportunities. Such impacts could compromise girls' abilities to advance in school. Girls also reported itching and concern for infection, self-exclusion from their peers, and misinformation about the reproductive cycle that may put them at risk for unplanned pregnancy.

Girls' challenges and experiences were determined by multiple factors across the social ecology. At the societal level, while policies exist to protect girls' right to education, no policies address girls' specific needs at school, particularly during menstruation. Menstruation is considered to be a female-only topic that is not openly discussed. Behavioural restrictions during menstruation are enforced through religion. At the environmental level, schools have insufficient water, sanitation, disposal facilities and supplies for managing menses. Soap and absorbent materials, for example, are not always available or accessible.

At the interpersonal level, although girls do confide in their mothers, access to support at school is difficult, especially when girls have only male teachers. At the personal level, girls lack basic knowledge about menstruation and need practical guidance for managing menses. Because they want to hide their menstrual status, they alter their behaviour at school on days when they are menstruating. At the biological level, pain was the most widely discussed challenge girls faced.

Participants indicated that improvements to WASH facilities in schools, increased access to management materials, provision of information about menstruation and menstrual hygiene management, and support from others during menstruation would ameliorate challenges. This report provides a comprehensive set of recommendations and identifies the roles of key stakeholders based on study findings.

The assessment in Sierra Leone was part of a multi-country study of the challenges faced by girls in schools that includes Bolivia, the Philippines and Rwanda.

# Introduction

## Assessment background

The Government of Sierra Leone has established policies protecting girls' right to education, although current education and health policies do not yet specifically address menstrual hygiene. Research from other countries has found that the onset of menstruation presents several challenges for girls in school. Girls report experiencing stress, shame, embarrassment, confusion and fear due to a lack of knowledge, an inability to manage menstrual flow or from being teased by peers [1–3]. These challenges may negatively impact girls' learning experiences and result in absenteeism, distraction, decreased school participation and falling behind in course work [4–6].

Girls may face these challenges as a result of poor menstruation-related knowledge; insufficient access to menstrual hygiene materials; and inadequate school water, sanitation and hygiene (WASH) facilities for girls to wash themselves, change materials in a private space and discreetly dispose of menstrual hygiene materials [5, 7–9].

In an effort to learn more about girls' experiences, UNICEF Sierra Leone – on behalf of the Ministry of Education, Science and Technology and the Ministry of Health and Sanitation – conducted a baseline study to understand WASH in Schools coverage, pupils' behaviour, and the health and educational status of pupils in rural Sierra Leone. Activities to learn about girls' experiences and perceptions of menstruation were included in the study, and interviews were conducted with 2,211 girls over age 9, including 319 girls (16 per cent) who reported that they had started menstruating [10].

Of the girls who had reached menarche (319 of 2,211 girls surveyed, or 14 per cent), 10 per cent indicated that they had been absent from school as a result of menstruation during the three months prior to the interview. Among the girls who reported missing school, they missed an average of 4.2 days during the three months. The most common reasons were pain, fear of leakage and shame – although heavy flow, lack of water, lack of privacy for cleaning and lack of disposal facilities were also reported [10].



Source: United Nations Cartographic Section, [www.un.org/depts/Cartographic/english/htmain.htm](http://www.un.org/depts/Cartographic/english/htmain.htm).

Because the experiences and perceptions of girls in urban areas were not included in the baseline study, the aim of the Emory University-UNICEF collaboration was to understand the range of challenges faced by girls during menstruation in urban Freetown, as well as the determinants of those challenges. This report presents the methods, findings and key programmatic recommendations to address menstruation-related challenges among girls in urban Freetown. Data collection in Sierra Leone was part of a multi-country assessment of the challenges faced by girls in schools that included Bolivia, the Philippines and Rwanda.

## Country context

### **Water and sanitation**

At the national level, Sierra Leone is not on track to reach the Millennium Development Goal targets for water or sanitation. As shown in table 1, only 57 per cent of the population uses an improved water source, far from the target of 73 per cent by 2015 [11]. Only 13 per cent of the total population

has access to improved sanitation, with greater access in urban areas (22 per cent) compared to rural areas (7 per cent). In the Western Area Urban District, which includes Freetown, 91 per cent of the population has access to an improved water source and 32 per cent has access to an improved and non-shared sanitation facility [12].

### **Education**

The transition rate to junior secondary school from primary school is 77 per cent. There are 83 girls for every 100 boys, on average, attending secondary school, as shown in table 1. This varies throughout the country, with the Western Area Urban District having the highest gender parity ratio for primary and secondary school (primary school: 1.0; secondary school: 0.95) [12].

Many factors contribute to lower comparative attendance for girls, including early pregnancy, greater responsibilities at home in comparison to boys, and school fees [13]. Although primary school is free for all children, and girls are entitled to scholarships that cover part of the junior secondary school fees, there are many other fees related to school – which become too much for many families to afford, regardless of free tuition.

**Table 1. WASH and education statistics, Sierra Leone**

Total household access to improved water <sup>a</sup>	57%
Urban household access to improved water <sup>a</sup>	84%
Rural household access to improved water <sup>a</sup>	40%
Total household access to improved sanitation <sup>a</sup>	13%
Urban household access to improved sanitation <sup>a</sup>	22%
Rural household access to improved sanitation <sup>a</sup>	7%
Primary school enrolment among primary-school-aged students <sup>b</sup>	74%
Primary school enrolment among secondary-school-aged students <sup>b</sup>	37%
Secondary school enrolment among secondary-school-aged students <sup>b</sup>	37%
Primary school gender parity index <sup>b</sup>	1.04
Secondary school gender parity index <sup>b</sup>	0.83
Transition rate to secondary school (national) <sup>b</sup>	25%
Transition rate to secondary school in Western Area Urban District (Freetown) <sup>b</sup>	20%
School access to improved water in rural areas <sup>c</sup>	20%
School access to improved sanitation in rural areas <sup>c</sup>	5%

a. JMP 2013 [11].

b. Statistics Sierra Leone and UNICEF 2011 [12].

c. NestBuilders International 2012 [10].

### Sierra Leone's national standards for toilet facilities in schools

- No more than 45 students per drop hole (latrine).
- Gender-segregated facilities.
- Hand-washing facilities attached to each latrine block.
- Locations that are not too distant from a water source.
- Proper ventilation and adequate lighting.
- At least one specially designed cubicle for children with disabilities.

Data from the baseline study on the WASH in Schools programme in rural areas show that only 4.6 per cent of schools had toilet facilities that were aligned with national standards. Only 20 per cent of school water points were found to be functioning in the rural areas surveyed [10]. Comprehensive data on WASH in Schools in urban areas of Sierra Leone are not available.



Observations of WASH facilities were conducted in all schools in Freetown where research activities took place.

Photo credit: © Alexandra Fehr, 2012



# Methods

## Research setting

The assessment was conducted in Freetown, from 27 June–27 July 2012, in eight schools and two communities. Schools and communities were selected with help from UNICEF Sierra Leone partner organizations, including Action Contre la Faim (Action Against Hunger), Community Action to Restore Lives (CARL), Counterparts in Rehabilitation and Development in Sierra Leone, the Development Initiative Program and Oxfam International.

All schools were either government, government-assisted or community schools, and both Muslim Mission and Christian Mission schools were represented. Four schools were located in East Freetown and four in West Freetown, which are socio-economically different areas of the city. Schools were also selected to include WASH facilities of varying quality. Each partner organization chose schools that had ‘good’ facilities and ‘poor’ facilities. Schools with ‘good’ facilities had functioning water points and gender-segregated latrines that aligned with national standards. Schools with ‘poor’ facilities lacked latrine and water facilities or had facilities that were not functioning or maintained.

The partner organization CARL, which works with out-of-school adolescent girls in Freetown, chose two neighbourhoods or ‘communities’ – one in the eastern area of the city and one in the west – as locations for holding conversations with girls who were not in school.



The research team was assisted by UNICEF Sierra Leone and partner organizations in selecting schools with varying types and quality of WASH facilities.

Photo credit: © Alexandra Fehr, 2012

## Data collection

The activities conducted and the themes researchers explored were guided by the theoretical socio-ecological framework of factors expected to influence menstrual hygiene management (MHM), as shown in the figure below.

## Socio-ecological framework for MHM research activities and themes



The assessment included four types of activities:

1. In-depth interviews (IDIs) focused on girls' personal experiences with menstruation – including what they knew about menstruation, where the information came from, and how they managed menstruation in school and at home. Up to two in-depth interviews were conducted with girls at each school or community. In total, 20 IDIs were conducted, 16 with girls in schools and 4 with girls who were not in school.
2. Focus group discussions (FGDs) aimed to provide an understanding of girls' normative practices. These discussions focused on the typical experiences and beliefs girls have while menstruating. Personal questions were not asked, although girls were welcome to share personal experiences as they wished. Eight FGDs were conducted with girls in school and two were conducted with girls not in school, with up to eight participants in each group.
3. Key informant interviews (KIIs) were conducted with one to three teachers at each school. The interview questions covered hygiene, sanitation, menstrual hygiene education and perceived menstruation-related challenges experienced by girls at school, with content influenced by UNICEF's WASH in Schools Monitoring Package [13]. Sixteen teachers participated, including 15 female teachers and 1 male teacher. Teachers working in class levels 5 and 6, or who taught health and sanitation to these class levels, were selected to participate in the interviews.
4. School observations to assess water, sanitation and hygiene facilities were carried out using an adapted version of the UNICEF WASH in Schools Monitoring Package [13].

Details of the activities completed and participants involved are shown in table 2.

**Table 2. Activities and participants involved in MHM research, Freetown, 2012**

<b>Tool</b>	<b>Population</b>	<b>No. of activities completed</b>	<b>No. of participants</b>
Focus group discussions	Girls in school	8	61
	Girls out of school	2	16
In-depth interviews	Girls in school	16	16
	Girls out of school	4	4
Key informant interviews	Teachers	16	16
Observations	Schools	8	–
<b>Totals</b>		<b>54</b>	<b>113</b>

Questions for qualitative data collection were created to investigate and understand the range of personal challenges and needs girls had during menstruation in the school setting. In-depth interviews and focus group discussions with girls were recorded and conducted in Krio, then transcribed and translated into English by trained research assistants. Key informant interviews with teachers were conducted in English, and thorough notes were taken.

To ensure privacy, girls were individually approached with the help of a female teacher in the schools, often the sanitation and health education teacher, or a CARL programme officer in the communities. The aim of the research activities was discreetly explained to girls, without other people around. Girls could individually decide to participate or not. All girls who participated in the study provided spoken assent and had written parental consent.

Four women from Freetown were involved in the activities as research assistants. All of them had previous experience in research and were fluent in both Krio and English. In preparation for data collection, the research assistants participated in a three-day training workshop that provided a broad understanding of WASH and menstruation, methods and techniques in qualitative data collection, and research ethics.

Two modules from the UNICEF WASH in Schools online course were presented – ‘Introduction to WASH in Schools’ and ‘Special Topics for Girls’ [14, 15] – with additional information specific to Sierra Leone. Training on research ethics was adopted from the FHI 360 Research Ethics Training Curriculum [16], and the ethics protocols were reviewed and approved by Emory University’s Institutional Review Board and Sierra Leone’s Ministry of Education, Science and Technology.



Interviews and group discussions were part of the research in urban Freetown.

Photo credit: © Alexandra Fehr, 2012



# Findings

The findings highlight the challenges girls in Sierra Leone face at school when menstruating, as described by the girls themselves and other participants. The determinants of those challenges are also described, and the impacts and potential risks of menstrual hygiene challenges are explored. Quotations from the research discussions with girls in school and those in the community who were not in school appear throughout the findings section as a complement to the main text.

## Challenges girls face during menstruation

Attending school during menstruation can often be challenging for girls. Challenges have been identified as the experiences girls have at school during menstruation that make this time more difficult than other days at school. Challenges were identified through conversations with research participants: Girls were asked what their experiences were generally like at school during their period and how days at school during menstruation might be different than other days; other participants were asked about their perceptions of girls' experiences at school during menstruation.

Prominent challenges discussed by girls in urban Freetown include:

- Pain
- Teasing and shame related to revealing menstrual status
- Leaks, stains and odours
- Lack of understanding of menstruation
- Lack of preparedness
- Inability to effectively manage menstrual flow at school.

Details on the findings for these challenges are presented below.

### Pain

While girls discussed myriad challenges at school, almost all of them indicated that pain is the most difficult to manage. Stomach pain is the most common type discussed, although some girls mentioned pain in their hips and breasts. Pain was often discussed as a challenge during classes because it distracts girls from their lessons.

### Teasing and shame related to revealing menstrual status

Girls talked a great deal about being provoked or disgraced as a result of their menstrual status becoming known. In class, many of them adapt their behaviour to avoid being embarrassed in public and so boys or others will not know they are menstruating. Girls discussed, for example, not going to the board in front of the classroom and avoiding active play during menstruation.

*Your body does not feel fine, your stomach aches and you're short in blood.*

~ IDI 2, School 4

*While she is playing she will get an overflow of the blood which will stain her clothes and boys will provoke her.*

~ IDI 1, School 7

## Leaks, stains and odours

Girls are very concerned about having leaks and stains or a bad odour during menstruation. Leaks, stains and odours can bring negative attention and teasing and can be distracting to girls in school. Describing what a friend would experience in class, one girl said: “She feels torment in class and she takes excuse often, saying ‘aunty please excuse me I want to go and ease myself’, then she goes out to look at her uniform [to see] if there are blood stains” (FGD, School 4).

## Lack of understanding of menstruation

When sharing their experiences regarding the first time they menstruated, girls repeatedly indicated feeling bad when they got their period because they did not know what it was. Many girls said they did not know what was happening to them at menarche. Many were afraid of the blood and thought they had a wound. Some thought that they would get in trouble or that they were pregnant. Fear related to a lack of understanding was often discussed as a barrier to girls seeking support.

## Lack of preparedness

Girls consistently discussed not being ready for their period, whether at menarche or when having regular menses. At menarche, lack of preparedness was related to both a lack of understanding and not having absorbent materials. Even when menstruating regularly, very few girls reported bringing materials to school with them in anticipation of their period. Rather, many girls would react to their menses as it arrived, a difficult strategy for menstrual hygiene management because most girls did not bring pads to school, and schools did not provide pads. Girls reported asking friends, teachers or women who lived close to the school for help, or simply going home to manage the onset of menses.

*She took excuse to go home, because there was neither pad nor pissi [cloth] available at school...She took excuse to go home and clean up. She did not return to school until the next day.*

~ IDI 2, School 3

## Inability to effectively manage menstrual flow at school

While all schools had toilet facilities, the quality varied. Some girls indicated that they do not like to use the school toilets because they smell, and privacy is an issue for girls who do not have access to gender-segregated latrines. Many girls do not have a place to dispose used cloths or pads in their school toilets, so they devise other strategies for disposing materials: Some flush them or drop them in pit latrines, others carry them home or use the latrine of a neighbour near the school.

## Impacts on and risks to education and health

Discussions with participants suggested that as a result of the MHM challenges they faced at school, girls experience negative education- and health-related impacts and are at risk for additional negative consequences.

### **“I feel normal”: Menstruation does not always have to be a challenge for girls**

Despite the challenges many girls reported, there are some who say they feel normal when they are menstruating and can participate in activities as they would on any other day. The following excerpt from an in-depth interview is one example.

RA: *Do you go to school the day when menstruating?*

Participant: *Yes.*

RA: *Do you cook when menstruating?*

Participant: *Yes.*

RA: *Is there anything you don't eat because you are menstruating?*

Participant: *I eat everything OK.*

RA: *Is there anywhere you should not go when menstruating?*

Participant: *I go everywhere, unless to the mosque, OK.*

RA: *Do you go to school or stay in school all day?*

Participant: *Yes, OK.*

RA: *Is there any time you were asked to do something that you think you should not do when menstruating?*

Participant: *I always do everything. I always talk in class when menstruating.*

RA: *Do you play games when menstruating?*

Participant: *Yes.*

RA: *Do you sit close to people when menstruating?*

Participant: *Yes.*

RA: *Do you go to the blackboard when menstruating?*

Participant: *Yes, yes because I feel normal, OK.*

**Voiced impacts** are the impacts that girls and teachers discussed as negatively influencing girls' health<sup>a</sup> and education in the school setting. Voiced impacts include missing or leaving school to manage menses; reduced participation in class; distraction; missed educational opportunities; self-exclusion from peers; and itching, irritation and infection.

**Potential risks** to health and education are issues that may arise in the long term as a result of challenges or negative practices or behaviours related to menstrual hygiene management. While these issues were not mentioned as occurring, potential risks were identified through analysis based on the experiences and practices discussed by participants. Potential risks include unplanned pregnancy due to misunderstanding the fertility cycle and decreased educational advancement.

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a. The World Health Organization definition of health is referred to for the purposes of this report: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." *Source:* 'WHO Definition of Health', [www.who.int/about/definition/en/print.html](http://www.who.int/about/definition/en/print.html), accessed 25 September 2013.

## Voiced impacts

### Voiced impact 1

#### Missing school or leaving school to manage menses

Many girls mentioned that when they come to school unprepared for menstrual management, they will leave to clean themselves and get a pad or cloth. Although many girls do return to class, others do not. Some girls discussed missing school for a full day, while others insisted that they are in school to learn and would not skip school during menstruation. The extent of class time missed, whether a full or partial day, could be further explored in future research.

### Voiced impact 2

#### Reduced participation in class

When asked about behaviour in class during menstruation, girls said that they or their friends would often sit quietly in class. Some girls who would usually be in the front of the room would sit in the back because of the smell they perceived to have during menstruation. Fear of showing a leak would prevent girls from approaching the blackboard even if called upon.

### Voiced impact 3

#### Distraction

Concern over leaks and stains would preoccupy girls. Leaving class to check on their skirts or the positioning of pads and cloths was commonly reported. Pain and discomfort were described as too difficult to manage on some days, and girls would cope by resting with their heads on their desks.

### Voiced impact 4

#### Missed educational opportunities

Managing menses became particularly hard to cope with on days when girls needed to concentrate on exams. A few girls reported having difficulty taking a test or leaving an exam due to menstruation.

### Voiced impact 5

#### Self-exclusion from peers

Girls repeatedly discussed isolating themselves from their peers while menstruating. Several discussed a fear of shaming themselves in front of their friends due to personal odour associated with menstruation.

RA: *When you come to school when menstruating do you stay until school breaks?*

P: *No, I do take excuse during lunchtime to go home.*

RA: *So when you go home do you come back to school?*

P: *No, I will tell my teacher that I am not well.*

~ IDI 2, School 4

*I did not go to the blackboard for fear that I might be disgraced because it is a mixed school.*

~ IDI 2, Community 1

*No, I don't go [to the blackboard]. I will say I don't know what I am asked so that I cannot get up from my seat.*

~ IDI 2, School 2



RA: *What was difficult for you in school when you saw your period?*

P: *The thing that was difficult for me in school when I was on my period, was that day I was on exams. That day I felt so sorry for myself, but on that day my friend had brought [a] pad to school, so I used it. It was the pad that was difficult for me in school.*

RA: *Did you stay in school that day?*

P: *No, I went to my house.*

~ IDI 1, School 3

RA: *Do you behave differently in class when on your period?*

P: *Yes, Ma.*

RA: *How do you behave?*

P: *I don't feel fine, and when my friends come near me I ask them to go away, and I also do not feel fine to go near them.*

RA: *Why do you ask them to go away from you?*

P: *Because of my body odor.*

~ IDI 1, School 5

### Voiced impact 6

#### Itching, irritation and infection

Unhygienic menstrual management practices could lead to itching, irritation or infection. One girl reported switching to cloth because she experienced having an infection when using a pad. Another girl said she felt cloths were more likely to be a health risk: "The cloth is not good, like our friends who use the cloth, especially when it is raining season. Sometimes you dried it. Bacteria will rest on it, [but] you will not know you put it on. You will get sick or sometimes it is not dried properly. You use it, you will get infection and this will destroy your womb and you do not bear children" (IDI 1, Community 2).

Although using unclean materials may present health risks, sometimes girls are left without much choice if they are unprepared. Describing a day when she was at school and did not have a pad, one girl said that she improvised: "In my bag, there is always an old cloth which I use to clean my shoe, I used part of it to make [a] pad" (IDI 2, School 5). While her effort demonstrates an ability to cope with the challenge of being unprepared, the use of a cloth normally used for cleaning a shoe demonstrates that girls have few resources or outlets from which to seek sanitary resources.

Improper personal cleansing or infrequent changing of materials due to a lack of space, water or soap could also cause problems for girls. Girls indicated that they faced limited access to management resources and had difficulty gaining support for menstrual hygiene management in school. They also mentioned that they changed materials and bathed more frequently when they were at home. Further research is needed to determine what healthy behaviours girls are able to practise in different locations, and whether they are at risk for health issues based on the resources and facilities available to them.

## Girls discuss challenges: Excerpts from a focus group discussion

Research assistant (RA): *How do you feel when you are menstruating and you come school?*

Participant (P) 3: *I feel bad, because my stomach aches during that period.*

RA: *Why do you feel bad?*

P4: *I feel bad because of the pain.*

P5: *When I come to school I am unable to play, I don't go out for lunch, I feel weak, I am not able to do anything.*

P1: *I don't concentrate when in class...When on my period I don't play, I don't feel like eating, [I'm] unable to do anything. When they are teaching in class I don't pay attention, I lie down on my desk, because of the period pain.*

RA: *Things that [your friend] normally does in school and class, is she able to do them while on her period?*

P3: *No she is unable to do them.*

RA: *Why is she not able to do them?*

P4: *Because of the stomach ache.*

RA: *Do you stay or become uncomfortable in class when on your period?*

P5: *I feel uncomfortable.*

RA: *Why do you feel uncomfortable?*

P5: *Because of the period pain.*

RA: *What makes other people know that your friend has started seeing her period?*

P1: *When the blood gets stained on her clothes.*

P2: *When I look at the back of my seat [skirt] every minute to make sure that my pad is properly worn, that is when other people know that I am seeing my period.*

P3: *I sleep a lot in class, and do not play with my friends, that is when other people know that I am menstruating.*

RA: *Do you leave your seat in class when on your period?*

P4: *Yes, I leave my seat and move to the back of the class.*

RA: *Where do you normally sit in class?*

P4: *In the front row.*

RA: *Why did you move from your seat?*

P4: *Because of the smell, odor.*

RA: *Do you play with other people when on your period?*

P5: *No I don't play with other people when I am menstruating.*

RA: *Why don't you play with other people when on your period?*

P5: *I experience period pain and I don't want them to know.*

RA: *When on your period, do you wear clothes, or uniform?*

P1: *I wear clothes.*

RA: *Why do you wear clothes?*

P1: *Because when I am menstruating, I do not go to school.*

P2: *I wear uniform.*

RA: *If you are at home, which color clothes do you like wearing when on your period?*

P3: *I like to wear black clothes.*

RA: *Why do you like wearing black clothes?*

P3: *Because if the clothes happen to get stained with blood, nobody will noticed it.*

## Potential risks

### Potential risk 1

#### Unplanned pregnancy due to misunderstanding the fertility cycle

Many girls asked questions about menstruation and pregnancy. Girls frequently did not understand the link between menstruation and their fertility cycle. When asked about what restrictions they may have when they began menstruating, several girls said that they were told to no longer go near boys when they were menstruating because they might get pregnant.

It is not clear if the girls misunderstood the information that was provided to them or if they were simply provided with incorrect information. However, the misunderstanding is quite pervasive and may encourage girls to make decisions about sex that are misinformed and put them at risk for unintended pregnancy.

### Potential risk 2

#### Compromised educational advancement

Although none of the girls reported the inability to advance in school as a result of menstruation, related factors may actually be hindering their academic achievement. Missing or underperforming on exams, missing school, and being distracted and unable to concentrate in class may have consequences for girls' ability to advance to the next grade or onto secondary school.

*I want to ask, when we are menstruating and we have sex, do we get pregnant?*

~ FGD, School 5

*She [mother] told me that whenever I get period pain I should take medication and rest. I should not have sex with men during menstruation [or] I will become pregnant.*

~ IDI 2, School 4



Research discussions included girls who were not in school, and their contributions reflected on experiences with menstruation when they had been attending school.

Photo credit: © Alexandra Fehr, 2012

## Determinants of menstruation-related challenges

Challenges girls face managing menstruation at school are determined by factors that are largely preventable. *Determinants* are the factors that contribute to girls' challenges at school during menstruation and were identified through conversations with study participants. When girls described the challenges, they often explained why they occurred. If specific challenges were noted and not elaborated, follow-up questions were asked by the research team.

Determinants of the challenges girls face, as identified in the research activities, are presented below, according to five levels in the MHM research framework: (1) societal; (2) environmental; (3) interpersonal; (4) personal; and (5) biological.

### 1. Societal factors

Menstruation is not an open topic culturally, limiting girls' ability to discuss challenges and concerns. Menstrual hygiene needs are not included in any school policy documents, so the topic is neglected in many schools. Many girls discussed menstruation in terms of religion, but their discussions focused on restrictions that are placed on girls' behaviour and did not include guidance on managing menstruation.

#### Key findings on societal factors

- Policies exist protecting girls' rights, including their right to education.
- Menstruation is not openly discussed.
- Menstruation is considered to be a female-only topic.
- Girls discussed behavioural restrictions based on religion.

#### **Policies**

While several education and gender policies exist in Sierra Leone, there are no MHM-specific policies, guidelines or educational initiatives that support an enabling school environment for girls during menstruation. Among the legislation that supports children's right to education, the Child Rights Act of 2007, the Social Protection Policy 2009, the national Constitution (articles 8 and 9) and the Education Act of 2004 require all children to complete six years of primary school and three years of junior secondary school. They do not, however, explicitly address the social and physical environments of the school once children are enrolled and attending, or the specific needs of girls.

In 2010, the Education for All Sierra Leone Coalition carried out a situation assessment of girls' education and identified key recommendations for improving girls' educational experiences [17]. The assessment identified several policy-level recommendations that could positively influence girls' schooling experience during menstruation, including:

- Enforcement and proper implementation of girl-centred provisions in the child rights act/policy.
- Improvement of classroom and school environments.
- Creation of concrete plans for hiring more qualified female teachers in schools to motivate girls and reduce their fears related to menstruation.
- Satisfaction of specific educational needs of older girls (aged 11 and over).
- A focus on education quality – beyond enrolment parity – that engenders change in the classroom and breaks out of stereotypical gender roles.
- Creation of innovative programmes that include a life-cycle approach to education.



## Cultural beliefs

Menstruation is a taboo topic in Sierra Leone. It is not discussed openly and makes people, especially young girls, uncomfortable when talking about it. When discussed, menstruation is considered to be a female-only topic.

*People don't normally talk about it [menstruation] with children...It's a cultural thing. It's thought to be a very bad thing.*

~ Teacher

Girls and teachers reported that men and boys are not involved in dialogue regarding menstruation. When girls were asked whom they did not want to know about their menstruation, their response was their fathers, brothers, male peers and uncles. When asked why, girls responded, "Because they are men." A common reason cited for why a girl would confide in another girl or a woman was, simply, "Because she is a woman."

## Religious beliefs

Christianity and Islam both influence girls' behaviour and their perceptions of themselves during menses. Both Christian and Islamic girls reported not being able to touch the Bible or Koran, to pray or to enter the church or mosque while menstruating – and indicated that they were "dirty" during menstruation as a justification for these practices.

*If my grandmother is cooking she will not allow me to go closer there. And as I am a Muslim and now it is the month of fasting, I don't fast because I am menstruating and I don't go close to the mosque because it is not good.*

~ IDI 1, Community 2

RA: *Does your religion restrict you from doing anything during your period?*

P: *Yes, am not allowed to touch a Bible.*

RA: *Who restricts you from touching a Bible?*

P: *My mother.*

RA: *Are there places you should not go to during your period?*

P: *Yes, [I] am not allowed to go to church.*

~ IDI 2, School 7

## 2. Environmental factors

The quality and availability of water and sanitation facilities greatly impacted girls' ability to confidently manage menstruation in the school setting. An inability to effectively manage menses could put girls at risk of exposing their menstrual status and being teased.

WASH facilities varied greatly among the schools, as shown in table 3 (page 18). Only three of the eight schools met the national standard for a ratio of 45 pupils per one toilet. Two schools had no functioning toilets,

### Key findings on environmental factors

- Girls have inconsistent access to water and latrine facilities at school.
- Girls often lack access to MHM supplies, including pads or soap and water.
- Schools lack waste disposal systems, and girls have difficulty managing used materials.

and one school's toilets were unusable during the rainy season due to flooding. Three schools had gender-segregated toilets as recommended by the national guidelines. At the other five schools, boys, girls and teachers all shared the same toilets, offering little privacy for girls.

Only three schools had actively functioning taps for on-site water access. The remaining five schools had to collect water from taps in the surrounding community or from other sources such as streams.

**Table 3. WASH facilities at participating schools, Freetown, 2012**

Facility	Indicator	No. of schools (n = 8)
Sanitation	Functioning toilet facilities	5
	45 students or less per toilet	3
	Gender-segregated toilet facilities	3
Water	Functioning water supply	4 <sup>a</sup>
Hygiene	Functioning hand-washing facility	2 <sup>b</sup>
	Soap available	2
	Allocated place to dispose of pads	0

Source: School observations, KIIs with teachers and school administrators, and IDIs and FGDs with girls.

a. In two of the four schools, the water supply was functioning at the time of the study (during the rainy season) but is insufficient during the dry season.

b. Teachers at two additional schools said they had buckets that they would fill with water for students to wash their hands, but soap was not available.

The availability of WASH facilities and resources in schools greatly impacted girls' practices and their ability to manage menstruation. Personal hygiene, places to change and a lack of disposal facilities were often discussed.

The inability to practise personal hygiene effectively in the school setting was discussed frequently. Girls discussed the need to have a clean space, water, soap and absorbent materials, which were not usually available at school. Asked to describe an instance when she was not prepared for her menstruation in school, a girl said: "I will ask for permission to go home because the things that I use are not available in school, like soap and water, pad. These are all not available in school, that is why I take permission to go home" (IDI, School 5).

When asked what difficulties their friends face in school when menstruating, one girl said, "She does not get soap and water to clean up" (FGD, School 7). A girl no longer in school discussed how she had changed absorbent materials less frequently at school compared to home due to the availability of water and soap: "When I am in school I change once, because there is no soap and not enough water unless you buy some, but if at home I change several times and I bath[e] several times" (IDI, Community 2).

Girls discussed not having adequate places to go when they had their period at school. Not all girls had access to gender-separated latrines, and having boys outside was an issue for some. Some girls did change a pad or cloth in the toilets at school, while others went home. Recalling

when she did attend school, one girl no longer in school noted: "I went home and cleaned myself and my sister gave me cloth that I used that day" (IDI, Community 1). She added that by the time she was cleaned up, the school was closed and she did not return.

Due to a lack of facilities and resources at school, girls have reported that teachers will tell them to go home if they start menstruating. In reference to a friend, one girl said, "Her teacher told her to go home and clean up herself" (FGD, School 7).

Disposal facilities were not available in schools and girls had to figure out ways of managing used materials if they changed at school. In most schools, girls mentioned throwing used materials in the latrines or flushing them in toilets. Those who took them home would put used materials in a plastic bag and then throw them in a dustbin or in the river. Girls who used cloths and intended to reuse them had difficulty carrying used materials home to wash. Although some girls used plastic bags to transport materials, girls often left school to change.

Conditions at home, however, were also frequently difficult. Very few girls indicated that they had access to private sanitation facilities at home. Many girls indicated squatting at or throwing faeces in the river, while others discussed using shared latrines that were uncomfortable and lacked privacy because so many people in the community used them.

RA: *Do you have separate latrines for boys and girls?*

P4: *No, both boys and girls use the same latrine, all of us went there.*

P8: *We always are constrained, boys stand outside and wait for girls.*

~ FGD, School 1

### **Girls discuss their strategies for managing menstrual hygiene**

The following excerpt from a focus group discussion reveals both the lack of proper facilities for schoolgirls, and their ingenuity in trying to find a solution.

RA: *Is there a place in the toilet where you dispose of your pad after use?*

P3: *No, Ma, there is no place to dispose of our used pads in the toilet.*

RA: *Now that you have nowhere to dispose of the pads, where do you dispose of them?*

P4: *I put my used pad in a plastic bag. When I go home, I throw it away in the dustbin.*

P1: *When I change my pad, I dispose of it in the pit toilet.*

RA: *If you are in school and the cloth gets soiled, how do you manage it? What do you do?*

P2: *We throw it away.*

RA: *Where do you dispose of it?*

P1: *We go to one woman over there, because the [school] toilet is locked. We make as if we are going to ease ourselves, [then] when we enter, we dispose of it inside the toilet.*

RA: *It is [a] flush [toilet]?*

P2: *No, the woman hasn't flush, she has pit latrine that is where we throw our cloth.*

### 3. Interpersonal factors

Girls' relationships and systems of support impacted how they experienced and managed menstruation and whether they felt they could seek guidance. Girls discussed the different interactions and relationships they had with others, such as their mothers, female relatives, teachers and peers – including how relationships changed and how people in their lives played specific roles.

#### ***Relationships with family***

Among the girls we spoke with, the primary source of information and support regarding menstruation came from their mothers, or if they did not live with their mothers, their aunts. Girls who did not have traditional family structures or female relatives had to seek alternative sources. Girls said they felt most comfortable talking with their mothers or female relatives about menstruation. The main reasons were “because she is also a woman,” “I live with her” or “she is my mother, she knows everything about me.”

Girls would turn to their mothers for advice and also for supplies to manage menstruation. Mothers or aunts were most likely to buy pads for their daughters and nieces when they could afford them. If they could not buy pads, the girls would use pieces of their mother's or aunt's old *lappas* (traditional cloth wrapped around the body as a skirt and worn by many women). Girls also mentioned seeking information and supplies from cousins and sisters.

Girls were shy about talking about menstruation with their fathers. When asked who they would not want to know, they often mentioned not wanting their fathers or male relatives to know about their menstruation. Many felt it was a topic for women alone.

#### ***Relationships with teachers***

The relationships girls had with teachers varied and were affected by the teacher's gender. Girls said they felt more comfortable talking with their teachers if they were female. In some schools, girls said that they felt comfortable openly discussing and asking questions about menstruation with their female teacher. The female teachers were perceived to be more understanding and sympathetic to the girls' needs. These teachers were sometimes a source of information and MHM supplies, including pads or pain medication.

#### **Key findings on interpersonal factors**

- Girls confide in their mothers or female relatives about menstruation.
- Girls are generally more comfortable with female teachers than male teachers, especially discussing menstruation.
- Girls' relationships with male peers change at menarche.

**RA:** *Who do you not want to know [about your menstruation]?*

**P:** *The uncle I am staying with, my aunt's husband. I don't want him to know.*

**RA:** *Why?*

**P:** *Because he is a man, therefore he should not know about such things.*

~ IDI 2, Community 1



If the teacher were male, girls were not likely to confide in him about menstruation-related needs or questions. Girls described their interactions with male teachers as much more constrained, especially with anything related to menstruation. Girls would hide their menstruation from male teachers. One girl said she would rather be punished for being late to class than explain to the male teacher that she was managing her menstruation.

### **Relationships with female peers**

Many girls said they confide in their female friends about many topics, including menstruation. Female friends were a source of support for girls, and girls shared stories of helping their female friend or receiving help from a female friend if she were to begin menstruating at school. Girls help each other with materials for menstrual management, whether finding a pad or cloth, or providing a *lappa* to wrap around her uniform until she could get home. Girls would also help each other financially and would provide food to their friends in need.

There was a distinction in relationships with female friends based on whether they had begun menstruating. After reaching menarche, girls expressed feeling more comfortable speaking with other girls who had begun menstruating than with their female peers who had not. Some girls reported learning about menstruation for the first time from their female friends and then feeling comfortable going to those friends for support.

*[My friend] felt bad [when she started her menstruation] because, she went to me and said "I have seen blood." Then I told her, "let's go to our teacher," but she said she is afraid. I said to her, "don't be afraid, let us go," so we went to our teachers.*

~ FGD, School 2

*RA: OK, what can you remember about the first time you menstruated?*

*P: My friend that we walk together in school, saw her mens [menstruation] and she told me that I am also going to see it one day. So when I saw it I remembered her straight away and I told her "what you told me will happen to me has happened."*

~ IDI 2, School 8

### **Relationships with male peers**

Girls' relationships with boys appeared to change after menarche. It was common for boys and girls to play together at home and school, but once girls reached menarche, girls said they were expected to no longer play with boys. Girls were warned that they could "disgrace themselves" in front of boys if the boys found out they were menstruating. Girls also said they had outgrown playing with boys in a social sense: "When you start menstruating you stop playing with boys, but if you haven't seen your period you play with them" (IDI 1, School 7).

Some said they were afraid of becoming pregnant as a consequence of having contact with boys. Once girls began menstruating, almost all of them were told explicitly by their mothers, female relatives, teachers or peers to stay away from boys and men, particularly during menstruation. Girls also felt they would be disgraced or teased if boys knew they were menstruating.

#### 4. Personal factors

Girls' challenges in school were largely determined by their inability or lack of confidence to manage menstrual hygiene effectively, and their lack of knowledge about menstruation. Many girls indicated preferring pads to cloth because of comfort, but said they did not have the means to purchase them. In addition, due to fear of accidents or the experience of pain or fatigue, girls changed their classroom behaviour. Some girls also reported abstaining from activities at home.

#### Key findings on personal factors

- Girls receive little information about menstruation.
- Many girls alter their behaviour during class when menstruating.
- Girls prefer pads to any other form of MHM materials.



Although the latrines at one school were separated for girls and boys, the entrances were right next to each other, leaving girls with little privacy when entering or leaving the facility.

Photo credit: © Alexandra Fehr, 2012

## **Managing menstruation**

Girls worried about managing menstruation effectively and feared disgracing themselves. The majority of girls preferred sanitary pads for managing menses. Girls reported feeling more comfortable and confident when they were able to use pads. If they had pads, they were less afraid of leaking or shaming themselves at school or in public. They appreciated being able to dispose of pads, as opposed to washing and reusing cloths. They also felt pads would stay in place, unlike cloths, which could fall out.

Some girls discussed using pads at school and cloth when at home. Not all girls could use pads, however, and cost was the greatest barrier to schoolgirls accessing pads.

Girls who could not purchase pads used cloth, often torn pieces of their or their mother's *lappa* (wrap). Girls expressed feeling conspicuous when using cloth and reported frequent leaks on their clothes or school uniform. They also reported leaving class to check their skirts to make sure they did not have stains. One girl reported changing her dress on days when she was menstruating to prevent leaks and visible stains: "I wear pieces of clothes, I wear my pants, skin tight, I wear a black skirt and then wear my uniform" (IDI 1, School 6).

Changing and cleaning cloths for reuse was particularly challenging. Girls did not have ways to clean their used cloths at school, nor were they comfortable carrying them around during the day if they were to change them at school. Girls who wore cloths were very likely to go home to change, although girls reported returning to school afterwards. Also, girls knew to clean their cloths and hang them to dry in the sun, but said they preferred to keep them elsewhere so others would not see them.

Girls said that bathing two to three times a day was something they were taught they "must do" while menstruating. Medicine, either pharmaceutical or traditional, was only occasionally used during menstruation, although many girls desired access to pain medication.

## **Knowledge of menstruation and MHM**

For the girls who participated in this study, knowledge of menstruation is typically gained once they have reached menarche. Nearly every girl interviewed said she was unaware of menstruation prior to her first experience. Girls expressed feelings of fear and confusion. A small number of girls attempted to stop the bleeding by applying medicine because they thought that they had been injured.

*I wear cloth at home, and uniform in school with pad when menstruating.*

~ IDI 1, School 9

*RA: What did she use when menstruating?*

*P2: She always use cloth, she did not have pad.*

*RA: Why did she use it?*

*P1: Because she has no money to buy pads that is why she uses cloth.*

~ FGD, School 1

*RA: What can you remember about your first menstruation?*

*P: I could remember that I thought I had a wound.*

~ IDI 1, School 6

Girls would seek help from trusted sources to manage menstruation, such as mothers, sisters, aunts, teachers or friends. They would often first learn about menstruation from these conversations seeking guidance. But not all girls felt comfortable seeking help because of the private nature of menstruation.

Even if girls had an idea of what menstruation was – for example, they learned from an older sister or friend who had begun menstruating – they were still surprised. However, having awareness seemed to help a few girls who did know in advance that they would experience menstruation to be less afraid.

Some girls would go directly to the person who first told them about menstruation, knowing it was a safe source. As described during an in-depth interview: “At first I was afraid, but when I realised my mother had told me about it, I became relaxed. I was going to the market and I had crossed the main road when I experienced it, so I managed to go to the market. When I returned I explained it to my mother” (IDI 2, Community 1).

*RA: What have you learned about puberty and maturity in school?*

*P: I have not learnt anything yet about these things, that is why I don't have any idea on them. They also don't teach them in school.*

*RA: If you haven't learnt anything at school, where have you learnt what you know?*

*P: I haven't learned anything at home either.*

~ IDI 2, School 5

*RA: The first time you had your period, how did you feel?*

*P: I felt bad because I was not expecting it. I was afraid, I thought my mother would beat me.*

*RA: Did you know what it was when you first saw it?*

*P: No, I did not know what it was.*

~ IDI 1, School 7

*RA: What have you learnt in school about puberty and maturity?*

*P: I learnt about maturity in school that when you are 15 years or 13 years of age, your breasts will shoot out and then you menstruate, after menstruation, your life and system changes. How you used to be before, that is not how you will be again.*

*RA: Why do women and girls menstruate?*

*P: To remove the filth from the stomach.*

*RA: What is good about menstruation?*

*P: Menstruation cleans the stomach, and if there is sickness in the stomach it clears your stomach very well.*

*RA: Do the lives of girls change when they start menstruating?*

*P: Yes.*

*RA: How does it change?*

*P: Because how you used to be has changed. When she hadn't seen her period, she was filthy, and liked to play like a child, but when she starts to see her period, she is clean and does not play like a child again and she also helps her family with household chores.*

~ IDI 1, School 3



Even after menarche, many girls still had unanswered questions and did not feel that they had enough information. In particular, girls were unaware of the physiological aspects of menstruation. When asked why women and girls menstruate, girls often responded with “because they have reached that stage,” “because they are now mature,” “because they are a woman” or “because they are of the age.” They did not know why girls of a certain age would begin menstruating. On a few occasions, girls mentioned that women menstruate to “clean the stomach of dirty blood.”

Occasionally, girls would link the act of menstruation with future childbearing. They stated that women and girls menstruate so that they are able to have children, or that not menstruating meant a woman was unable to bear children. But the biological reasons or how menstruation was linked to having children were often unknown. The most common menstruation-to-childbearing link that girl expressed was the belief that sex during menstruation would lead to pregnancy. Few girls knew that sex in general could lead to pregnancy now that they had reached menarche.

Most girls in the study expressed the belief that sex during menstruation could result in pregnancy. Often, this was the only information girls were taught about menstruation, and this information was accompanied by a common warning taught to girls: “Be careful of men.” On occasion, girls interpreted this further, believing that playing with or touching boys while menstruating could lead to pregnancy. According to one teacher, there were girls in her class who believed that having their period meant that they were pregnant.

Four teachers said their school taught some form of menstrual hygiene education, but only two of these schools formally included menstrual hygiene management in the curriculum – as part of the toolkit developed for the School Sanitation and Hygiene Education (SSHE) initiative. Few girls mentioned learning about menstruation in school, and when asked about what they learned, answers were broad and did not provide clear explanations of menstruation or why it happened.



A girl’s age at menarche varies according to biological and socio-economic factors. This study emphasizes the importance of teaching girls about menstruation before they have their first period.

Photo credit: © Alexandra Fehr, 2012



### **Girls discuss their struggles to understand menstruation**

“When I told my older sister that I have started menstruating, she told me I have started having sex, so she went and told my mother, so I ran away from home.” (IDI 1, School 8)

“[My mother] told me when I am menstruating I should not have sex with boys because I will become pregnant.” (IDI 2, School 2)

“My teacher is a male teacher so I am ashamed to talk about [menstruation] with him.” (IDI 2, School 4)

“She said [that] I have not seen my period, which implies I have started having sexual intercourse... when a girl starts to mess, she is a virgin. That was the only thing they told me.” (IDI 2, School 5)

### ***Behaviour at school during menstruation***

Several girls said they always attended class and did not behave any differently at school while menstruating: They went to school, stayed at school, participated in class and interacted with their peers. But most girls altered their behaviour. Some said they would skip school for a full day. Others would go home if they began menstruating while at school, generally to manage menstruation, and would usually return to finish the school day. However, girls who left school due to menstrual pain would often not return.

When girls were in school during menstruation, they often remained quietly in their seats or did not play or talk with their peers. Girls would sometimes move so they did not have to sit next to anyone, either because they did not want others to know they were menstruating or they were afraid of odour. Some girls would stop participating in class and would not go to the chalkboard in front of the class. Frequently mentioned reasons for this included fear of leakage; concern that others would know their menstrual status; and menstrual pain that caused girls to feel ill and fatigued. Teachers confirmed that many girls participated less in class while menstruating, noting that girls would rest their heads on their desks and would not answer questions.

### ***Behaviour at home during menstruation***

When not in school, girls had varying degrees of behaviour change or restrictions regarding menstruation. Many girls did not want to complete their household chores or interact with peers and family. This was often a result of pain or fatigue, but also of fear of their menstrual status being known.

There were some places girls were prohibited from visiting or activities they were excluded from participating in while menstruating. The most pervasive restriction was to stay away from men and to abstain from sex. Muslim girls were not allowed to attend services at the mosque, and some reported being restricted from praying or touching the Koran. Many Muslim girls reported being restricted from cooking, entering a garden or fetching water while menstruating. Their mothers or a sibling were responsible for taking over these activities when the girls had their periods. Christian girls reported not being able to go to church or touch the Bible. Both Muslim and Christian girls said these restrictions came from religious teachings and from their mothers.

## 5. Biological factors

The timing of menarche, menstrual pain, discomfort and fatigue, and heavy flow were important determinants of girls' experience of menstruation. Most girls reached menarche by age 13, yet few had been educated about menstruation before this time. Programmes aiming to implement puberty and menstruation education should reach out to girls before they experience menarche and other pubertal changes.

Menstrual pain was discussed by nearly every girl in the study and was often considered girls' greatest challenge. Pain was one of the main reasons girls did not fully participate in school or other activities, and few girls had access to pain medication.

Some were able to access pain medication such as acetaminophen from the pharmacy, and one girl indicated that she got injections from the hospital for pain relief. A few girls used "country medicine," a mixture of herbs and roots originating from traditional medicine.

Providing medication to cope with pain was one of the most frequent recommendations from girls. Fatigue and general discomfort caused many girls to not want to participate in class or their daily activities. Heavy blood flow was also a concern for some girls, and they expressed constant worry of blood leaking during these days – especially when they did not have access to pads, because cloths were deemed inadequate to control heavy blood flow.

## Discussion of key findings

The study results identified specific factors within the theoretical framework that affect girls in Freetown, Sierra Leone, as shown in table 4 on page 28.

Many similarities exist between the present study in urban Freetown and the previous baseline study in rural Sierra Leone [10]. The physical environment of schools is a challenge for all students, particularly adolescent girls, in both urban and rural environments. At many schools, girls do not have the necessary facilities to manage their menstruation. Girls in both urban and rural areas want functioning toilets, water and soap, and gender-segregated and private facilities.

Another common finding between the rural WASH in Schools study and this study is that girls discussed participating less in school while menstruating. In rural areas, the study found that 45 per cent of girls said they do not like to stand up in class. This sentiment was also expressed frequently by urban girls when asked if they go to the blackboard while menstruating.

### Key findings on biological factors

- The average age of menarche among girls who participated in the in-depth interviews was 12.8 years old.
- Pain was the most discussed challenge for girls during menstruation.

*I took excuse from my teacher to go home because I was having stomach pain.*

~ IDI 2, School 5

*We don't have anybody to help us, because when our stomach is aching we don't have anybody to give us money to buy medicine, so help us.*

~ FGD, School 5

**Table 4. Summary of key factors affecting girls**

Framework factor	Study findings
Societal – policy, tradition, cultural beliefs, religion	<ul style="list-style-type: none"> <li>• Many policies exist addressing education and gender, but enforcement varies</li> <li>• Menstruation is a taboo topic and only discussed among women</li> <li>• Traditional beliefs regarding menstruation are still prevalent</li> <li>• Education should be sensitive to religious beliefs and traditions</li> </ul>
Environmental – water, sanitation, resource availability	<ul style="list-style-type: none"> <li>• Schools have inconsistent access to water and toilet facilities</li> <li>• Girls often lack access to MHM supplies, including pads, soap and pain medication</li> </ul>
Interpersonal – relationships with family, teachers and peers	<ul style="list-style-type: none"> <li>• Girls confide in their mothers or female relatives</li> <li>• Girls are closer to female teachers than male teachers</li> <li>• Relationships with male peers change after menstruation</li> </ul>
Personal – knowledge, skills, beliefs	<ul style="list-style-type: none"> <li>• Girls receive little information on menstruation</li> <li>• Girls often participate less in class when menstruating</li> <li>• Girls prefer to use pads rather than cloths</li> </ul>
Biological – age at menarche, pain, intensity of menstrual flow	<ul style="list-style-type: none"> <li>• Girls in the study, on average, reached menarche before age 13</li> <li>• Menstrual pain is a big challenge for girls at school and in general</li> </ul>

Both rural and urban girls learn about menstruation most often from their mothers or female family members, and are taught information about using pads and restrictions during menstruation. Restrictions are often based on religious practices and, for both rural and urban girls, include not going to religious institutions, cooking or fetching water while menstruating.

In the rural baseline report, some girls reduced contact with boys while menstruating, while the majority of urban girls mentioned reduced contact with boys.

Age at menarche varies among and within countries, based on biological and socio-economic factors. One study comparing the age at menarche in 67 countries found the mean age to be 13.5 years old [18]. In this study, girls were an average age of 12.8 when they experienced their first menstruation, though the assessment had a small, non-random sample.

When schools teach about menstruation, it is often in junior secondary school. In Sierra Leone, the age of schoolchildren at each grade level varies, but most girls are old enough to have already begun menstruating well before menstruation is taught in school.

This study highlights the importance of reaching girls prior to menarche, and teaching girls according to age and not grade to make sure information is provided before their first period is experienced. Several girls cited that knowing about menstruation prior to menarche would eliminate much of the fear and shame they experience during their first menstruation.



Multiple stakeholders – including the Government of Sierra Leone, UNICEF and non-governmental organizations – must be involved in the continued effort to make schools more child- and girl-friendly.

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The MHM research carried out in Freetown is a qualitative study that does not follow the same methods of selection and sample size as a quantitative study. Therefore, the results can not necessarily be extrapolated to populations outside those who participated in the study.

As an overall conclusion, however, it becomes apparent that multiple stakeholders – including the Government of Sierra Leone, UNICEF and non-governmental organizations – must be involved in the continued effort to make schools more child- and girl-friendly. Specific programmatic recommendations for key stakeholders are discussed in the next section.

# Recommendations

The girls who participated in this study suggested many recommendations that could be applied to WASH in Schools programmes implemented by UNICEF and other national and international organizations, as well as recommendations for their families and schools. Most of their suggestions focused on improvements to the physical environment and requests for supplies such as pads and pain medication. Girls also requested more information and guidance, particularly before menarche. Table 5 presents suggestions expressed by girls and teachers during the MHM assessment in Freetown.

**Table 5. Participants’ recommendations, by topic**

Topic	Quotations from the research
WASH facilities in school	“We will tell them to provide us a structure for girls that are menstruating in our school...and also get a place to dispose of our used pads...We need these things because we don’t have them in school, but if we have them we will be able to clean up ourselves.” (IDI 1, School 5)
Access to materials	<p>“We want you people to help us, because we don’t have money to buy pads. We don’t have money to buy lappas [cloth]. We don’t have money to buy the things we should use when on our period, so these are the things we want you to help us with...pads, water, soap and cloth, and with a place where we can go to clean up ourselves when we come to school.” (IDI 1, School 3)</p> <p>“I would want them to help us, the menstruating girls, with pads, soap and water in school to prevent us from going home each time we see our period.” (IDI 1, School 3)</p> <p>“Let them give us medicine to drink whenever we experience stomach pains during menstruation.” (FGD, School 4)</p>
Information on menstruation and menstrual hygiene management	<p>“I would want them to teach us about menstruation because I and most of my colleagues do not understand... I would want [parents] to tell their children about menstruation before they experience it, because if they get prior knowledge, they will be prepared for it and would not be ashamed.” (IDI 2, School 3)</p> <p>“I want to know how to take care of myself, and the things you should do and the ones you should not do during menstruation.” (IDI 2, School 1)</p> <p>“Parents don’t teach their children about menstruation. We need to educate mothers. Go to the air and get mothers involved.” (Teacher)</p>
Support for girls on managing menses in school	<p>“P2: I want them to train one female teacher who will show us what to do, and we can also talk to her.”</p> <p>“P3: Because she will be the one we can talk to and she will teach us how to clean up ourselves.” (FGD, School 6)</p> <p>“The girls feel comfortable talking with me. I will have lunch with them and teach them things about menstruation, like how to use pads and keep clean. It’s a good thing and good for them.” (Teacher)</p>



Table 6, on pages 32-33, outlines programmatic recommendations based on information provided by girls and teachers during group discussions and in-depth interviews; data gathered during school observations; and information from policy documents and the baseline report. These recommendations are organized by the five types of research framework factors: societal, environmental, interpersonal, personal and biological.

While all of the assessment recommendations are evidence-based, the evidence comes from a small sample of urban schools in Sierra Leone. Stakeholders should consider what is feasible in their specific context and test various strategies for action at a small scale to discern what is most effective.



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**Table 6. Programmatic recommendations, by research framework themes**

Implications of the research findings	Recommendations	Responsible parties
<b>Societal factors</b>		
<p>Parents need to discuss menstruation with their children.</p> <p>Girls need a safe space to discuss menstruation, especially at school.</p> <p>Negative connotations surrounding menstruation need to be removed, and more positive language needs to be used when discussing menstruation.</p>	<p><b>Increase dialogue about menstruation in the school community:</b></p> <ul style="list-style-type: none"> <li>• Discuss menstruation at parent-teacher association meetings;</li> <li>• Encourage parents to discuss menstruation with their children and emphasize that parents need to discuss menstruation with their daughters, before and after they begin menstruating;</li> <li>• Include men and boys in the conversation;</li> <li>• Use positive language when discussing menstruation.</li> </ul> <p><b>Create a safe space at school for girls to discuss menstruation:</b></p> <ul style="list-style-type: none"> <li>• Utilize already existing SSHE clubs and have a ‘girls-only’ section where girls can meet together to discuss health-related topics;</li> <li>• Include a trusted female teacher or woman from the community to help lead the section.</li> </ul> <p><b>Include topics on menstruation in already occurring radio messages pertaining to health.</b></p>	<p>Teachers and school administrators</p> <p>Parents and the community</p> <p>Students</p> <p>Those who control health messages on the radio</p>
<b>Environmental factors</b>		
<p>Girls need access to gender-segregated and private toilet facilities and water in schools so they do not have to go home to manage menstrual hygiene.</p> <p>Girls need access to consumable supplies, such as pads, soap and pain relief medication.</p>	<p><b>Improve WASH facilities in schools:</b></p> <ul style="list-style-type: none"> <li>• Provide functioning toilets for girls that are private and separate from boys’ facilities;</li> <li>• Ensure that a clean, private space is available for girls to change absorbent materials;</li> <li>• Have water within facilities for personal cleansing;</li> <li>• Place bins within facilities for girls to privately and safely dispose of absorbent materials that will not be reused while at school;</li> <li>• Create a system for safely handling waste.</li> </ul> <p><b>Make consumable supplies available in schools:</b></p> <ul style="list-style-type: none"> <li>• Make soap available to all students;</li> <li>• Make pads available for girls, especially if they are unprepared when menstruating at school;</li> <li>• Make pain medication available;</li> <li>• Create programmes to help generate funds for necessary supplies with support from the community and parents.</li> </ul> <p><b>Encourage principals and school administrators to discuss budgetary needs for WASH facilities and consumable materials with education authorities:</b></p> <ul style="list-style-type: none"> <li>• Include consumables and WASH infrastructure when planning school budgets.</li> </ul>	<p>UNICEF</p> <p>Ministry of Education, Science and Technology</p> <p>WASH stakeholders working in schools</p> <p>Teachers</p>

Table 6 continued

Interpersonal factors		
<p>Girls need social support while at school.</p> <p>A teacher can be a source of information, someone girls can go to when they need to discuss menstruation or other needs.</p> <p>Girls need access to female teachers because they feel more comfortable speaking with them than with male teachers.</p>	<p><b>Train a female teacher or female school staff member to support girls:</b></p> <ul style="list-style-type: none"> <li>• Provide them with more in-depth knowledge on menstruation, MHM and girls' health, enabling her to provide practical guidance consistent with the school environment and available resources;</li> <li>• If a teacher or staff member is not the best person for this role, involve a local woman from the community or a community health worker to be active in supporting girls' needs in school.</li> </ul> <p><b>Make sure there are female teachers in every primary and secondary school.</b></p> <p><b>Train teachers, especially male teachers, to be more sensitive to the needs of menstruating girls.</b></p>	<p>Ministry of Education, Science and Technology</p> <p>Teachers</p> <p>Teacher trainers</p>
Personal factors		
<p>Girls need accurate information regarding menstruation and sexual activity in order to reduce the risk of unwanted pregnancy and sexually transmitted infections.</p> <p>Teachers need to be aware of how girls change their behaviour in class while menstruating and support them through this time.</p> <p>Many girls alter their behaviour at school while menstruating; for fear of bloodstains that reveal their menstrual status, girls do not actively participate in class or with their peers.</p>	<p><b>Utilize the SSHE booklet on menstruation or other menstruation-related education resources to provide girls with access to information on menstruation and MHM:</b></p> <ul style="list-style-type: none"> <li>• Increase circulation of the booklet to both girls and teachers;</li> <li>• Encourage girls to read and teachers to use the booklet as an educational reference;</li> <li>• Solicit feedback from teachers and girls on the SSHE booklet to guarantee it is meeting their informational needs, and make improvements as needed.</li> </ul> <p><b>Encourage teachers and administrators to promote a learning environment where it is unacceptable to tease girls or any student.</b></p> <p><b>Encourage a classroom protocol where students do not have to stand to answer a question.</b></p>	<p>Teachers and school administrators</p> <p>UNICEF and WASH in Schools stakeholders</p>
Biological factors		
<p>Teaching about menstruation needs to begin at younger ages to ensure girls know about it prior to menarche.</p> <p>Girls need pain relief medication during menstruation in order to participate more fully in daily and school activities.</p>	<p><b>Provide information on menstruation prior to menarche:</b></p> <ul style="list-style-type: none"> <li>• Start teaching menstruation in primary school and continue into junior secondary school;</li> <li>• Begin providing information according to age, not grade;</li> <li>• Include practical guidance to girls on health and hygiene, biological aspects of menstruation, and sexual and reproductive health.</li> </ul> <p><b>Help make pain medication, along with other consumables, available for students, especially menstruating girls.</b></p>	<p>Ministry of Education, Science and Technology</p> <p>School officials</p> <p>Those who are responsible for setting the school curriculum</p>

## What girls need: Their suggestions for better menstrual management

During the research in Freetown, girls expressed the need for pain medication and more comfortable menstrual pads.

RA: *What do you think should be done for girls that have started menstruation?*

P1: *I think you should give the girls medicine because she has started her period.*

RA: *Which kind of medicine?*

P1: *Pain medicines.*

P2: *We want you to give us pads, because when we use the cloth it disturbs us.*

RA: *How does it disturb you?*

P2: *It makes us itch.*

Other recommendations from this discussion included:

P3: *We want you to send us soap, because the local soap disturbs us.*

P4: *To help us with a place to use to clean up ourselves when on our period in school.*

P5: *We want them to help us with a place to dispose of our pads.*

P6: *We want them to help teach us about the menstrual cycle.*

P7: *When on our period, we want them to show us the time we should start and the time we end for the other month.*



Providing girls with practical information about MHM before they reach menarche will help them manage menstruation with confidence.

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## References

1. Abioye-Kuteyi, E. A., 'Menstrual Knowledge and Practices amongst Secondary School Girls in Ile Ife, Nigeria', *Journal of the Royal Society for the Promotion of Health*, vol. 120, no. 1, March 2000, pp. 23–26.
2. Irinoye, O. O., A. Ogungbemi and A. O. Ojo, 'Menstruation: Knowledge, attitude and practices of students in Ile-Ife, Nigeria', *Nigerian Journal of Medicine*, vol. 12, no. 1, January–March 2003, pp. 43–51.
3. Sommer, Marni, 'Ideologies of Sexuality, menstruation and risk: girls' experiences of puberty and schooling in northern Tanzania', *Culture, Health & Sexuality*, vol. 11, no. 4, May 2009, pp. 383–398.
4. Sommer, Marni, 'Where the Education System and Women's Bodies Collide: The social and health impact of girls' experiences of menstruation and schooling in Tanzania', *Journal of Adolescent Health*, vol. 33, no. 4, August 2010, pp. 521–529.
5. Sommer, Marni, 'Putting Menstrual Hygiene Management into the School Water and Sanitation Agenda', *Waterlines*, vol. 29, no. 4, 2010, pp. 268–278.
6. Ten, Varina Tjon A., editor, 'Menstrual Hygiene: A neglected condition for the achievement of several Millennium Development Goals', Europe External Policy Advisors, Zoetermeer, Netherlands, 10 October 2007.
7. McMahon, Shannon A., et al., '“The Girl with Her Period Is the One to Hang Her Head”': Reflections on menstrual management among schoolgirls in rural Kenya', *BMC international Health and Human Rights*, vol. 11, no. 1, 2011, pp. 1–10.
8. Crofts, Tracey, and Julie Fisher, 'Menstrual Hygiene in Ugandan Schools: An investigation of low-cost sanitary pads', *Journal of Water, Sanitation, and Hygiene for Development*, vol. 2, no. 1, 2012, pp. 50–58.
9. Montgomery, Paul, et al., 'Sanitary Pad Interventions for Girls' Education in Ghana: A pilot study', *PLOS ONE*, vol. 7, no. 10, October 2012, e48274.
10. NestBuilders International, 'Rural WASH in Schools Programme in Sierra Leone: Baseline study report', Ministry of Education, Science and Technology, Ministry of Health and Sanitation, Government of Sierra Leone, and United Nations Children's Fund, Freetown, 2012.
11. WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation, 'Progress on Sanitation and Drinking-Water: 2013 update', World Health Organization and United Nations Children's Fund, Geneva and New York, 2013.
12. Statistics Sierra Leone and United Nations Children's Fund, *Sierra Leone Multiple Indicator Cluster Survey 2010: Final report*, Statistics Sierra Leone and UNICEF, Freetown, December 2011.
13. United Nations Children's Fund, *WASH in Schools Monitoring Package*, UNICEF, New York, April 2011.
14. Freeman, Matthew C., 'Module 1. Introduction to WASH in Schools', *The WASH in Schools Distance-Learning Course*, United Nations Children's Fund, New York, 2012, pp. 8–13.
15. Caruso, Bethany, 'Module 8. Special Topics for Girls', *The WASH in Schools Distance-Learning Course*, United Nations Children's Fund, New York, 2012, pp. 38–43.
16. Rivera, Roberto, and David Borasky, *Research Ethics Training Curriculum*, 2nd edition, FHI 360, Research Triangle Park, N.C., 2009.
17. Education for All Sierra Leone Coalition, 'A Situational Assessment of Girls' Education: Final report', EFA-SL, September 2010.
18. Thomas, Frédéric, et al., 'International Variability of Ages at Menarche and Menopause: Patterns and main determinants', *Human Biology*, vol. 73, no. 2, April 2001, pp. 271–290.

## Abbreviations

CARL	Community Action to Restore Lives	no.	number
FGD	focus group discussion	P	participant
IDI	in-depth Interview	RA	research assistant
KII	key informant interview	SSHE	School Sanitation and Hygiene Education
MDG	Millennium Development Goal		
MHM	menstrual hygiene management	WASH	water, sanitation and hygiene





*We need a structure for girls that are menstruating in our school...and also a place to dispose of our used pads...because we don't have them in school. But if we have them, we will be able to clean up ourselves.*



*She had to go home, because there was neither pad nor pissi [cloth] available at school...she went home to clean up. She did not return to school until the next day.*



*While she is playing she will get an overflow of the blood which will stain her clothes and boys will provoke her.*



*When I told my older sister that I have started menstruating, she told me I have started having sex, so she went and told my mother, so I ran away from home.*



– Excerpts from in-depth discussions with schoolgirls



**WASH in Schools Empowers Girls' Education in Freetown, Sierra Leone**

An Assessment of Menstrual Hygiene Management in Schools

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