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## Role of Academic Institutions in Promoting Menstrual Hygiene Management among School Girls in Lofa County, Liberia. Evidence from a Mixed-method Survey in Senior High Schools in Voinjama City

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### ABSTRACT

This study explores the role of academic institutions in promoting menstrual hygiene management (MHM) among school girls in Lofa County, Liberia, focusing on senior high schools in Voinjama City. A mixed-method survey was conducted among 308 girls from seven high schools to assess their knowledge, access to menstrual products, sanitation facilities, and the impact of menstrual hygiene management (MHM) on school attendance. The findings reveal that 66.1% of respondents were informed about menstruation before their first period, with family being the primary source. While 70.4% of girls received menstrual health education in schools, a significant 29.6% did not, indicating the need for more inclusive programs. Regarding menstrual products, 71.8% of girls use disposable sanitary pads, though nearly half (47.7%) consider them unaffordable. The study also highlights deficiencies in school sanitation facilities, with only 42.1% of girls reporting access to clean and private facilities, and just 28.3% having proper disposal mechanisms for used products. Nearly half (47.9%) of the girls miss school due to menstruation, missing an average of 2.5 days per month. Qualitative findings emphasize the demand for sanitary pads and improved facilities, as well as the need for government intervention. The lack of formal MHM policies in schools, coupled with limited teacher training and resources, further complicates effective MHM. The study concludes that while some progress has been made, significant gaps remain, necessitating enhanced efforts from schools, government, and communities to ensure comprehensive MHM for all girls, ultimately improving their education and well-being.

### INTRODUCTION

The health, dignity, and educational attainment of schoolgirls are significantly affected by menstrual hygiene management (MHM), especially in low-income regions. Schools worldwide are increasingly acknowledging the necessity of addressing MHM to support girls' academic performance and overall well-being. According to the United Nations, adequate menstrual hygiene management involves the use of clean menstrual materials, access to facilities for changing and disposing of these materials, and maintaining proper hygiene during menstruation (Deshpande *et al.*, 2018). Nonetheless, millions of girls and women, particularly in low-income countries, face substantial barriers to achieving adequate menstrual hygiene. Approximately 800 million women aged 15 to 49 menstruate each day, and for many, this natural biological process presents considerable challenges (UNFPA, 2022). Consequently, many girls encounter academic difficulties or miss school during their menstrual periods (Boosey, Prestwich, & Deave, 2014).

In sub-Saharan Africa, including Liberia, menstrual hygiene remains insufficiently addressed, with a lack of regionally representative data on the prevalence of effective menstrual hygiene practices among adolescent girls (Anbesu & Asgedom, 2023). Research in Ethiopia indicates that inadequate menstrual hygiene practices among schoolgirls can negatively impact their dignity,

well-being, academic performance, and school attendance (Habtegiorgis *et al.*, 2021). Similarly, studies in Nigeria have demonstrated that many girls lack access to clean materials, facilities, pain relief, and proper disposal methods for menstrual hygiene (Nnennaya *et al.*, 2021). A multi-method survey in Ghana revealed the sociocultural restrictions and barriers faced by adolescent schoolgirls and boys in managing menstruation (Anbesu & Asgedom, 2023).

A UNESCO report indicates that 1 in 10 girls in sub-Saharan Africa misses school during menstruation due to a lack of menstrual products or adequate sanitation (UNESCO, 2011). UNICEF has identified inadequate menstrual hygiene as a significant barrier to girls' education in numerous regions, with poor facilities, insufficient sanitary products, and cultural taboos contributing to absenteeism and school dropouts (UNICEF, 2019). Effective menstrual hygiene management is crucial for the health and education of adolescent girls, as it significantly influences their school attendance, participation, and performance. Good MHM practices include using clean menstrual management materials, changing these materials in privacy as needed, using soap and water for personal hygiene, and having access to safe and convenient facilities for disposing of used materials (Sumpter & Torondel, 2013). Poor MHM can adversely affect the health and psychosocial well-being of women and girls (Das *et al.*, 2015).

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Despite these challenges, awareness of the importance of addressing MHM in schools is growing. Efforts are underway to integrate MHM into school curricula and provide girls with the necessary knowledge and resources to manage their menstruation effectively. For instance, UNICEF has recommended including menstrual hygiene management in the curricula of primary schools in Asia and Africa (Shah *et al.*, 2023). Academic institutions play a pivotal role in tackling these challenges. Schools serve not only as centers of learning but also as critical environments for shaping attitudes and behaviors toward menstruation. They can furnish the necessary infrastructure, education, and support systems to help girls manage menstruation with dignity and comfort. Research has demonstrated that when schools actively promote MHM, significant improvements in girls' attendance and academic performance ensue (Sommer *et al.*, 2015). Studies conducted in India indicate that structured menstrual education programs in schools significantly enhance girls' awareness of menstrual hygiene and help reframe their understanding of menstruation as a normal physiological process (Sivakami *et al.*, 2019).

This study aims to investigate the role of academic institutions in promoting effective menstrual hygiene management among senior high school girls in Voinjama City, Lofa County, Liberia. It seeks to understand existing practices, challenges, and the impact of menstrual hygiene on girls' education and develop actionable recommendations to enhance menstrual hygiene management within the school environment.

### Menstrual Hygiene Situation in Liberia

Menstrual hygiene management (MHM) remains a critical issue in Liberia among women and girls. The availability of affordable menstrual hygiene products is limited, and inadequate sanitation facilities further exacerbate the challenge, leaving many without the necessary means to manage their menstruation hygienically. According to a study by WaterAid Liberia, approximately 30% of Liberian women and girls are unable to consistently afford menstrual pads or tampons, highlighting the pervasive issue of period poverty in the country (Borgen Project, 2024). The United Nations has underscored the importance of addressing menstrual hygiene as a fundamental right, recognizing that access to water, sanitation, and hygiene (WASH) facilities, affordable menstrual hygiene materials, and a supportive environment are essential for effective MHM (Boisen *et al.*, 2016).

### Impact of Inadequate Menstrual Hygiene Management on Girls Education

Menstrual hygiene management is pivotal to the educational success of girls. Inadequate MHM can have a profound negative impact on girls' school attendance, participation, and overall education experience. Cultural taboos and restrictions related to menstruation often limit girls' activities during their menstrual cycles, including, restrictions on religious practices and leaving the house.

These constraints foster negative attitudes toward menstruation and impose both physical and psychological burdens on girls. The lack of proper menstrual hygiene facilities, such as access to clean and effective absorbents, appropriate places to change and dispose of them, and access to soap and water, contributes to increased absenteeism among girls during menstruation (Sivakami *et al.*, 2019). The challenges faced by adolescent girls in low- and middle-income countries regarding effective MHM can lead to school dropout. Without access to clean absorbents, adequate facilities, and sufficient privacy, managing periods at school becomes challenging, resulting in disengagement from education and, ultimately, dropping out (Nnennaya *et al.*, 2021).

### Roles of Schools in Menstrual Hygiene Management

The role of schools in menstrual hygiene management (MHM) is critical in ensuring that girls have equitable access to education. Inadequate MHM facilities and education in schools have been linked to increased absenteeism, lower academic performance, and higher dropout rates among girls. In many low- and middle-income countries, the stigma and taboos surrounding menstruation are compounded by a lack of appropriate infrastructure and education, leaving girls to manage menstruation in isolation and often with a sense of shame (Sommer *et al.*, 2016). Studies have shown that when schools provide adequate MHM resources—such as access to sanitary products, private and hygienic latrines, and comprehensive menstrual health education—girls are more likely to attend school consistently during their menstrual periods (Mahon & Fernandes, 2010). Furthermore, engaging boys and men in MHM education has been found to reduce stigma and foster a more supportive school environment (Hennegan & Montgomery, 2016).

### MATERIALS AND METHODS

This study used a mixed methods approach, incorporating quantitative, and qualitative interviews, to investigate menstrual hygiene management practices among senior high school girls across seven high schools in Voinjama City, Lofa County, Republic of Liberia. The selected schools included Voinjama Multilateral High School, Voinjama Free Pentecostal Mission High School, Korma Shepherd Mission High School, Voinjama Public High School, St. Joseph Catholic Mission School, Japan Elementary Junior and Senior High School, and Lutheran Mission High School. Excluding 12th graders engaged in the West Africa Examination for senior high students, the quantitative phase employed structured questionnaires to gather statistical insights into menstrual hygiene practices, facility availability, and their impact on school attendance and academic performance. Concurrently, qualitative interviews with one school administrator and two teachers from each selected high school delved into their perspectives on existing policies, implementation challenges, and attitudes toward menstrual hygiene education within their respective institutions. This mixed

method approach aimed to provide a comprehensive understanding of the factors influencing menstrual hygiene management in these educational settings.

### Sample Size and Sampling Method

The researchers recruited a sample from all high schools in Voinjama City, Lofa County, encompassing seven institutions including two public and five private high schools. Convenience sampling was employed to select all available 10th and 11th graders present on their school campus on the survey day. The survey was strategically scheduled on a regular school day to maximize the students participation. A total of 308 students participated this study. Additionally, within each school, one administrator and two classroom teachers were selected to participate in the interviews, providing further insights into institutional perspectives on menstrual hygiene management.

### Data Collection

Data were collected using structured questionnaires administered to 308 female students in the 10th and 11th grades. The questionnaires were pretested among six female students to detect and correct any issues with question wording, structure, or format that could lead to biased or inaccurate responses. The questionnaire comprised eight sections: Section one covered demographic profiles, Section Two assessed the participants' knowledge and awareness of menstrual hygiene management, Section Three examined participants' access to menstrual products, Section Four focused on sanitation facilities, Section five explored the impact of menstrual hygiene management on participants' learning, and Section six solicited suggestions for improving menstrual hygiene management. Qualitative data were gathered through in-depth interviews with school administrators and teachers. These interviews concentrated on the availability of written school policies on menstrual hygiene management, and how school administrators and teachers support girls during menstruation. The interviews aimed to collect insights into their knowledge, attitudes, and practices regarding menstrual hygiene. Data collection was conducted by female nursing students who received training on survey data collection techniques to

ensure accuracy and consistency.

### Data Analysis

The quantitative data collected from the structured questionnaires administered to the 10th and 11th-grade female students were analyzed using descriptive statistics. This included calculating the frequency, percentage, mean, and standard deviation. The qualitative data collected through in-depth interviews with school administrators and teachers were analyzed using thematic analysis. This process involved, identifying and labeling key pieces of data that relate to specific themes or categories. For example, codes included "lack of MHM policy," "need for sanitary pads," and "improving sanitation facilities." Similar codes were grouped to identify common themes and patterns. This helped in understanding the broader issues and perspectives related to school menstrual hygiene management.

### Ethical Issues

Before data collection commenced, formal letters were submitted to the principals of the seven selected high schools, requesting permission to conduct the study. All principals granted their approval for the study to proceed. Ethical considerations were meticulously addressed, including obtaining informed consent from all participants. Confidentiality was rigorously maintained, and participation in the study was entirely voluntary. The data collected were handled and analyzed with the highest level of care to ensure the privacy and rights of the respondents were fully protected.

## RESULTS AND DISCUSSION

Table 1, reveals key demographic insights. The average age of the 308 respondents is 19.9 years, indicating a group of late adolescents. Grade distribution is almost even, with 45.9% in the 10th grade and 54.1% in the 11th grade, providing a balanced perspective across different levels of secondary education. Additionally, the sample comprises 53.4% of students from private schools and 46.6% from public schools, suggesting a slight majority from private institutions.

The data from Table 2 on knowledge and awareness

**Table 1:** Biography Profile

Respond Category	Frequency (n)	Percentage (%)	Mean ±SD
Age (n = 308)			19.9 ± 2.4
<b>Grade (n = 307)</b>			
10 <sup>th</sup> Grade	166	45.9	
11 <sup>th</sup> Grade	141	54.1	
<b>School type (n = 305)</b>			
Private	163	53.4	
Public	142	46.6	

about menstruation among school girls, shows that 66.1% of the respondents were informed about menstruation before their first period, primarily through family (37.1%),

followed by schools (32.9%) and friends (30%). This highlights the significant role families play in menstrual education. Furthermore, 70.4% of the respondents

received menstrual health education in school, indicating a substantial effort by educational institutions to provide this vital information. However, 29.6% did not receive

such education, pointing to a need for more inclusive and comprehensive menstrual health programs in schools. Table 3 presents valuable findings on the access to

**Table 2:** Knowledge And Awareness About Menstruation

Respond Category	Frequency (n)	Percentage (%)
<b>Knowledge about menstruation before first period (n = 307)</b>		
Yes	203	66.1
No	104	33.9
<b>Area information was obtained (n = 210)</b>		
School	69	32.9
Family	78	37.1
Friend	63	30
Media	/	/
<b>Receive menstrual health education in School (n = 307)</b>		
Yes	216	70.4
No	91	29.6

menstrual products among school girls in Lofa County, Liberia. The results indicate that 71.8% of the girls primarily use disposable sanitary pads, 24.4% use menstrual cloth, 1.9% use reusable pads, and another 1.9% use other materials such as tissue paper. In terms of access to these products, 60.9% of the girls reported easy access, while 39.1% stated that access was not easy.

Furthermore, 52.3% of the girls found menstrual products affordable, while 47.7% considered them unaffordable. These findings highlight the dominance of disposable sanitary pads and the need for academic institutions to address the challenges of access and affordability faced by school girls in Lofa County, Liberia. The findings from Table 4 highlight significant

**Table 3:** Access To Menstrual Products

Respond Category	Frequency (n)	Percentage (%)
<b>Type of menstrual product primarily use (n = 308)</b>		
Disposable sanitary Pads	221	71.8
Menstrual cloth	75	24.4
Reusable Pads	6	1.9
Other (tissue paper, etc.)	6	1.9
<b>Easy Access to these Products (n = 304)</b>		
Yes	185	60.9
No	119	39.1
<b>Menstrual Products Affordable (n = 298)</b>		
Yes	156	52.3
No	142	47.7

deficiencies in sanitation facilities on school campuses for supporting menstrual hygiene management. Less than half of the schools (42.1%) provide clean and private sanitation facilities for girls, while a majority (57.9%) do not. Similarly, only 42.1% of the schools have adequate facilities for washing hands and menstrual products,

leaving 57.9% of the schools without these necessary resources. Moreover, a critical gap is observed in the proper disposal mechanisms for used menstrual products, with only 28.3% of schools having adequate systems in place, and a striking 71.7% lacking such mechanisms. The findings from Table 5 highlight the substantial impact

**Table 4:** Sanitation Facilities

Respond Category	Frequency (n)	Percentage (%)
<b>The school provides clean and private sanitation facilities for girls (n = 304)</b>		
Yes	128	42.1
No	176	57.9

Adequate facilities for washing hands and menstrual products (n = 297)		
Yes	125	42.1
No	172	57.9
A proper mechanism for disposing of used menstrual products (n = 304)		
Yes	86	28.3
No	218	71.7

of menstrual hygiene management on school attendance and student comfort. Almost half of the students miss school due to menstruation, with an average of 2.5 days missed per month. While a majority of students feel

comfortable managing their menstruation at school, a significant portion (32.6%) do not, indicating a need for improved menstrual hygiene facilities and support systems. The responses from the school girls highlight critical

**Table 5:** Impact on Education

Respond Category	Frequency (n)	Percentage (%)	Mean±SD
Students miss school due to menstruation (n = 305)			
Yes	146	47.9	
No	159	52.1	
Number of days missed per month due to menstruation (n = 146)			2.5 ±1.2
Feel comfortable managing your menstruation at school (n = 282)			
Yes	190	67.4	
No	92	32.6	

areas for improving menstrual hygiene management on campus (Table 6). A significant majority (243 out of 261) suggested that schools should provide sanitary pads, indicating a substantial demand and potential lack of access to these essential items. Additionally, some respondents (18 out of 261) called for government support to supply sanitary pads, underscoring the need for broader policy intervention. Concerns about sanitary facilities were also prominent, with 38 out of

43 respondents emphasizing the necessity for clean and private sanitation facilities, suggesting current inadequacies. Furthermore, a smaller group (5 out of 43) stressed the need for basic hygiene supplies like water and soap, highlighting gaps in essential resources. These insights underscore the urgent need for both material support and infrastructure improvements to enhance menstrual hygiene management for school girls. The interviews with seven school principals revealed a

**Table 6:** Suggestions For Improvement (n = 304)

Themes	Quote	Number of Interviewees	Interpretation
Sanitary Pads (N = 261)	“I suggest that the school provide sanitary pads”	243	Most respondents (243 out of 261) believe that providing sanitary pads at school is crucial. This indicates a high demand and potential lack of access to these essential items
	“Government should help to supply sanitary pads to all girls”	18	Some respondents (18 out of 261) extend the responsibility to the government, highlighting a need for broader policy support and resource allocation for menstrual hygiene products.
Sanitary Facilities (N = 43)	“To provide clean and private sanitation facilities for girls”	38	Most of these themes (38 out of 43) emphasize the importance of clean and private sanitation facilities. This suggests that current facilities may be inadequate, impacting girls’ comfort and privacy during menstruation.
	“provide water and soap on campus for hand washing during menstruation”	5	A smaller number of respondents (5 out of 43) focus on the need for basic hygiene supplies like water and soap, indicating that these essentials are either insufficient or not readily available.

significant gap in the availability of formal menstrual hygiene management (MHM) policies, with five out of seven principals indicating the absence of any policy and two noting that policies are not written (Table 7). The lack of formal policies was attributed to several factors: three principals mentioned that the Ministry of Education (MOE) has not provided the necessary

directives, one cited the absence of the appropriate personnel to develop such policies, and two indicated that MHM is addressed orally rather than through written guidelines. Additionally, one principal pointed out that his school administrations have not prioritized the development of an MHM policy.

Table 8, highlights the role and knowledge of classroom

**Table 7:** School Policies on Menstrual Hygiene Management (n = 7 Administrators)

Themes	Quote	Number of Interviewees	Interpretation
Menstrual Hygiene Management Policies Availability	“No policy”	5	The majority of principals (5 out of 7) indicated that their schools do not have a written MHM policy. This suggests a widespread absence of formal guidelines to support menstrual hygiene, which could lead to inconsistent practices and a lack of resources for managing menstruation effectively.
	“Policy not written”	2	Two principals mentioned that although there might be some understanding or informal practices, there is no formally documented policy. This points to a need for formalization and documentation to ensure clarity and consistency in MHM practices.
Justification For Not Having A Menstrual Hygiene Management Policy	“Not provided by MOE”	3	Three principals attributed the lack of MHM policies to the absence of directives or frameworks from the Ministry of Education (MOE). This indicates a reliance on higher authorities for policy development and implementation, highlighting a top-down approach in policy initiation.
	“Because the school has not met the appropriate person to do so”	1	One principal mentioned the lack of expertise or the right personnel as a reason for not having an MHM policy. This reflects challenges in accessing the necessary human resources or expertise required to develop such policies at the school level.
	“It is orally thought”	2	Two principals mentioned that MHM is addressed orally rather than through written policies. This suggests that while menstrual hygiene may be discussed, the lack of formal documentation could lead to inconsistencies and gaps in implementation.
	“Not available by school Administration”	1	One principal noted that his school administrations have not developed an MHM policy. This highlights the absence of initiative or priority given to MHM by school leadership, potentially due to competing priorities or lack of awareness.

teachers in high schools regarding menstrual hygiene management. Among the 14 teachers surveyed, only 36% had received training on menstrual hygiene management, while 64% had not. Despite this lack of training, 77% of teachers included information on menstrual hygiene management in their classrooms, indicating a willingness

to address the topic even without formal training. However, only 15% of teachers provided menstrual hygiene products to students, with 85% not offering such support.

Table 9, illustrates how classroom teachers support students

**Table 8:** Classroom Teacher’s role and Knowledge Regarding menstrual hygiene Management

Respond Category	Frequency	Percentage (%)
<b>Teacher receives training on menstrual hygiene management (n = 14)</b>		
Yes	5	36
No	9	64
<b>The teacher includes information on menstrual hygiene management in classroom (n = 14)</b>		
Yes	11	77

No	3	23
<b>Teacher provides menstrual Hygiene products for students in Classroom (n = 14)</b>		
Yes	2	15
No	12	85

experiencing menstrual issues and their efforts to reduce menstrual stigma. A majority of teachers (10 out of 14) allow students to visit a female counselor, and 4 provide sanitary pads and access to a special bathroom, indicating a focus on both emotional support and practical needs.

To reduce stigma, 6 teachers conduct private discussions with female students, 4 educate the broader student body, 3 refer students to counselors for specialized advice, and 1 emphasizes the importance of peer respect and support.

**Table 9:** Teachers support students who experience menstrual issues during class (n = 14)

Themes	Quote	Number of Interviewees	Interpretation
Support Students Who Experience Menstrual Issues During Class	“Allow them to visit the female counselor”	10	The majority of teachers (10 out of 14) support students by allowing them to visit a female counselor, indicating reliance on specialized support services for addressing menstrual issues.
	“Provide sanitary pads and a special bathroom for them”	4	A significant number of teachers (4 out of 14) provide practical support by supplying sanitary pads and ensuring access to a special bathroom, highlighting efforts to address immediate needs.
Reducing Menstrual Stigma In The Classroom	“Provide private discussions with female students”	6	Many teachers (6 out of 14) engage in private discussions with female students, suggesting personalized approaches to reduce stigma and provide support.
	“To educate students on how to address the problem”	4	Some teachers (6 out of 14) focus on educating the entire class on menstrual hygiene, aiming to foster a more informed and supportive classroom environment.
	“Refer them to a female counselor for counseling about their menstrual hygiene management”	3	A few teachers (3 out of 14) refer students to female counselors for specialized advice on menstrual hygiene management, indicating reliance on professional guidance.
	“By advising students to respect their mates and provide support”	1	One teacher emphasizes the importance of peer respect and support, highlighting the role of fostering a respectful and supportive classroom culture.

**Discussion**

The findings of this study highlight the crucial role that academic institutions can play in promoting menstrual hygiene management (MHM) among senior high school girls in Voinjama City, Lofa County, Liberia. Despite some progress, significant challenges remain, particularly in the areas of menstrual education, access to menstrual products, sanitation facilities, policy development, and teacher training.

A substantial portion of the girls surveyed (29.6%) did not receive menstrual health education in school, despite the efforts of some institutions to provide this information. Families were identified as the primary source of menstrual education for many girls, which points to a gap in the school-based provision of this vital information. This finding aligns with studies from

Ethiopia and India, where similar deficiencies in school-based menstrual education have been reported. These gaps underscore the need for more comprehensive and consistent educational programs within schools to ensure that all girls are adequately informed about menstrual hygiene (Habtegiorgis *et al.*, 2021; Sivakami *et al.*, 2019). Access to menstrual products was another significant issue identified in this study. While the majority of girls used disposable sanitary pads, nearly 40% reported difficulties in accessing these products, and almost half found them unaffordable. This situation reflects the broader economic barriers faced by girls in low-income settings, similar to findings from Nigeria and other parts of sub-Saharan Africa. These economic challenges highlight the need for schools and academic institutions to take a more proactive role in ensuring that girls have

access to affordable menstrual products, possibly through partnerships with governmental and non-governmental organizations (Nnennaya *et al.*, 2021).

The study also revealed significant shortcomings in the availability of adequate sanitation facilities in schools, with less than half of the schools providing clean and private facilities for girls to manage their menstruation. The majority of schools lacked proper handwashing and disposal facilities, which are essential for maintaining good menstrual hygiene. These deficiencies are consistent with reports from UNESCO and UNICEF, which have identified inadequate school sanitation as a major barrier to effective MHM in sub-Saharan Africa. The lack of proper facilities not only affects girls' ability to manage their menstruation but also contributes to absenteeism, with nearly half of the respondents missing an average of 2.5 days of school per month due to menstruation. This absenteeism directly impacts girls' educational outcomes and underscores the need for significant improvements in school sanitation infrastructure (UNESCO, 2011; UNICEF, 2019).

Furthermore, the study found a notable absence of formal MHM policies within schools. Interviews with school principals revealed that most schools either did not have formal MHM policies or relied on informal, oral communication to address the issue. This lack of formal guidelines can be attributed to several factors, including the absence of directives from the Ministry of Education and a lack of trained personnel to develop such policies. Similar challenges have been observed in other low-income settings, where the absence of formal MHM policies has been linked to poor menstrual health outcomes among students. This finding highlights the need for a coordinated effort at both the school and national levels to develop and implement comprehensive MHM policies (Sivakami *et al.*, 2019).

Lastly, the role of teachers in supporting MHM was examined, revealing that while many teachers included MHM in their classroom discussions, only a small percentage had received formal training on the topic. Despite this, many teachers were willing to support their students by providing information and, in some cases, menstrual hygiene products. However, the limited provision of products and the lack of formal training highlight a significant area for improvement. Providing teacher training on MHM, as recommended by scholars, could empower educators to better support their students and reduce the stigma associated with menstruation, thereby creating a more supportive school environment (Shah *et al.*, 2023).

## CONCLUSION

The findings of this study underscore the critical importance of academic institutions in Voinjama City, Lofa County, Liberia, in promoting effective menstrual hygiene management (MHM) among senior high school girls. While some progress has been made in providing menstrual education and support, significant gaps remain

in key areas such as access to menstrual products, sanitation facilities, and the formalization of MHM policies. The lack of comprehensive and inclusive menstrual health education within schools, coupled with economic barriers that limit access to affordable menstrual products, poses ongoing challenges for adolescent girls in this region. Additionally, the inadequacy of sanitation infrastructure in schools, including the absence of clean and private facilities for managing menstruation, further exacerbates the difficulties faced by schoolgirls, leading to absenteeism and negative impacts on their educational outcomes.

## RECOMMENDATIONS

The study identified several recommendations for enhancing menstrual hygiene management (MHM) among senior high school girls in Voinjama City, Lofa County, Liberia.

First, it is essential to strengthen menstrual health education within schools. To ensure that students gain accurate information about menstruation, a comprehensive menstrual hygiene management curriculum, should be integrated into school programs. This curriculum should cover menstrual hygiene practices, the use of menstrual products, and the importance of maintaining proper hygiene. Additionally, teachers should receive specialized training on menstrual health education to equip them with the knowledge and skills necessary to address menstrual health issues effectively and to help reduce the stigma associated with menstruation.

Improving access to menstrual products is another critical area for intervention. Schools should establish programs to provide menstrual products directly to students, particularly for those facing financial barriers. Collaborations with government agencies, NGOs, and private sector partners can help ensure a steady supply of sanitary pads and other menstrual products. Moreover, exploring cost-effective solutions such as reusable menstrual pads or menstrual cups can provide more affordable options for students in need.

Enhancing sanitation facilities within schools is also crucial. Investment in upgrading school facilities to ensure they are clean, private, and well-maintained will significantly impact students' ability to manage menstruation effectively. This includes providing adequate handwashing facilities and proper disposal systems for menstrual products. Regular maintenance of these facilities should be implemented to ensure their continued functionality and hygiene.

Developing and implementing formal MHM policies is necessary to provide structured support for menstrual health in schools. Schools should formulate comprehensive MHM policies that address menstrual health education, access to menstrual products, and the availability of sanitation facilities. These policies should be supported by clear guidelines and directives from the Ministry of Education. Additionally, mechanisms for monitoring and enforcing these policies should be established to ensure compliance and effectiveness.

Finally, supporting ongoing research and data collection on MHM practices and challenges is crucial. Further research can provide a deeper understanding of the needs and experiences of schoolgirls and help evaluate the effectiveness of interventions. Implementing systems for regular data collection and analysis will inform policy and program development, ensuring that MHM initiatives are responsive to the needs of the community.

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