

Influencing Factor Analysis and Countermeasures for Improving Hygienic Management for School Girls During Menstruation Period: A Case Study of Ten (10) Schools on Bushrod Island, Monrovia Liberia

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Abstract

A culture of silence surrounds the issue of menstruation in Liberian society. In traditional societies of the world, like Liberia, menstruation is usually considered unclean and taboo. Most schoolgirls do not have adequate information about menstrual hygiene. This study was conducted to identify factors that affect Menstrual Hygiene Management (MHM) of schoolgirls in Liberia and mitigation strategies for improving Menstrual Hygiene during their menstruation periods. Although menstrual hygiene is fundamental to a healthy environment and the overall well-being of women and girls everywhere, it has not attracted such deserving urgency from the national health authorities, including the Water, Sanitation, and Hygiene (WASH) Commission of Liberia. The researcher employed a mixed-method with a cross-sectional descriptive approach to examine girls' understanding, practices, and skills concerning menstrual hygiene. Only ten (10) schools in Liberia were surveyed; six (6) private schools and four (4) public schools. The survey was conducted with 200 students from these schools ranging from the three divisions as structured by the Ministry of Education in Liberia, namely elementary (1st – 6th grade), junior (7th – 9th grade) and senior high (10th – 12th grade). The research found that shortage of educational materials on MHM, lack of knowledge and experience of menstruation and limited sanitation facilities on school campuses are the key factors affecting the menstrual hygiene management of schoolgirls in Liberia. The research further revealed that most schools have poor sanitation facilities (toilets and washrooms), causing female students to miss days in school during their menstruation. During the assessment, it was observed that the few facilities on some campuses were rated unhealthy and combined, meaning both girls and boys were using the same sanitation facilities (toilets and washrooms). Based on these findings, the researcher realizes that girls need the right support, information, and safe space for appropriate menstrual hygiene practices. Therefore, the Ministry of Education of Liberia should galvanize support to inspect schools' sanitation facilities and include MHM through its comprehensive sexuality education model across Liberian schools.

Keywords: Menstruation, Hygiene, Sanitation, Female Students

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1. Introduction

Menstrual hygiene is a subject that every girl and woman has to deal with in their lifetime. It refers to adolescent girls' special healthcare needs and requirements during the menstrual period. However, schools and communities lack awareness of menstruation as a naturally occurring phenomenon among adolescent girls and the right hygienic absorbent materials needed to manage menstruation (Santra, 2017). In traditional societies, including Africa, menstruation is usually considered unclean and taboo. In Tanzania, it is believed that if others see a menstrual cloth, the owner of the cloth may receive a curse (McMahon et al., 2011). Beliefs are held in Asia that restrict women from actively engaging in routine activities and keep them confined to the home and home-related activities for their menstrual cycles. These societies uphold such norms and frown on ladies for engaging in acts contrary to these unwritten rules. These restrictions imposed on menstruating adolescent girls sometimes impact their mental health and reinforce the negative stereotypes of menstruation in some parts of the world (Mahajan & Kaushal, 2017).

In Liberia, girls are often uninformed and unsure about what is happening to their bodies when they reach menarche, causing fear of misunderstanding. They may not have adequate information and facilities in communities and schools, such as safe, private, and clean toilets, washrooms equipped with functional door locks, water for personal hygiene, or disposal facilities, demonstrating MHM's inadequacy in schools. Due to the cultural restrictions and stereotypes of menstruation, most female students are interrupted in school and prevented from fully participating in school activities and mingling with their peers. This syndrome inhabits their abilities to achieve better life outcomes for themselves and their future families.

Menstruation is a change that usually begins with adolescent girls. The World Health Organization (WHO) defines adolescence as the age group between 10-19 years, a phase of life spanning childhood and adulthood. This

age group is important to this study because it is when menstruation first begins at 13 years. At this age range, a female menstruates for 3 to 7 days (2 days minimum, seven days maximum) each month until menopause (Kapoor et al., 2017; Oche et al., 2012).

2. Research Methodology

2.1 Study Site

The survey was conducted in ten (10) schools, consisting of five primary and five secondary divisions from private and public institutions in the Greater Monrovia area on Bushrod Island. Bushrod Island was named after Bushrod Washington, a nephew of one of America's presidents. It is a densely populated locality with a great attraction of the Country's national port called 'Liberia Port of Authority (LPA). However, the ten selected schools are spread across four sub-locations on Bushrod Island.

2.2 Research Design and Method

The study employed a mixed-method with a cross-sectional descriptive approach to examine girls' understanding, practices, and skills concerning menstrual hygiene (Almalki, 2016). A self-administered structured closed-ended questionnaire was developed, pre-tested and used for the survey.

2.3 Study Population

Two hundred (200) schoolgoing girls were selected to participate in the survey, from the 4th to 12th grades, between 11 and 26 years. The researcher used the purposive sampling technique. Twenty (20) girls were sampled from ten (10) schools. 100% confidence level of their participation was calculated.

2.3 Data collection and analysis

The questionnaire was designed, approved, distributed and collected from selected respondents. The researcher employed SPSS (version 16) software for data analysis. The questionnaire distribution and collection and the data analysis last for two months.

3. Results and Discussion

3.1 Shortage of Educational Materials on MHM

The ten (10) schools within the survey had no materials for MHM education such as books, posters, photographs, tape/DVD, or any other items that can be used for teaching or reading menstrual hygiene management. They confirmed that nothing is posted in the class or visible areas or in girls' latrines to promote awareness of hygienic menstrual practices in schools. It was observed that the majority of girls in three (3) private schools prefer someone from outside the school to provide menstrual education. However, most girls in some government and private schools prefer it with the matron. The differences between government schools and private schools could be contributed to the fact that some government schools did not have qualified science teachers. A female teacher appointed to serve the position is probable to underperform the matron's duties as it becomes difficult to perform the duties of a science teacher and that of a matron at the same time. However, all girls admitted that more information on menstrual education is required and necessary. 83% of schools do not provide any material for children on personal hygiene & sanitation awareness. Only 17% of schools provide posters or stickers for awareness of personal hygiene & sanitation.

3.2 Lack of Knowledge and Experience of Menstruation

Little is known about menstruation to schoolgirls in Liberia. In developing countries of Africa, menstruation tends to be an unmentionable topic and taboo to discuss, particularly in the traditional African setting openly.

Abdissa (2021) indicates that studies from many low-income countries reflect that many girls in these countries are not well prepared to begin menstruation without any knowledge of what they are experiencing. Females are also stereotyped and teased by their male counterparts in school settings of most low-income countries. This lack of knowledge and poor MHM usually causes stress, confusion, and fear among girls in low-come countries (Phillips-Howard et al., 2016).

Studies conducted on MHM in Nigeria show that parents and teachers are poorly equipped to improve a girl child's knowledge of MHM, especially in schools with gender mainstream (Okafor, 2016). In the same way, the failure of the parents and instructors to educate young females adequately about the change they expect to occur in their bodies during puberty and menstruation could lead them into seeking wrong advice or solutions. A recent study carried out by Water Aid Nigeria on MHM in Benue, Bauchi, and the Plateau States in Nigeria disclosed misleading information about menstruation that women experiencing such change are cursed (Okafor, 2016). A documented data from United Nations Children's Fund (UNICEF) also revealed that about one in ten school-age African girls did not attend school during menstruation or dropped out at puberty due to a lack of cleanliness and separate toilet facilities (UNICEF, 2015).

3.3 Limited Sanitation Facilities on School Campuses

During the assessment, it was observed that out of the 200 girls that participated in the survey, which come from ten schools, 120 of the students said that their schools have poor sanitation facilities (toilets and washroom). As a result, students have to travel a distance to complete their instant needs, and their schools use the same toilet that the community members use, while 80 of the students from four schools have toilets located within their school premises. Additionally, when schools do not have adequate water facilities, both boys and girls may have to spend time collecting water instead of attending classes. Girls may miss school when a school does not have adequate sanitary facilities with water for hygiene. The study found that out of the 200 schoolgirls that participated in the survey, 68% were absent from school or classrooms at least 1-3 days a month, 26% were absent 5-7 days in monthly time while 1 and 2% missed school in 2 weekends in a month during their menstruation. However, two out of 10 schools accounted for healthy sanitation facilities (toilets and washrooms), while the remaining eight (8) had unhealthy sanitation toilets and washrooms.

The sanitation plan remains incomplete if the issue of hygiene is not dealt with in schools, communities, and other public places. However, hygiene is a very serious issue for girls while talking about menstrual hygiene (Jasper & Bartam, 2012). 82% of schoolgirls reported that their school toilet can always be full so that students and teachers cannot use it. Some girls indicated that they would prefer to use the bush because of poor sanitation and hygienic practices. The survey showed that 58% of schools disposed of their rubbish or garbage by burning it; burying it next to the school compound or in its surroundings accounted for 13%. It is very harmful to the schools' environment as it includes polythene too which affects everyone. While 22% of school waste or garbage is dumped around school surroundings, only 7% transported their trash at the school waste site by students or the local waste disposal system.

4. Tables and Figures

Table 1: List of Private School

School Name	Division		
	<i>Elementary</i> (4 th – 6 th grades)	<i>Junior</i> (7 th - 9 th grades)	<i>Senior</i> (10 th – 12 th grades)
St. Mary Catholic High School	5	9	7
Diana E. Davies High School	3	5	11
New Era High School	8	6	6
Greater Vision High School	7	10	3
Trinity United Methodist High School	3	4	13
Mark Richards High School	9	7	4
Total	35	41	44

Table 1 shows the six (6) private schools that participated in this survey. Students were selected based on three divisions such as elementary (4th – 6th grades), junior (7th – 9th grades) and senior high (10th – 12 grades). Table 1 reveals that 120 students were sampled from private schools, and each school was represented in every division.

Table 2: List of Public Schools

School Name	Division		
	<i>Elementary</i> (4 th – 6 th grades)	<i>Junior</i> (7 th - 9 th grades)	<i>Senior</i> (10 th – 12 th grades)
D. Tweh Memorial High School	0	10	10
Jewish Haward School	7	6	7
Point Four Elementary School	20	0	0
St. Paul Bridge Elementary School	20	0	0
Total	47	16	17

Table 2 shows that four (4) public schools were included in the survey. Eighty (80) students were sampled using the purposive sampling technique from each class division. However, the results reveal that most students were selected from the elementary division, except for D.Tweh Memorial High School, which does not have an elementary division.

Table 3: Knowledge and Experience of Schoolgirls on Menstruation

Variable	Descriptive Analysis			
	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	84	42	42	42
No	113	58	58	100%
Total		200	100	100%

Table 3 shows students' responses regarding their knowledge and experience with menstruation. Out of 200 students who participated in this survey, 84 students accumulating 42%, agreed that they have experiential

knowledge of menstruation. In contrast, most students (113), representing 58%, expressed their ignorance of menstruation yet admitted their experience. However, they mentioned that their parents, siblings and science teachers had not provided them with full knowledge of the meaning and impact of menstruation on their bodies.

Table 4: Sanitation Facilities Currently on School Campuses

Variable	Descriptive Analysis				
	# of Toilets	Condition	# of Washroom	Condition	Cumulative Percent
St. Mary Catholic High School	2	healthy	1	healthy	Not combined
Diana E. Davies High School	1	unhealthy	1	unhealthy	Combined
New Era High School	1	unhealthy	0	none	Not combined
Greater Vision High School	2	unhealthy	0	none	Not combined
Trinity United Methodist High School	2	healthy	1	healthy	Not combined
Mark Richards High School	1	unhealthy	1	unhealthy	Not combined
D. Tweh Memorial High School	2	unhealthy	0	none	Not combined
Jewish Haward School	2	unhealthy	0	none	Not combined
Point Four Elementary School	1	unhealthy	0	none	Not combined
St. Paul Bridge Elementary School	1	unhealthy	0	none	Not combined

Table 4 shows the descriptive analysis of the sanitation facilities on the selected school campuses. Generally, the survey captured ten (10) Liberian schools: six (6) private schools and four (4) public schools. The students' responses reveal the number of toilets and washrooms, their conditions and the connectivity of facilities on each campus. According to the results, St. Mary Catholic High School and Trinity United Methodist High School have both toilets and washrooms on their campuses. However, these facilities are separated or not combined.

Most importantly, their facilities were rated healthy for students and teaching staff use. In contrast, the Diana E. Davies High School has each facility, but both were combined and rated unhealthy. Greater Vision High School, D. Tweh Memorial High School, and Jewish Haward School have two unhealthy toilets and no washroom. These toilets are not separated or have no demarcation, meaning that both males and females are using the same facility. Furthermore, New Era High School, Point Four Elementary School and St. Paul Bridge Elementary School each have one unhealthy toilet that both males and females use without demarcation. Lastly, Table 4 reports that Mark Richards High School has one unhealthy toilet and an unhealthy washroom. Additionally, most public schools are challenged to meet the demand for better sanitation facilities. At least in every school, female students do not have the choice but to share washrooms with male students.

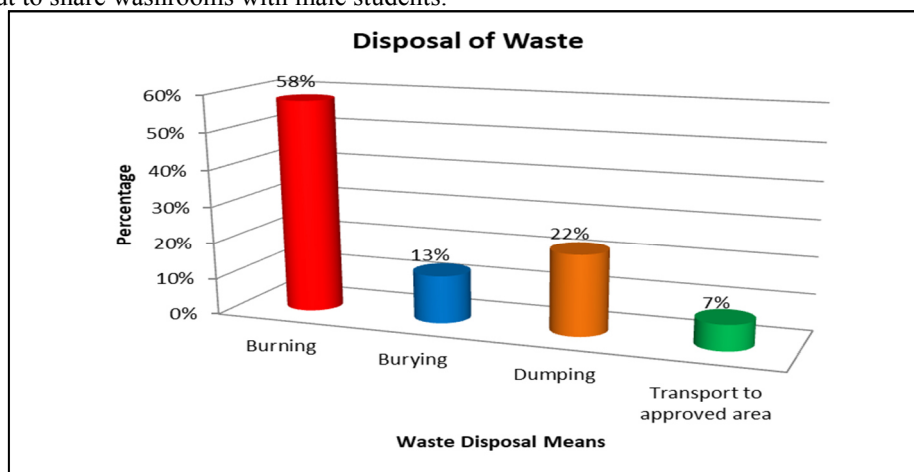


Figure 1. Disposal of Waste

Figure 1 shows how selected schools dispose of their wastes. Students are accustomed to creating specks of dirt on campuses. However, the way the schools handle the disposal of their wastes is very significant to sanitation and, if not done properly, could affect their environment and health. In Figure 1, 58% of schools dispose of wastes by burning; 13% is involved in burying wastes as a preferred method of disposal, while 22% prioritize dumping their wastes around the school environment; and sadly, only 7% of schools would prefer to transport their wastes to approved areas.

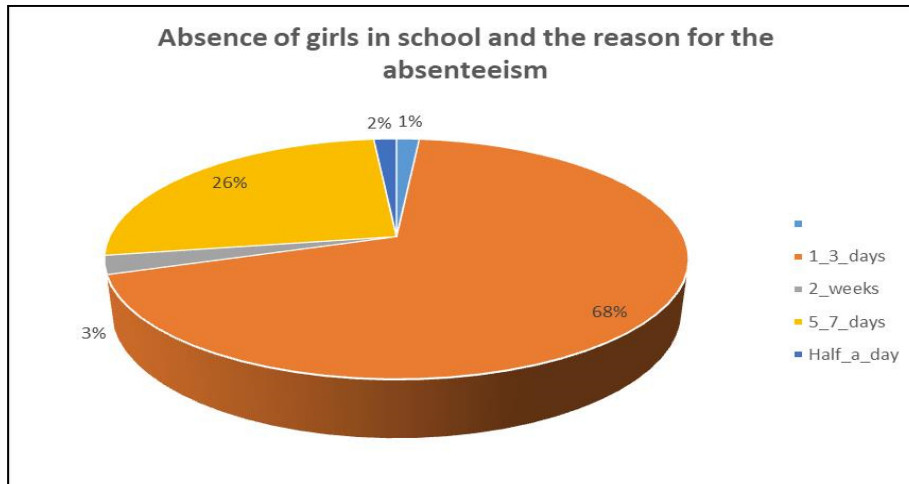


Figure 2: Absence of Girls in School and Reasons for Absenteeism

Figure 2 shows the effect of menstruation on girls' attendance in schools. From the Figure above, the majority (68%) of female students could not go to school because of menstruation. They felt embarrassed going to school since the schools never had healthy and separate sanitation facilities (toilets and washrooms) for both boys and girls. As a result, they would intentionally decide to stay home to avoid the shame and disgrace due to poor sanitation facilities on their campuses. Generally, their absences were measured in days and weeks. At least between 1-3 days, most girls were absent from classes, while a few were absent between 5-7 days.

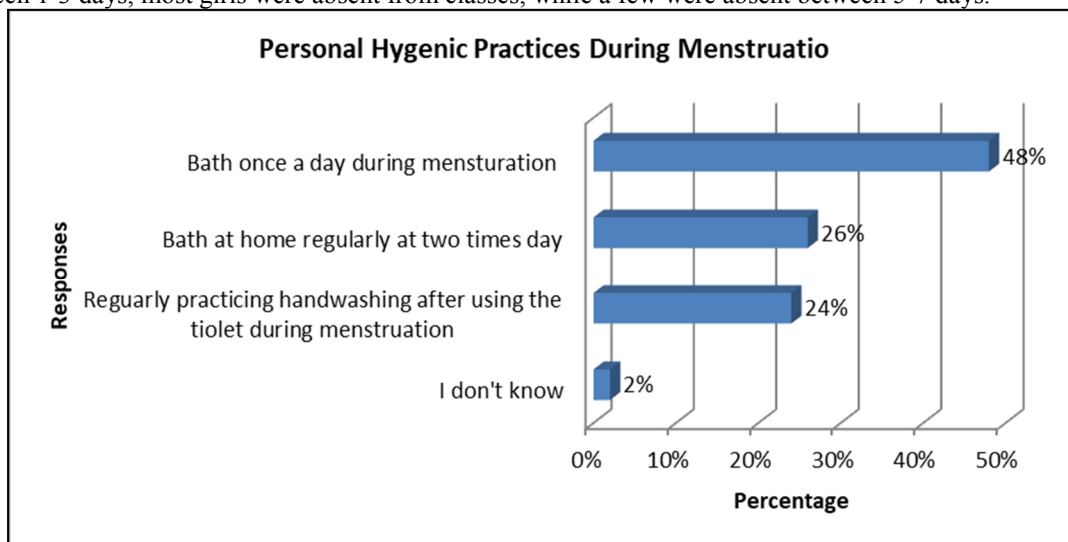


Figure 3. Personal hygiene practices during menstruation

Figure 3 shows the frequency and personal hygiene practices schoolgoing girls apply during menstruation. 48% of the students admitted that they have a bath once a day during menstruation; 26% disclosed bathing twice a day, and 24% affirmed their regular handwashing after using the toilet during menstruation. Based on Figure 3, there are irregular or poor personal hygiene practices observed among schoolgoing girls during menstruation.

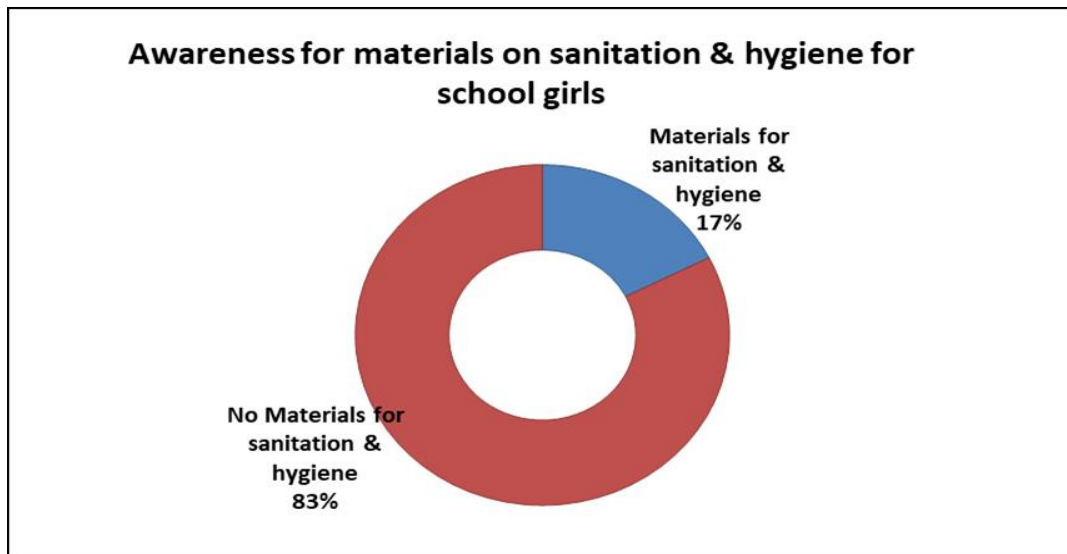


Figure 4. Materials Awareness of Sanitation & Hygiene for School Girls

Figure 4 shows the female students' awareness of sanitation and hygienic materials on their school campuses. The results present a knowledge gap on menstruation, indicating 83% of students admitted to having no materials for sanitation and hygiene while 17% claimed to have these materials. However, it remains that majority of the students are ignorant and somehow deprived of the right to be acknowledgeable and recipients of these materials.

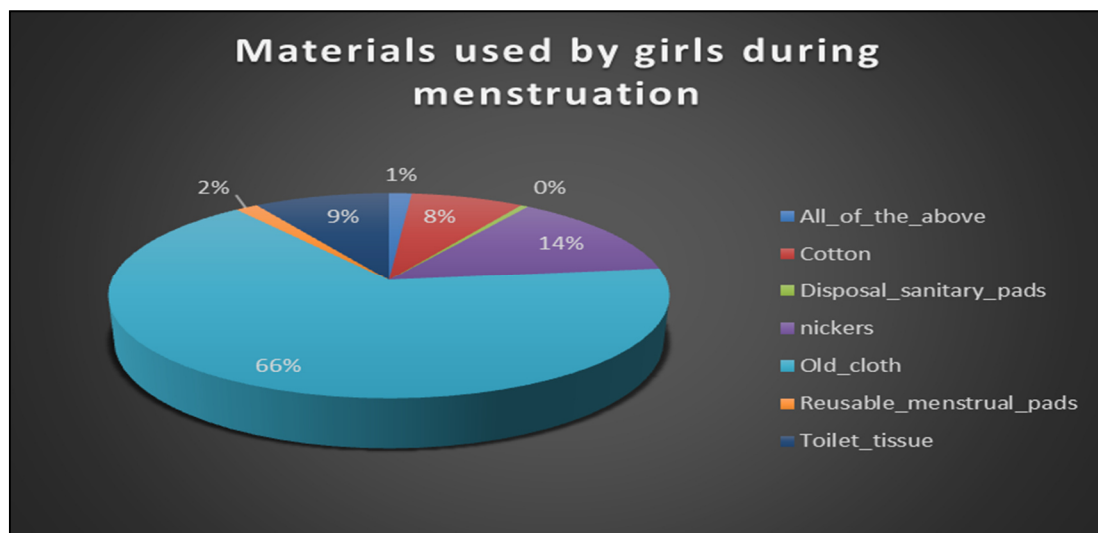


Figure 5. Materials Girls Used by Girls During Menstruation

Figure 5 shows the materials school girls use during menstruation. The results reveal that most schoolgirls (66%) were using old cloth during menstruation. A few of them used other materials such as cotton (8%), nickers (14%), toilet tissue (9%), reusable menstrual pads (2%), and all of the above (1%). Girls used old cloth because of poverty; they could not afford to purchase disposal sanitary pads. They would wash the old clothes regularly and use them repeatedly as long as their menstruation. Hygienically, most of them realized the danger of using old clothes but had no choice due to financial constraints.

5. Conclusion and Recommendations

The issue of menstruation is yet to be understood by schoolgirls, and they need to be knowledgeable about to use of hygienic menstrual materials. Indeed, there is a need for them to be aware to prevent themselves from harmful habits or practices undermining the proper hygienic menstruation at school. Therefore, increased knowledge and practices about menstruation right from childhood may improve girls' hygienic management during their menstruation period and may help in mitigating the sufferings of millions of women in Liberia and other parts of the world. Competitive efforts from Civil Society Organizations (CSO) and Government would be needed to create an MHM platform in schools to ensure girls' equally thriving learning environment. The meaningful propositions/recommendations to be considered for a safe space for girls have been given below:

1. Access to health information: Teenagers, especially girls, need the proper support, information, and safe space for appropriate menstrual hygiene practices. In schools and communities, girls are affirmative about the need for health education or sexual reproductive health, rights, and services to enable them to practice menstrual hygiene at an early age before puberty that would continue throughout adolescence to adulthood. When girls have access to health education, they are prepared emotionally and psychologically for the experience of menstruation. Girls are likely to change and grow based on the amount of information they receive in practice. The Government of Liberia must exert effort to finalize the MHM and comprehensive sexuality education for the school curriculum.
2. The practice and institutionalization of SRHR/Services in schools should increase the growth of every girl child. While the health system in Liberia will make appropriate services to SRH, the practices for hygiene associated with MHM should be enforced in school protocols and curricula. The provision of soap, handwashing facilities, availability of emergency pads, safe space for girls, and their privacy are very important factors in ensuring the practice of hygiene while attending schools, public events, and service centers. From this study, these are identified challenges faced by girls in schools in Liberia, which require immediate national action from CSOs and private and Government efforts. These efforts will make appropriate facilities available at schools and do not require huge investments in infrastructures but a change in attitude and behaviour toward the significance and rights of girls.
3. The Ministry of Education of Liberia should galvanize support to include MHM through its comprehensive sexuality education model to be fully implemented in school curricula and across Liberian schools. However, this effort is long overdue as many girls continue to suffer the lack of access to information, health education, and services in schools and communities. While, at the moment, the school curriculum is silent on Menstrual Hygiene Management, WASH in schools, and reproductive health education, there is a need for national guidance to take immediate effect at the institutional level on MHM and improved hygiene management. Each school must have internal services to support safe space for girls and menstrual hygiene support available to promote good sanitation facilities.
4. Access to services: Girls in both urban and rural communities lack access to SRH services, thus using sanitary pads. This is mainly because sanitary pads have economic values that some girls and their families may not be able to afford every month. Instead, girls alternatively use materials made at home with scraps of old cloth, cotton, paper, etc. Home Economics education should encourage girls to make their pads more healthy and hygienically sustainable, including education around proper care and hygiene for reusable pads. Lack of privacy, access to clean water, and separate toilet facilities for girls in schools make it harder for MHM. Corporate and Government investments should consider an annual increase in budgetary allotment to make the price of sanitary pads affordable that girls can purchase them monthly.

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