

## Menstrual Hygiene Management- A Study among Adolescent Girls in Five Schools in Bo District, Sierra Leone

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### ABSTRACT

Menstruation can place significant impacts on girl's health and education if they are not properly informed about effective menstrual hygiene management. The present study was undertaken to assess the knowledge and practices of menstrual hygiene among adolescent girls in five schools in Bo district, Sierra Leone and to assess the restrictions practiced by them during menstruation. A cross sectional study design was carried out among 103 in November 2019. A self-administered structured questionnaire at schools was used for data collection. Data was collected regarding their knowledge about menstruation, from where they get information and practices followed to maintain menstrual hygiene, problems faced while attending school during menstruation and facilities available in school, etc. The analysis part was done with the help of SPSS version 25. Age of respondents varied between 12-21 years with the mean age of 16.5. 69.9% of the girls don't know from where menstrual bleeding occurs. Majority of the girls are using sanitary pads as absorbent during menstruation. 42.7% of the girls said they have been restricted from praying when seeing their menses and 49.5% of the girls said they feel their school is uncomfortable to keep hygiene during menstruation. The findings led to the conclusion that the girls have deficient knowledge and inadequate practices regarding menstruation and its management.

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### Introduction

Adolescence is understood as a stage in the lives of females, which indicates their transition from girlhood to womanhood. This also constitutes an important milestone, which is marked by the onset of menstruation (Dhingra, Kumar & Kour, 2009; Nagar & Aimol, 2011) [1,2]. From this stage onwards until menopause, reproductive health and menstrual hygiene are important aspects in the lives of females. There is however not much attention paid to adolescent girls' specific health needs, notwithstanding that doing so would lay a good foundation for their physical and mental wellbeing and their ability to cope with the heavy demands of reproductive health later in life [2,3,4]. In a worst case scenario, the latter may include unwanted pregnancies, urinary tract infections (UTI) and pelvic inflammatory diseases [3,5,6].

Menstrual hygiene, which refers to the effective management of menstrual bleeding by women and girls, is an important aspect of reproductive health, which if not handled appropriately can cause infections of the urinary tract, pelvic inflammatory diseases and

vaginal thrush, as well as bad odor, soiled garments and ultimately shame, leading to infringement on the girls' dignity [7].

Schools, particularly those in developing countries, often completely lack drinking-water and sanitation and hand washing facilities; even, where such facilities exist they are often inadequate in both quality and quantity. Girls are likely to be affected in different ways from inadequate water, sanitation and hygiene conditions in schools, because the lack of such facilities they cannot attend school during menstruation (WHO, 2009) [8]. Girls are particularly vulnerable to dropping out of school, partly because when toilet and washing facilities are not private, not safe or simply not available in schools. Girls who reached puberty and female school staff need gender-related privacy; otherwise they may not use the facilities. This may result in absenteeism rates that can reach 10–20 per cent of school time [9].

Study on menstruation and its hygienic impact as well as its effects on girl's education is limited in Sierra Leone. The present study was undertaken to assess the knowledge and practices of menstrual hygiene among adolescent girls in five schools in Bo district, Sierra Leone.

### Rationale

There is a need to better understand how menstruation affects girls while at school and the challenges it presents to their education [10]. It is also hoped that the findings from the study will generate further interest in the research field of reproductive health and menstrual hygiene in the context of Sierra Leone.

### Problem Statement

Research exists on the challenges girls face while menstruating, their knowledge source and cultural traditions regarding menstruation. The current understanding is that menstruation causes girls to be absent from school, and that continued absence leads to dropout and attrition. Studies have shown that girls miss school during their menses, especially when the school lacks the water, sanitation and hygiene facilities necessary to maintain hygiene [11].

There is a consistent lack of knowledge and education among adolescent girls regarding menstruation. It is the motive behind the study.

### Research Methodology

The researchers used multiple approaches for collecting data, namely Questionnaires and note taking of discussions, combined with interactions with participants and observations of their non-verbal communications [12].

The employment of a variety of data collecting approaches enabled the researcher to explore in-depth the problems related to menstrual hygiene of adolescent girls, understand their perceptions and sources of information about menstruation, as well as their practices and experiences during menstruation [13]. Hence a total of one hundred and three (103) respondents from five secondary schools in Bo District, Sierra Leone took part in

the study. The respondents were within the age limit of 12 to 21 years. They all had attained menstruation and none of them had experienced pregnancy. Quantitative data was inputted during the research process in the field and subsequently analyzed using the Statistical Package for the Social Sciences (SPSS) software version 25. Categorical data was analyzed using frequency tables and charts.

### Results

**Table 1: Distribution of Study Participants based on Age**

Age	Frequency
12	2
13	4
14	6
15	17
16	24
17	15
18	18
19	8
20	4
21	5
<b>Total</b>	<b>103</b>

**Source:** Research data from the study conducted in five schools in Bo, Sierra Leone

The age wise distribution of study participants is given in Table 1. Majority of participants were in the age group of 16 years followed by 18 and 15 yrs. There is no significant difference ( $p > 0.05$ ) in age distribution between the groups.

**Table 2: Respondents Belief about Menstruation**

Schools	Belief of Menstruation					Total
	No Response	Disease	Don't Know	Physiological Process	Sin	
ALLAWALIE	1	2	6	6	1	16
	6.3%	12.5%	37.5%	37.5%	6.3%	100.0%
AWADA	0	2	17	4	3	26
	0.0%	7.7%	65.4%	15.4%	11.5%	100.0%
BO COMMERCIAL	0	0	12	7	4	23
	0.0%	0.0%	52.2%	30.4%	17.4%	100.0%
SLMB	0	0	19	0	0	19
	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
UMC NJABOIMA	0	1	18	0	0	19
	0.0%	5.3%	94.7%	0.0%	0.0%	100.0%
<b>Total</b>	<b>1</b>	<b>5</b>	<b>72</b>	<b>17</b>	<b>8</b>	<b>103</b>
	<b>1.0%</b>	<b>4.9%</b>	<b>69.9%</b>	<b>16.5%</b>	<b>7.8%</b>	<b>100.0%</b>

**Source:** Research data from the study conducted in five schools in Bo, Sierra Leone.

From the above table 69.9% of the girls said they don't know about the belief of menstruation, 16.5% believed is a physiological process, 7.8% believed is a sin, 4.9% believed is a disease, and 1.0% made no response.

**Table 3: Respondents view on Causes of Menstruation**

Schools	Belief of Menstruation					Total
	No Response	Disease	Don't Know	Hormones	Sin	
ALLAWALIE	1	1	8	4	2	16
	6.3%	6.3%	50.0%	25.0%	12.5%	100.0%
AWADA	0	0	4	20	2	26
	0.0%	0.0%	15.4%	76.9%	7.7%	100.0%
BO COMMERCIAL	0	2	10	11	0	23
	0.0%	8.7%	43.5%	47.8%	0.0%	100.0%
SLMB	0	3	0	16	0	19
	0.0%	15.8%	0.0%	84.2%	0.0%	100.0%
UMC NJABOIMA	0	0	2	17	0	19
	0.0%	0.0%	10.5%	89.5%	0.0%	100.0%
<b>Total</b>	<b>1</b>	<b>6</b>	<b>24</b>	<b>68</b>	<b>4</b>	<b>103</b>
	<b>1.0%</b>	<b>5.8%</b>	<b>23.3%</b>	<b>66.0%</b>	<b>3.9%</b>	<b>100.0%</b>

**Source:** Research data from the study conducted in five schools in Bo, Sierra Leone.

From the above table 66.0% of the girls believed menstruation is caused by Hormones, 23.3% said they don't know, 5.8% believed is caused by disease, 3.9% believed is caused by sin, and 1.0% made no response.

**Table 4: Respondents view on Menstruation Blood Flow**

Schools	Where does Menstruation Blood flow From?					Total
	No Response	Bladder	Don't Know	Uterus	Vaginal	
ALLAWALIE	1	0	0	4	11	16
	6.3%	0.0%	0.0%	25.0%	68.8%	100.0%
AWADA	0	0	0	1	25	26
	0.0%	0.0%	0.0%	3.8%	96.2%	100.0%
BO COMMERCIAL	0	0	1	1	21	23
	0.0%	0.0%	4.3%	4.3%	91.3%	100.0%
SLMB	0	1	0	1	17	19
	0.0%	5.3%	0.0%	5.3%	89.5%	100.0%
UMC NJABOIMA	0	0	0	0	19	19
	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>93</b>	<b>103</b>
	<b>1.0%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>6.8%</b>	<b>90.3%</b>	<b>100.0%</b>

**Source:** Research data from the study conducted in five schools in Bo, Sierra Leone

From the above table 90.3% of the girls believed that menstruation blood from the vaginal, 6.8% believed is from the uterus, 1.0% believed to be either the Bladder or Uterus and 1.0% made no response.

**Table 5: Does Poor Menstrual Hygiene Practices Lead to infection?**

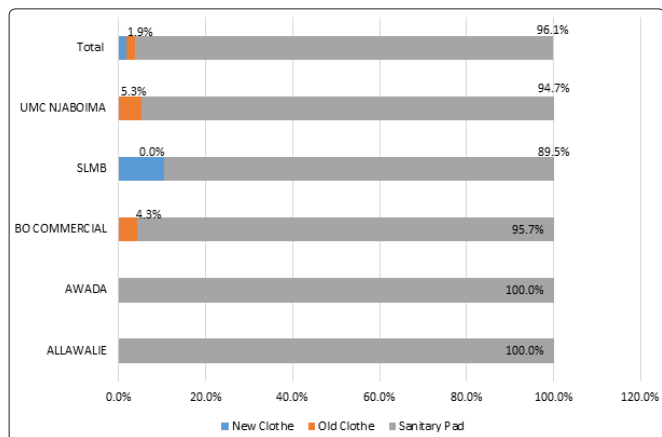
Schools		Does Poor Menstrual Hygiene Practices Lead to infection?			Total
		No Response	No	Yes	
ALLAWALIE	Count	1	1	14	16
	% within School	6.3%	6.3%	87.5%	100.0%
AWADA	Count	0	2	24	26
	% within School	0.0%	7.7%	92.3%	100.0%
BO COMMERCIAL	Count	0	1	22	23
	% within School	0.0%	4.3%	95.7%	100.0%
SLMB	Count	0	0	19	19
	% within School	0.0%	0.0%	100.0%	100.0%

UMC NJABOIMA	Count	0	1	18	19
	% within School	0.0%	5.3%	94.7%	100.0%
Total	Count	1	5	97	103
	% within School	1.0%	4.9%	94.2%	100.0%

Source: Research data from the study conducted in five schools in Bo, Sierra Leone

From the above table 94.2 % of the girls believed that poor menstrual hygiene leads to infection, 4.9% believed that poor menstrual hygiene does not lead to infection, and 1.0% made no response.

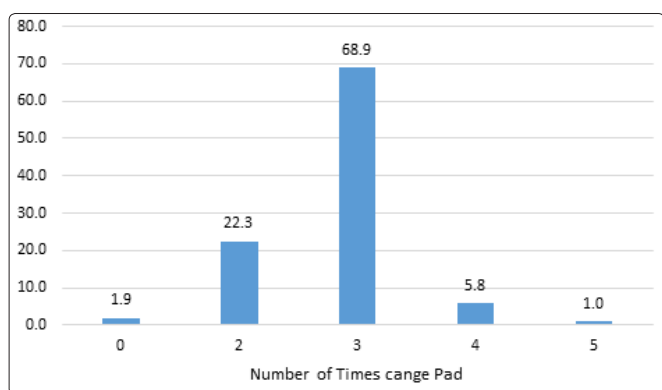
Figure 1: Absorbent used during menstruation



Source: Research data from the study conducted in five schools in Bo, Sierra Leone.

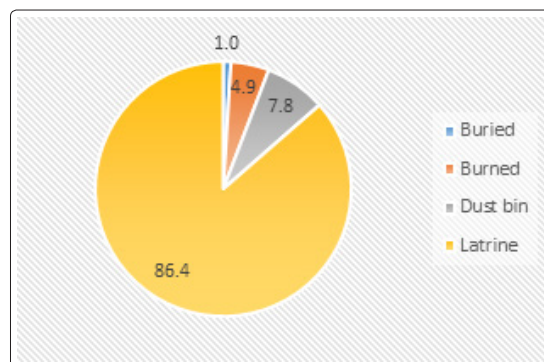
From the above figure 96% of girls use sanitary pad as absorbent during menstruation, others because of poverty use new and old clothes.

Figure 2: Number of times respondents change absorbents



Source: Research data from the study conducted in five schools in Bo, Sierra Leone

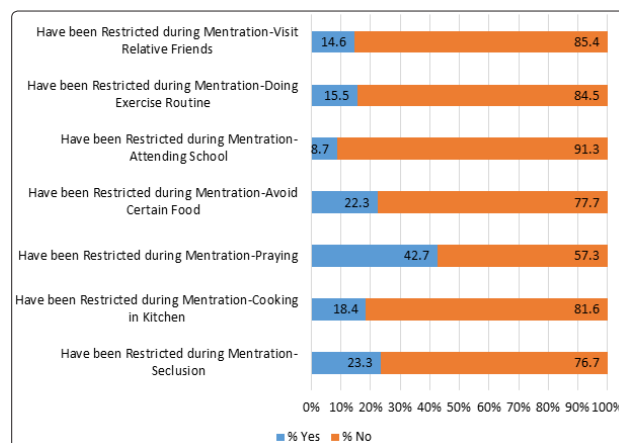
From the above figure 68.9% of the girls said they change their absorbents 3 times a day, 22.3% said 2 times a day, 5.8% said 4 times a day, 1.9% said 0 times a day and 1.0% said 5 times a day.



Source: Research data from the study conducted in five schools in Bo, Sierra Leone.

From the figure above 86.4% of the girls said they dispose their absorbents in Latrine, 7.8% said dustbin, 4.9% said they burn, and 1% said they bury.

Figure 4: Possible Restrictions faced by respondents during Menstruation



Source: Research data from the study conducted in five schools in Bo, Sierra Leone

From the above figure 42.7% of the girls said they have been restricted from praying during menstruation, 23.3% said they have faced seclusion, 22.3% said they have been restricted to avoid certain foods, 18.4% said they have been restricted from cooking in the kitchen, 15.5% said they have been restricted from doing exercise routine, 14.6% said they have been restricted from visiting relatives or friends and 8.7% said they have been restricted from attending school.



## Discussion

Adolescence is recognized as a special critical period of females in which significant hormonal and emotional changes take place including their first menstrual onset [14]. Although menstruation is such a normal physiological process in female's reproductive age, it is surrounded by taboos and supernatural perceptions [15]. As a result, many adolescent girls could not have the access to get adequate information regarding menstruation and its hygienic practice, and they often join to their menarche without preparing themselves, particularly in rural areas [16]. This might result in adverse health outcomes and poor academic performance of adolescent school girls [17].

In the current study, 69.9% of adolescent school girls Bo, Sierra Leone had poor knowledge regarding the bleedings of menses. This is in line with other similar study done in Southern Ethiopia (60.1%) [18]. However, the finding of the current study showed a better knowledge towards menstruation among adolescent school girls as compared to a similar study done in India, which revealed that 71.3% of female students had poor knowledge regarding their menstruation (Shanbhag D, et. al 2012) [16].

In adequate knowledge and false beliefs make girls unprepared for menstruation. In the present study, only 6.8% girls knew that menstruation is due to uterine bleeding. Similar low percentage of girls had knowledge of menstruation in studies carried out elsewhere in India [19-21].

The current study shows that 94.2% of girls were aware that poor hygiene leads to infection which is greater when compared to a similar study done by shows that 37.7% of girls were aware of it [22]. The possible explanation for this discrepancy might be the measurement techniques studies used to assess level of knowledge and the socio-cultural differences of study participants.

The type of absorbent used during menstruation is of importance since unhygienic materials could lead cause of infection. In the present study 96% of the girls prefer to use sanitary pads as absorbent during menstruation. This is similar to a study conducted shows 93.8% sanitary pads usage [23]. In a study conducted by (J. Bharathalakshmi et al, 2014) sanitary pads were used by 90.5% of the study population [24]. (El Gilany et al. 2005) reported that two-thirds of the girls (66.8%) used sanitary pads, while 12% used old pieces of cloth thrown away after use, respectively [25]. Only 49.3% of participants used sanitary napkins and 177 (45.7%) girls used old cloth pieces and 19(4.90%) used new pieces of clothes in a study done [26]. The increased use of sanitary pads in the present study is mostly due to increased awareness among girls.

In the present study, 22.3% girls change pads twice a day and 75.7% girls change it more than thrice a day. About 50.8% and 41.0% of girls responded that they change pads twice and thrice a day in a study done at rural Nepal by [22]. Also in a study done by (Patavegar et al, 2014) 53.6% and 40.8% of girls change pads twice and thrice a day respectively [27]. Methods of disposal of used absorbent was questioned and categorized as fair (83.8%) and poor (16.2%) practice. This shows that awareness among adolescent girls regarding menstruation has increased in recent times but there is a lot more to be done to improve menstruation and menstrual hygiene management awareness among adolescent girls, for addressing poor menstrual health.

In the present study 42.7% of girls said that they face restrictions during menstruation. Among them, about 23.3% girls faced seclusion. About 18.4% girls were restricted from doing household

activity. Majority 42.7% of girls faced restriction from praying. About 22.3% of the participants said that certain types of foods were restricted which is almost similar to 33.5% [28].

## Conclusions and Recommendations

The present study highlights the need for adolescent girls to have accurate and adequate information about menstruation. The study revealed that the knowledge on menstruation is poor and the hygiene practiced is often sub-optimal. Girls should be educated about the facts of menstruation, its physiological implications, the significance of menstruation and development of secondary sexual characters, and above all, they should be imparted knowledge of proper hygienic practices and sanitation. We should also promote an innovative gender approach in all programming, ensuring that menstrual hygiene management aspects are included in planning processes and budget allocation processes by the health and sanitation, and education ministries in Sierra Leone [29-31].

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