

Uncovering the challenges to menstrual hygiene management in schools in Mali

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There is limited information on girls' menstrual hygiene practices and experiences at school in francophone sub-Saharan Africa. We conducted qualitative research to determine the challenges faced by school-aged girls in Mali, a culturally diverse and largely Muslim country. Research activities were conducted in eight urban and rural schools across the Sikasso and Koulikoro regions, including in-depth interviews with 26 girls and key informant interviews with 14 teachers and school directors. Results describe girls' practices for managing menstruation at school, their support systems and information channels, and their voiced recommendations for school WASH and education improvements.

Keywords: menstruation, school, adolescent girls, Mali

THERE HAS BEEN INCREASED ATTENTION on the ways in which menstruation can impact the educational experience of girls in low-income countries. Qualitative studies have found that girls report missing class time to manage their periods and even dropping out of school (Sommer, 2010b; McMahan et al., 2011; Keihas, 2013; Mason et al., 2013). While in school, abdominal pain and fear of leaks can impair concentration and prevent girls from participating if required to stand or go to the board (Rasmussen, 1991; Sommer, 2010b; McMahan et al., 2011; Caruso et al., 2013; Haver et al., 2013; Long et al., 2013).

Multiple factors prevent girls from successfully managing menstruation at school. A comparative study of menstrual hygiene management (MHM) in Cambodia, Ethiopia, Ghana, and Tanzania found that girls faced common challenges across these disparate contexts, including inadequate guidance and information both pre- and post-menarche and insufficient school latrines and water supply (Sommer et al., 2014). Studies undertaken by Emory University and UNICEF in Bolivia, Philippines, and Sierra Leone also found lack of communication; insufficient knowledge, practical guidance, and support; limited access to preferred materials; and inadequate water

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access, sanitation conditions, handwashing facilities, and disposal mechanisms to be common across contexts (Caruso et al., 2013; Haver et al., 2013; Long et al., 2013).

Although there are broad similarities in the challenges girls face when managing menstruation, cultural contexts pose unique challenges as well. In order to address girls' needs and mitigate educational impacts, solutions must consider cultural practices and beliefs (Sommer, 2010a). The few studies on menstruation in francophone West Africa focused on issues of reproduction, the practices of adult women, or the cultural meaning of menstrual blood (Gottlieb, 1982; Rasmussen, 1991; Slobin, 1998; Levin, 2001; Madhaven and Diarra, 2001; Castle, 2003). To date, only one study, conducted in Niger and Burkina Faso, has focused on the menstrual attitudes and practices of adolescent girls (Keihias, 2013).

The aim of this study was to understand the cultural practices, beliefs, and structural environments that impact how girls in Mali manage menstruation at school. The study was conducted in partnership with UNICEF, Save the Children, WaterAid, and Emory University under the umbrella of a Dubai Cares-funded WASH in schools partnership. The findings of this research are intended to inform ongoing and future initiatives to improve girls' education in Mali, including the development of an MHM module for the national teacher training curriculum in partnership with the Ministry of Education. Girls' involvement in this research enabled the identification of recommendations aligned with their voiced concerns (Sommer, 2010a).

Methods

Setting

Mali is an ethnically diverse country, with cultural ties that spread throughout West Africa. The population is estimated to be 95 per cent Muslim and 2 per cent Christian, although many people adhere to traditional animist beliefs (Institut National de la Statistique, 2011). Nationally, 82 per cent of school-aged children are enrolled in primary school, with fewer girls (76 per cent) than boys (87 per cent) (UNESCO, 2012).

Study design

This qualitative study was conducted as part of a larger investigation of menstruation and puberty-related knowledge and practices among school-age girls in Mali. The current analysis focuses on in-depth interviews (IDIs) with girls that explored their personal MHM experiences, and key informant interviews (KIIs) with teachers and school directors that sought their perspective of this issue.

School and pupil selection

Data were collected at eight mixed primary (grades 1–6) and secondary (grades 7–12) day schools, including four schools in Sikasso region, three schools in Koulikoro region, and one school in Bamako city. Four schools were in urban areas and four were rural. Schools were selected purposively to have latrines and a water source on

the grounds to understand girls' challenges when the most basic structural needs for menstrual management were available.

The study staff identified girls who had experienced at least one menstrual cycle and invited their mothers to the school to learn the purpose of the research. Girls whose mothers approved of their participation were invited for interview. We conducted IDIs with three or four girls at each of the eight schools for 26 total interviews. Girls were 12–17 years old, in grades 5–9, and were of Bambara (10), Senoufou (10), Peuhl (4), Dogon (1), and Bwa (1) ethnicities. KIIs were conducted at five of the schools with one female and four male school directors and three female and six male teachers.

Data collection activities

Tools were adapted from a multi-country Emory–UNICEF collaboration to understand girls' challenges in school during menstruation (Caruso, 2014). Topics in the IDI guide included: first knowledge of menstruation, experience of menarche, support and information channels, and management practices. Topics in the KII guide included: formal education and informal discussions about menstruation, attitudes towards teaching menstruation, and perceptions of the impact of menstruation on girls' education.

Interviews were conducted by trained research assistants in Bambara or French and recorded. French-language interviews were transcribed verbatim. Translators produced written French translations of the Bambara-language interviews.

Analysis

Interviews were analysed using thematic analysis (Guest et al., 2011) and coded using MaxQDA v10. Codes developed in the Emory–UNICEF multi-country study were modified and applied. Coded data were reviewed to identify trends, and sub-codes were created to reflect the detail of girls' experiences and teachers' perspectives. Sub-codes were reviewed and organized into themes that describe girls' management practices in school.

Ethics

Ethical approval for the study was granted by the Emory University Institutional Review Board and by the CNRST, the Malian board for authorization of research designated by the Ministry of Education. Mothers provided written consent and girls provided oral assent.

Results

We describe girls' school menstrual management strategies and three factors that explain these strategies: a culture of minimal information that left girls unprepared; beliefs and practices that require certain resources and infrastructure; and an

inadequate school environment that did not fulfil those needs. These broad themes were true for girls across regions and ethnicities.

School management strategy

Few girls had strategies for managing menstruation that kept them in class and free from the distraction of worrying about leaks or stains. The majority of girls would go home immediately if their period started while at school, including those who lived over an hour away. Few girls made preparations for the onset of their periods by bringing protective materials to school. Girls generally relied on the protective material they placed in the morning to last throughout the school day. Only 5 of 26 girls said that they brought additional cloths or pads with them to school. The few girls that did not leave immediately when materials failed or needed replacement used head wraps or folded up their skirts to hide stains.

When you leave your house [in the morning] you place it and you don't return until the evening. Or if you have a friend close by you go to her house to change, or you rest sitting in class until the end of lesson so that all of the others leave before you (Age 15, urban Sikasso).

None of the girls reported seeking assistance from teachers. Girls who went home did not tell teachers why they left; they would say that they were ill or needed at home. Teachers and school directors were not aware that girls were missing class frequently due to menstruation-related challenges.

Culture of minimal information

Girls had few discussions with mothers, sisters, or friends about how to practically manage menstruation. Only half of the girls reported having knowledge of menstruation before menarche. Aside from telling girls of the existence of menstruation, these early conversations did little to prepare them and rarely covered management practices.

Participant: My friends they talked about it [menstruation]. At that time they were all older than me. They said sometimes periods give you stomach ache ... to not have sex during periods, that it wasn't good.

Interviewer: Did anyone tell you what to do if you got your period?

Participant: No, no one had told me that (age 17, rural Koulikoro).

At first period, most girls confided in their mothers; some turned to aunts, grandmothers, sisters, or friends; and three did not seek help from anyone. Five girls specifically tried to hide that they had started menstruating from their mothers and for some this was motivated by misinformation: 'I was afraid of [telling my mother]. I heard that you get your period when you go to bed with a boy' (age 13, Bamako).

When girls sought support at menarche, they learned methods to manage menstrual blood and that menstruation signified that they were capable of having children. These conversations often did not include practical management information or

indicate that menstruation was recurrent, leading girls to be unprepared for future cycles. None of the girls reported learning how to manage menstruation at school specifically.

Many girls did not have further conversations about menstruation after their first period. All but a few said that they were ashamed to talk about it. Only two girls said that they had talked about menstruation with their teachers. Others cited shame or lack of female teachers in the school. One girl said that she 'did not know if we are supposed to tell the teachers' (age 13, Bamako). Girls were more likely to report talking to close friends, but over half of the girls said that they didn't talk about it with anyone and felt that it needed to be kept secret to avoid shame: 'If you tell people they will gossip about it in town. It will make you ashamed' (age 13, rural Koulikoro).

According to teachers, there is a formal curriculum starting in 7th grade (approximately age 14) that covers topics related to the biology of menstruation. However, among the 16 7th, 8th, and 9th grade girls interviewed, only two reported having received a formal lesson on menstruation. No books or materials are available on menstruation at any of the schools. School directors reported that only biology teachers receive training on menstruation-related topics. Nearly all teachers interviewed said that they would be comfortable teaching on menstruation if they received proper training. Only two teachers reported ever having spoken with girls or other teachers about menstruation.

Practices and beliefs

Practices and beliefs around cleanliness, maintaining secrecy, and the power of menstrual blood influenced girls to miss class during their periods. Bathing and washing were central to most girls' management experiences; one of the words used most frequently to refer to menstruation in Bambara is *koli*, which means washing. Most girls said they would go to the latrine or other bathing area to wash themselves and their clothes at the start of their period. They also stressed the importance of bathing throughout their periods. 'The changes that I had [in life after menarche] were to wash myself well and to wash my clothes, and to manage my period well so that people were not aware' (age 15, rural Sikasso).

The need to keep their menstrual status secret also influenced girls' management strategies. Many girls spoke of the shame associated with poor management, whether from stains or wearing absorptive materials improperly so they are seen. Most preferred using latrines or washrooms (enclosed bathing areas) to change their menstrual materials, as these facilities were practical and offered privacy.

Girls typically used pieces of cloth from old *pagnes* (cotton fabric typically used as wrap skirts) to absorb menstrual blood. Fewer than half of the girls had tried commercially purchased sanitary pads, including only two girls in rural areas. Six girls used pads exclusively. Girls who had tried pads generally preferred them to cloths, but cost and access impeded use. Several girls reported that they did not use anything to manage their periods; they wore or carried an additional wrap skirt or changed their underwear frequently.

After use, menstrual cloths were typically washed, hung or lain somewhere private to dry like inside the latrine or under their bed, and stored for re-use in a concealed place. Once cloths could no longer be used, girls threw them in the latrine or burned them. Girls who used pads also reported throwing them in the latrine, often washing off the blood first. Girls frequently stressed that it was not appropriate to dispose of used materials in trash bins. Some girls said that they would be embarrassed if someone saw them, but they mainly had a desire to control access to menstrual blood to prevent someone from casting a spell on them. Even letting someone see menstrual blood was perceived to have negative ramifications: 'People shouldn't see it, that's why we are told it isn't good to throw it [used menstrual materials] in the trash bin, and boys shouldn't see it ... that could provoke complications around pregnancy' (age 13, Bamako).

Inadequate school environment

Despite having latrines and water facilities, girls generally found school environments insufficient to support their management practices and preferred to leave school to manage menstruation at home. A primary concern for girls, at menstrual onset and throughout their cycle, was that menstrual materials were not available at school. When probed on why they did not bring their own materials, some girls cited fear that fellow pupils would see the materials in their bags while others had not thought of bringing replacement supplies or did not have a sack in which to carry them.

Even if they did bring supplies, girls often reported that school infrastructure did not meet their needs. Girls lacked latrines that were clean and private, often because they were not sex-separated or were missing locks or doors; there was also a lack of soap, sufficient water, and buckets for bathing and washing.

Recommendations voiced by girls

When asked how to improve their situation or that of other girls, participants almost universally voiced desires for information, supplies, and an improved school environment. Almost all girls said they would have liked more information about menstruation before menarche and advised that girls should start learning about menstruation and puberty as early as fifth grade. Most said that they wanted to learn from their mothers or female teachers, and approved of the idea of having girls' groups. Several girls said that they did not want boys to learn about menstruation because they might start teasing, whereas now there was no teasing because boys didn't know about it.

When asked what advice they would give younger sisters or friends, girls almost universally replied: 'I would tell them not to be afraid.' They also proposed advice on what materials to use, how to use them, the importance of bathing, and the need for managing periods secretly. In terms of improving the school environment, girls requested private, clean latrines or bathing areas that were separated from boys; menstrual hygiene management materials at school; soap and water; buckets for bathing; and medication to manage abdominal pains.

Discussion

Girls in Mali face clear challenges to managing menstruation at school in a way that keeps them in class and free from mental distress. These challenges are similar to other contexts: girls lack information and school infrastructure is insufficient to match girls' personal preferences and the requirements of their practices and beliefs. The specifics within these areas have important implications for strategies to improve girls' experience managing menstrual hygiene at school in Mali.

The desire to bathe at menstrual onset is a unique challenge for girls in Mali. Restrictions on bathing have been noted in Muslim societies in India, Iran, and Saudi Arabia (Moawed, 2001; Poureslami and Osati-Ashtiani, 2002; Dhingra et al., 2009). Frequency of bathing is reported to increase among adolescent girls in northern Nigeria, though bathing at menstrual onset was not discussed (Irinoye et al., 2003; Lawan et al., 2010). Bathing at menstrual onset is particularly challenging for girls who start menstruating in the middle of the school day, as schools do not provide adequate facilities.

Girls' need for secrecy impedes them from bringing additional absorbent supplies to school due to fear that they will be discovered and because schools lack the privacy, water, and soap necessary to change and wash materials discreetly. Cultural beliefs about the need to guard against the use of menstrual materials in witchcraft further complicate Malian girls' school management practices. Many cultures believe menstrual blood can be used in witchcraft, including those in Niger, Burkina Faso, Nigeria, Tanzania, Ghana, and elsewhere in Mali (Castle, 2003; Irinoye et al., 2003; Keihas, 2013; Sommer et al., 2014).

Private changing and washing space and either an appropriate place to dispose of soiled materials or soap and water to clean them is essential for girls to change absorptive materials at school. There have been ample calls for water, sanitation, and hygiene facilities to be in place for girls to manage menstruation at school (Sommer, 2010a; Lee and Kerner, 2013). However, the experience of girls in Mali makes it clear that girls need facilities that are aligned with their cultural beliefs and practices. The girls we spoke with specifically avoided throwing used materials in trash cans, also common in Bolivia (Long et al., 2013). They preferred throwing cloths and pads in latrines, which can clog evacuation pumps and cause pits to fill prematurely (Crofts and Fisher, 2012; Sommer et al., 2013).

Underlying the challenges girls face in managing within inadequate school environments is the fact that they are often coping with minimal information and support. Girls rarely discussed how they should manage menstruation at school with others, formal education about menstruation occurs too late (if ever), and girls expressed a need for keeping their menstruation hidden due to fear of gossip or punishment. Girls are not in a position to initiate the conversations necessary to improve their capacity to manage menstruation in school and need an environment where they can feel comfortable discussing their needs and asking questions.

The lack of discussion at school echoes findings from across sub-Saharan Africa (McMahon et al., 2011; Keihas, 2013; Sommer et al., 2014). Many girls were open to having female teachers as a source of support; however, due to a lack of

training, teachers often did not feel qualified to provide that support. The absence of discussion between pupils and teachers meant that educators were not aware of the problems girls were facing, and the lack of discussion between teachers meant there were no efforts within the schools to improve girls' experiences. Both girls and educators need support to start these conversations.

Limitations

We were only able to speak with girls in a few different settings in Mali. While there was consistency across their reported beliefs and practices, we cannot assume that these practices reflect the situation across all of Mali, which is culturally and geographically diverse.

Conclusions and recommendations

The culture of silence among girls and educators around menstrual hygiene management in Malian schools in our study indicates that this issue is not considered among those who make policies and provide funding for school infrastructure, curriculum, teacher training, and educational resources. This silence prevents girls from seeking guidance and prevents school administrations from understanding and addressing the challenges that girls face. A push for dialogue about menstruation is needed, particularly among Ministry of Education officials. Potential interventions to improve girls' experiences with menstruation at school in Mali could include: creating facilities that allow for bathing and controlling access to menstrual blood; educational efforts that respond to girls' limited knowledge; enhancement of supply chains or alternatives for improved menstrual hygiene management products, particularly in rural areas; and increased training of teachers.

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