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Assessment of Perceptions and Practices on Menstruation among Adolescent Girls in Five Schools in bo district, Sierra Leone

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ABSTRACT

Menstrual hygiene is essential as it promotes the health of women. Unhygienic menstrual practices can affect the health of girls and can lead to urinary tract infections. Many girls deficient of appropriate knowledge in menstruation and menstrual hygiene. It is therefore necessary to assess their perceptions, problems, and practices on menstruation. This Cross-sectional study was conducted amongst 103 secondary school girls from five schools in the southern part of Sierra Leone via structured questionnaire. Majority of the students, were aged 15-18 years. 29.1% of the girl's attained menstruation at age 14 years. 57.3% of the girls believed that the normal monthly interval of menstruation is 28 days. 33% of the girls said Menstruation upsets them. Staining of dress and bad odor 30.1% were the most embarrassment faced by girls during menstruation. 64.1% of the girls said Scared was their reaction to Menstruation. 78.6% of the girls said Worried is how they feel when they don't get their period on time. Menstrual problems were most commonly discussed with their mothers, (68%), and least commonly discussed with the fathers, 1.9%. Majority of the respondents had poor knowledge on menstruation, menstrual hygiene and practices. Menstruation perceptions are poor, and practices often incorrect. A multi-dimensional approach focusing on capacity building of mothers, and teachers on sexuality education skills; using religious organizations as avenues for sexuality education; and effectively using the Mass Media as reproductive health education channels are recommended towards improving adolescents' perceptions and practices on menstruation. (Afr Reprod Health 2008; 12[1]:74-83).

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Introduction

Adolescence in girls is a phase of transition from girlhood to womanhood and marks the onset of female puberty. This period of attaining reproductive maturity between the ages of 10-19 years is marked by a number of physiological, behavioral and psychological changes, the most notable being the onset of menstruation [1].

Menstrual health is an important part of life cycle approach to women's health, so loud and clear messages and services on this issue must reach adolescent girls. Menstrual hygiene deals with a woman's special health care needs and requirements during her monthly menstruation or menstrual cycles. These areas of special concern include choosing the best period protection, or feminine hygiene products, how often and when to change her feminine hygiene products, bathing, care of her vulva and vagina, as well as the supposed benefits of vaginal douching at the end of each menstrual period [2]. Primarily poor personal hygiene and unsafe sanitary conditions result in gynecological problems. Infections due to lack of hygiene during menstruation are often reported [3].

Personal hygiene is hygienic and safe practice during menstruation. Menstrual hygiene is an issue for adolescent girls in developing countries, predominantly when attending school. Good menstrual hygiene means sufficiently cleaning external genitalia daily, use of sanitary pad and regularly changed pad every 3-5 hours per day to prevent odour and infection practice related to menstrual hygiene is essential to ensure prevention of disease and better health of adolescent girls [4]. Unhygienic menstrual practices can affect the health of the girls and there is an increased vulnerability to reproductive tract infections, urinary tract infections, pelvic inflammatory diseases and other complications. To reduce burden of all reproductive phase complications, it is important to educate adolescence girl. Women having better knowledge about menstrual

hygiene and out of harm's way practices are most likely to practice adequate sanitation during their menstruation are less vulnerable to urinary and reproductive tract infection [5].

Many young girls in our country may lack appropriate and sufficient information regarding menstrual hygiene, causing incorrect unhealthy behavior during their menstrual period. This study therefore emphasized on assessing the perception and practice of the students about menstruation.

This will be expected to enable the incorporation of correct and appropriate information on menstruation and menstrual practices into the reproductive health education programs of schools in Sierra Leone.

Methods

Bo District is a district in the Southern Province of Sierra Leone. It is one of the sixteen Districts of Sierra Leone. Bo District is the fourth most populous District in Sierra Leone. Its capital and largest city is the city of Bo, which is the third most populous city in Sierra Leone. other major towns in the district include Baoma, Bumpeh, Serabu, Sumbuya, Baiima and Yele. Bo District borders Kenema District to the east, Tonkolili District to the north, Moyamba District to the west, Bonthe District to the southwest and Pujehun District to the south.

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 the respondents' age at menstruation span 13 to 15 years. Preliminary meetings were held with the school authorities in each of the schools to explain the purpose of the study.

At the beginning of each session, the research team introduced themselves and reiterated the purpose of the project to participants. Informed written consent was gained before proceeding with the questions. Due to the differing levels of spoken English and the fact that this was, for the vast majority, the first time they had been asked to complete a questionnaire, the researcher lead participants through each question. The process by which certain questions needed to be answered, with regards to particular formats, was explained every time. Girls were also given the opportunity to ask any questions they might have.

A Self-administered, pre-tested and semi-structured Questionnaire was used for data collection. The questionnaire had six parts which are as follows:

First – Socio demographic profile
Second – Menstruation and Menstruation details
Third – Knowledge regarding menstruation & Menstrual Hygiene
Fourth – Attitude of participants towards Menstruation & Menstrual hygiene
Fifth – Practices during menstruation
Sixth – Restrictions faced by participants during menstruation.
Seventh- Addition opinion of respondents into confidential box

Quantitative data was inputted 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
Total	**103**

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

The age wise distribution of study participants in Table 1 shows that 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: Ages of Respondents that they attained Menstruation

Schools	Age attained Menstruation						Total
	12 yrs.	13 yrs.	14 yrs.	15 yrs.	16 yrs.	below 12	
ALLAWALIE	1	3	7	2	0	3	16
	6.3%	18.8%	43.8%	12.5%	0.0%	18.8%	100.0%
AWADA	9	9	3	1	0	4	26
	34.6%	34.6%	11.5%	3.8%	0.0%	15.4%	100.0%
BO COMMERCIAL	3	2	6	10	1	1	23
	13.0%	8.7%	26.1%	43.5%	4.3%	4.3%	100.0%
SLMB	0	10	8	1	0	0	19
	0.0%	52.6%	42.1%	5.3%	0.0%	0.0%	100.0%
UMC NJABOIMA	6	5	6	0	0	2	19
	31.6%	26.3%	31.6%	0.0%	0.0%	10.5%	100.0%
Total	**19**	**29**	**30**	**14**	**1**	**10**	**103**
	18.4%	**28.2%**	**29.1%**	**13.6%**	**1.0%**	**9.7%**	**100.0%**

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

From the table above 29.1% of the girl's attained menstruation at age 14 years, 28.2% attained menstruation at age 13 years, 18.4% of the girls attained menstruation at age 12 years, 13.6% of the girls attained menstruation at age 15 years, 9.7% of the girls attained menstruation below 12 years and 1.0% of the girls attained menstruation at age 16 years.

Table 3: Duration of Menstrual Cycle of Respondents

Schools	Duration of Menstruation Cycle					Total
	3 days	4 days	5 days	6 days	7 days	
ALLAWALIE	2	6	4	1	3	16
	12.5%	37.5%	25.0%	6.3%	18.8%	100.0%
AWADA	9	7	8	1	1	26
	34.6%	26.9%	30.8%	3.8%	3.8%	100.0%
BO COMMERCIAL	11	6	4	1	1	23
	47.8%	26.1%	17.4%	4.3%	4.3%	100.0%
SLMB	3	8	6	2	0	19
	15.8%	42.1%	31.6%	10.5%	0.0%	100.0%
UMC NJABOIMA	3	4	9	3	0	19
	15.8%	21.1%	47.4%	15.8%	0.0%	100.0%
Total	**28**	**31**	**31**	**8**	**5**	**103**
	27.2%	**30.1%**	**30.1%**	**7.8%**	**4.9%**	**100.0%**

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

From the table above 30.1% of the girls their menses lasted for 4 or 5 days, 27.2% of the girls their menses lasted for 3 days, 7.8% of the girls their menses lasted for 6 days and 4.9% of the girls their menses lasted for 7 days.

Table 4: Respondents Belief about Menstruation

Schools	Belief about 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%
Total	**1**	**5**	**72**	**17**	**8**	**103**
	1.0%	**4.9%**	**69.9%**	**16.5%**	**7.8%**	**100.0%**

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

From the above table 69.9% of the girls say 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 5: Does Food Habit Affect Menstruation Cycle

Schools	Does Food Habit affect Menstruation cycle?			Total
	No Response	No	Yes	
ALLAWALIE	1	12	3	16
	6.3%	75.0%	18.8%	100.0%
AWADA	0	14	12	26
	0.0%	53.8%	46.2%	100.0%
BO COMMERCIAL	0	17	6	23
	0.0%	73.9%	26.1%	100.0%
SLMB	0	9	10	19
	0.0%	47.4%	52.6%	100.0%
UMC NJABOIMA	0	3	16	19
	0.0%	15.8%	84.2%	100.0%
Total	**1**	**55**	**47**	**103**
	1.0%	**53.4%**	**45.6%**	**100.0%**

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

From the above table 53.4 % of the girls does not believe that food habit affect menstruation, 45.6% believed that food habit affect menstruation, and 1.0% made no response.

Table 6: 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.

Table 7: Reactions to Menstruation

		Reactions to Menstruation				Total
		Embarrassed	Guilty	No Reaction	Scared	
ALLAWALIE	Count	3	2	1	10	16
	% within School	18.8%	12.5%	6.3%	62.5%	100.0%
AWADA	Count	9	0	0	17	26
	% within School	34.6%	0.0%	0.0%	65.4%	100.0%
BO COMMERCIAL	Count	9	2	2	10	23
	% within School	39.1%	8.7%	8.7%	43.5%	100.0%
SLMB	Count	7	0	1	11	19
	% within School	36.8%	0.0%	5.3%	57.9%	100.0%

UMC NJABOIMA	Count	0	0	1	18	19
	% within School	0.0%	0.0%	5.3%	94.7%	100.0%
Total	**Count**	**28**	**4**	**5**	**66**	**103**
	% within School	**27.2%**	**3.9%**	**4.9%**	**64.1%**	**100.0%**

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

From the above table 64.1% of the girls said Scared was their reaction to Menstruation, 27.2% said they felt embarrassed, 4.9% said no reaction and 3.9% said they felt guilty.

Table 8: Reactions when respondents don't get their period

Schools		**How they feel when they don't get their period?**				**Total**
		Happy	**No Reaction**	**Scared**	**Worried**	
ALLAWALIE	Count	0	0	1	15	16
	% within School	0.0%	0.0%	6.3%	93.8%	100.0%
AWADA	Count	1	0	4	21	26
	% within School	3.8%	0.0%	15.4%	80.8%	100.0%
BO COMMERCIAL	Count	0	0	5	18	23
	% within School	0.0%	0.0%	21.7%	78.3%	100.0%
SLMB	Count	8	1	2	8	19
	% within School	42.1%	5.3%	10.5%	42.1%	100.0%
UMC NJABOIMA	Count	0	0	0	19	19
	% within School	0.0%	0.0%	0.0%	100.0%	100.0%
Total	**Count**	**9**	**1**	**12**	**81**	**103**
	% within School	**8.7%**	**1.0%**	**11.7%**	**78.6%**	**100.0%**

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

From the above table 78.6% of the girls said Worried is how they feel when they don't get their period, 11.7% said they feel scared, 8.7% said they feel happy and 1.0% said no reaction.

Table 9: Is it better to know about menstruation earlier?

School		**Is it better to know about menstruation earlier?**		**Total**
		No	**Yes**	
ALLAWALIE	Count	1	15	16
	% within School	6.3%	93.8%	100.0%
AWADA	Count	0	26	26
	% within School	0.0%	100.0%	100.0%
BO COMMERCIAL	Count	0	23	23
	% within School	0.0%	100.0%	100.0%
SLMB	Count	5	14	19
	% within School	26.3%	73.7%	100.0%
UMC NJABOIMA	Count	0	19	19
	% within School	0.0%	100.0%	100.0%
Total	**Count**	**6**	**97**	**103**
	% within School	**5.8%**	**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 said it is better to know about menstruation earlier, and 5.8% said it is not better to know about menstruation earlier.

Table 10: Do you think educating Girls about Menstruation is important?

Schools		Do you think educating Girls about Menstruation is important?		Total
		No	Yes	
ALLAWALIE	Count	1	15	16
	% within School	6.3%	93.8%	100.0%
AWADA	Count	0	26	26
	% within School	0.0%	100.0%	100.0%
BO COMMERCIAL	Count	2	21	23
	% within School	8.7%	91.3%	100.0%
SLMB	Count	1	18	19
	% within School	5.3%	94.7%	100.0%
UMC NJABOIMA	Count	0	19	19
	% within School	0.0%	100.0%	100.0%
Total	**Count**	**4**	**99**	**103**
	% within School	**3.9%**	**96.1%**	**100.0%**

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

From the above table 96.1% of the girls said it is important to educate girls about menstruation, and 3.9% said it is not important.

Table 11: whom do you prefer to discuss menstruation issues?

Schools		Whom do you prefer to discuss menstruation issues?					Total
		Father	Friends	Grandparent	Mother	Relatives	
ALLAWALIE	Count	0	1	1	12	2	16
	% within School	0.0%	6.3%	6.3%	75.0%	12.5%	100.0%
AWADA	Count	2	2	4	16	2	26
	% within School	7.7%	7.7%	15.4%	61.5%	7.7%	100.0%
BO COMMERCIAL	Count	0	1	0	20	2	23
	% within School	0.0%	4.3%	0.0%	87.0%	8.7%	100.0%
SLMB	Count	0	2	0	14	3	19
	% within School	0.0%	10.5%	0.0%	73.7%	15.8%	100.0%
UMC NJABOIMA	Count	0	5	1	8	5	19
	% within School	0.0%	26.3%	5.3%	42.1%	26.3%	100.0%
Total	**Count**	**2**	**11**	**6**	**70**	**14**	**103**
	% within School	**1.9%**	**10.7%**	**5.8%**	**68.0%**	**13.6%**	**100.0%**

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

From the above table 68.0% of the girls said they prefer to discuss menstrual issues with their mothers, 13.6% said their relatives, 10.7% said their friends, 5.8% said their grandparents, and 1.9% said their fathers.

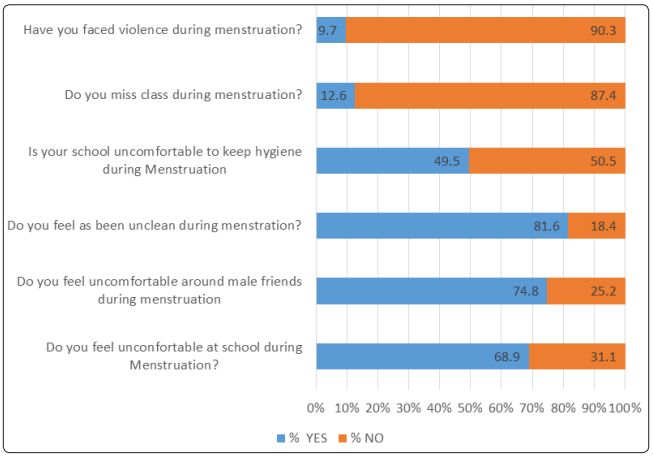
Table 12: Source of Information on menstrual Hygiene

Sources	Frequency	Percent
Friends	10	9.7
Mass Media	8	7.8
Mother	34	33.0
Teachers	51	49.5
Total	103	100.0

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

From the above table 49.5% of the girls said they got information on menstrual hygiene from teachers, 33% said from their mothers, 9.7% said from friends and 7.8% said from mass media.

Figure 1: Possible challenges faced during Menstruation



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

From the above figure 81.6% of the girls said the feel unclean during menstruation, 74.8% of the girls said they feel uncomfortable around male friends during menstruation, 68.9% said they feel uncomfortable at school during menstruation, 49.5% said they feel their school is uncomfortable to keep hygiene during menstruation, 12.6% said they miss class during menstruation, and 9.7% said they have faced violence during menstruation.

Table 13: What's your Opinion as a girl child on Menstruation?

Opinions of Respondents on Menstruation	Frequency	Percent
As a girl child once you have started seeing your period you have to be careful with men.	1	1.0
I don't like it because it is unhygienic.	16	15.5
I feel embarrassed about menstruation.	1	1.0
I feel it is a sign of parenthood.	1	1.0
I feel scared.	2	1.9
It gives painful stomach ache	10	9.7
It is unclean.	1	1.0
It makes me feel sick and I feel shy to sit among male friends.	1	1.0
It makes me tired and uncomfortable	12	11.7
It shows sign of Maturity and I like it	20	19.4
It upsets me	34	33.0
Menstruation should be treated with much attention in schools but it's not done.	1	1.0
My opinion as a girl is that fellow girls should maintain cleanliness and take good care of themselves.	1	1.0
One needs to be educated about menstruation	1	1.0
One needs to be educated about menstrual cycle.	1	1.0
Total	**103**	**100.0**

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

From the table above 33% of the girls said Menstruation upsets them. Another 19.4% said its shows sign of maturity and I liked it. Another 15.5% stated that they don't like it because it's unhygienic. 11.7% said it makes them tired and uncomfortable. 9.7 % said it gives them painful stomach ache.

Table 14: Embarrassment faced by respondents during Menstruation

Embarrassment faced with during Menstruation	Frequency	Percent
Bad body odor and bleeding.	1	1.0
Bad odor and stomach pain.	1	1.0
Bleeding and Stomach pain.	18	17.5
Feel ashamed when among male friends.	6	5.8
Feel shy because bad body odor	5	4.9
I don't face any embarrassment	18	17.5
It comes out in places that I am not comfortable with like school, churches etc.	1	1.0
It gives me body pain.	1	1.0
It makes feel uncomfortable as it makes me not to play.	1	1.0
It makes me very uncomfortable.	1	1.0
Most times blood flows out unexpected and it's very embarrassing.	1	1.0
Period pain and bad odor.	1	1.0
Staining of my dress(uniform) and Bad smell	31	30.1
Unexpected flow of blood	16	15.6
Unexpected flow of blood and Staining of my dress.	1	1.0
Total	**103**	**100.0**

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

From the table above staining of dress and bad odor (30.1%) was the most embarrassment faced by girls during their menstruation followed by stomach pain and unexpected flow of blood (17.5%) and (15.6%) respectively. Another 17.5% of the girls said they faced no embarrassment during menstruation.

Discussion

Menstruation is a cyclical bleeding through the vagina in woman and this is the preparation of a woman by the nature for motherhood. Although menstruation is a natural process, it is linked with several misconceptions and practice, which sometimes result into adverse health outcomes. Every girl should be prepared for her first menstruation as it is preceded by the general development and changes [6].

From the current 94.2% of the girls had knowledge that poor menstrual hygiene leads to infection which is similar to the study done in Amhara, northern Ethiopia, which was 90.7 % [7].

Only 16.5% of the respondents in this study perceived menstruation to be a physiological process. This is lower than that reported by Tiwari et al, 31.0%, in India [8]. These figures are surprisingly much lower than 66.2% earlier reported by Drakshayani and Venkata also from India. This indicates that health education program needs to be strengthened in schools [9].

When questioned whether food will affect menstruation about 53.3% responded with "no" which is lower to 65.6% of participants who answered similarly in a study done by Haque et al. About 94.2% of the girls were aware of menstrual hygiene [10]. This is comparable to a study done by Shivaleela et al (2015) in which 75.1% of participants responded similarly.

When asked how they felt at menstruation, about 64.1% of participants responded that they were afraid which is higher to some other studies as 53% in Nigeria study by Oche M, et al, 49.6% in Udupi study by Kamath R, et al, [11,12]. When asked about how they feel on missed or delayed periods, about 78.6% responded that they will be worried and 8.7% said will be happy. About 96.1% of participants said that educating girls regarding menstruation and menstrual hygiene is important.

The present findings revealed that most girls (68.0%) reported their mothers as a principal person who menstrual issues are discussed with. On the same line of these results, Abd El-Hameed et al, found that the main source of information about menstruation (59.4%) were mothers and also, Tiwari et al, (2006) found that high percentage of the sample studied (60.7%) reported they got information from their mothers. On the other hand, Rajni et al, found that friends were the most important source of information (83%) [8,13,14]. As many young girls identified their peers as the best source for sharing, and talking about their problems. Moreover, students spend most of their daily time at schools.

Conclusions and Recommendations

This study has revealed that perceptions on menstruation amongst adolescent secondary school girls in Bo district, Sierra Leone are poor, and practices often incorrect. The reproductive health implications of these are many and invariably call for an urgent address by all stakeholders in reproductive activities in order to entrench correct menstrual perceptions, and practices amongst this vital segment of our population. This will assure the overall reproductive wellbeing of our future generation. Teacher's capacities should be improved and equipped with tools to provide in-depth and accurate information to students in a safe learning environment. Special attention should be given towards making schools a comfortable place for girl's menstrual hygiene practice.

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