

# Menstrual Hygiene among School Girls in A Hilly Area of Bangladesh

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## Abstract

**Background:** Menstrual hygiene is a matter that is not sufficiently acknowledged. Even though menstruation is a natural phenomena in a woman's life, it is associated with misconceptions, malpractices and challenges among girls in developing countries. School drop outs are more frequent among girls after they have reached puberty and menstruation is increasingly recognized as a major factor for this. The aim of the study was to assess the situation of menstrual hygiene of adolescent girls in a hilly area of Bangladesh.

**Materials and methods:** This was a cross-sectional study; convenient type of non-probability sampling technique was applied. The study was performed in Khagrachari Technical School and College and Khagrachari Government Women College among 300 students.

**Results:** Out of 300 adolescent girls studied, the majority was between 16 to 18 years of age. The mean age of menarche in this study subjects was  $12.96 \pm 1.214$  years. Majority (72%) of the adolescents had no idea about menstruation before menarche. One hundred twenty six (42%) girls used sanitary pads during menstruation. In cases of reused cloth, 89 (51.2%) girls dried them outside the house in proper sunlight, 32 (18.4%) girls dried them inside the house hidden under cloths, and 36 (20.6%) girls dried them outside the house but hidden under cloths. Around 264 (88%) girls faced different restrictions during menstruation.

**Conclusion:** Formulating Menstrual Hygiene Management (MHM) programs in the country can have an outcome of great interest. To accomplish this, multiple strategies need to be used such as educational session on reproductive health and menstrual hygiene in schools or by media campaigns.

**Key word:** Adolescent; Menstruation; Menstrual hygiene.

## INTRODUCTION

Practices related to menstrual hygiene during periods is a serious problem for girls in Low and Middle Income Countries (LMIC). The sustainable development goals (SDG-3, 4, 5 and 6) are influenced directly or indirectly by poor menstrual hygiene, the achievement of the same is indeed very important for the overall development of the women and the nation at large.<sup>1</sup>

During a women's lifetime, a woman will manage menstruation on an average of 3,000 days and it's still known as unclean or dirty in Bangladeshi society.<sup>2</sup> Because of various myths, misconceptions and restrictions regarding hygiene practice during menstruation, adolescent girls in Bangladesh have a negative attitude towards this natural physiological phenomenon. Adolescent girls in Bangladesh often feel shy to discuss this issue with their parents and are reluctant to seek any type of help or clarify any doubts regarding their menstrual problems.<sup>3</sup>

There is a dearth in knowledge concerning menstruation as well as availability of products or facilities needed to manage menstrual hygiene among school going girls.

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Added to this is the poor availability of advice and support from the society regarding menstruation. Owing to these challenges, unhygienic practices during menstruation seem to be a common issue among school going girls who have crossed menarche.<sup>4</sup>

## MATERIALS AND METHODS

This descriptive type of cross-sectional study was conducted from January 2019- December 2019 among female school and college students between 12 to 19 years, who were studying in Khagrachari Technical School and College and Khagrachari Government Women College and who had their menarche.

This study was conducted after the approval from Research Cell and Ethical committee of Chittagong Medical College, Chattogram. Permission from school and college authority was duly taken before collection of data. Verbal informed consent was taken from all participants and they were briefed about purpose, procedure and implication of the study. Total 300 participants were selected for this study. The participants were not influenced or insisted to provide responses. Self-administered questionnaire was used for data collection. Data was collected, compiled and tabulated according to key variables, taking special notification on research objectives. The analysis of data was done by using data analysis software IBM-SPSS version 22.

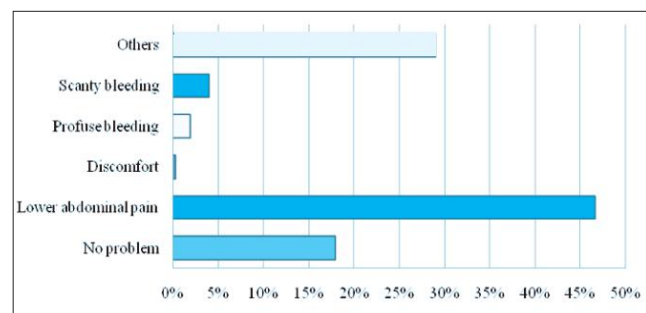
## RESULTS

Total 300 girls participated in the study, out of which 191 (63.7%) respondents were from 16-18 years of age group making up the highest number of respondents. Mean age was  $16.7 \pm 1.13$  and most of the students 123 (41%) were of H.S.C first year. Majority of the students (40 %) students were followers of Islam. In case of ethnicity, most of the respondents (54.3%) were tribal. Out of 300 respondents more than half respondents (55.7%) had their menarche below 14 years of age and the mean age of menarche was  $12.96 \pm 1.214$  years. The highest level of education of the respondents' mothers was secondary education (2.7%), and the most frequent level of education completed by them was primary education (61.7%). About 48.3% girls reported that their toilets were not sufficient enough to maintain privacy (Table- I).

**Table I** Demographic characteristics of adolescent girls (n=300)

Variable	Number	Percentage
<b>Age in years</b>		
12-14	12	4
14-16	97	32.3
16-18	191	63.7
<b>Class</b>		
Class Nine	63	21
Class Ten	63	21
HSC First Year	123	41
HSC 2nd Year	51	17

Variable	Number	Percentage
<b>Religion</b>		
Islam	120	40
Hinduism	104	34.7
Christianity	3	1
Buddhism	73	24.3
<b>Ethnicity</b>		
Tribal	163	54.3
Non-Tribal	137	45.7
<b>Age of menarche</b>		
<10	6	2
<12	100	33.3
<14	167	55.7
<16	27	9
<b>Educational qualification of the mother</b>		
Illiterate	107	35.7
Primary	185	61.7
secondary	8	2.7
<b>Sufficient latrine privacy</b>		
No	145	48.3
Yes	155	51.7



**Figure 1** Problems faced during menstruation

The figure above illustrates the problems faced by the respondents during menstruation. Among them 246 (82%) faced problems during their menstrual period with 140 respondents (46.70%) complaining of lower abdominal pain, 12 (4%) had scanty bleeding, 6 (2%) had profuse bleeding problem, 1 (0.3%) had generalized discomfort and 87 (29%) had others problems like low back pain or headache during their menstrual periods.

Based on opinions about menstruation, only 85 (28.3%) respondents claimed they had some idea on menstruation before menarche. Most of the respondents (88%) faced restriction in their personal life during menstruation and 70.5% of that was on religious background.(Table-II).

**Table II** Opinions of respondents concerning menstruation (n=300)

Opinion	Number	Percentage (%)
<b>Idea about menstruation prior to menarche</b>		
Yes	85	28.30
No	215	71.70
<b>Restrictions faced during menstruation</b>		
Yes	264	88
No	36	12
<b>Types of restrictions faced</b>		
Religious	186	70.5
Cultural	36	13.6
Food habits	42	15.9

In case of menstrual hygiene, this study showed that about 42% respondents used only sanitary pad on their menstrual period and 16.7% respondents only used homemade cloth. The other 41.3% respondents used both cloth and sanitary pad. Out of 174 girls who used cloth with or without pads, 76% used same cloth every month and most of them (165 girls) washed menstrual cloth with soap and water. Half of the respondents (51.2%) dried their menstrual cloth outside the house in the presence of proper sunlight and 18.4% respondents dried their cloth inside the house hidden under cloth. Most of the girls, 55.7% kept their menstrual cloth in a separate bag and few of them (52.2%) kept their cloth in the bathroom. Almost half the respondents (44%) changed their cloth or pad twice a day, while 35.3% respondents changed thrice per day. Two third of the respondents (66%) used soap for genital cleansing and majority of the respondents (89%) took shower every day during menstruation (Table-III).

**Table III** Information regarding hygienic practices during menstruation (n=300)

Hygiene practices	Number	Percentage (%)
Item used as menstrual absorbent(n=300)		
Cloth/rag	50	16.7
Sanitary pad	126	42
Both Sanitary pad and cloth	124	41.3
Use of same cloth every month (n=174)		
Yes(Reused cloth)	132	76
No(New cloth used)	42	24
Wash of menstrual rag (n=174)		
Water With soap	165	94.8
Water without soap	9	5.2
Use antiseptic solution for washed cloth/rag (n=174)		
Yes	80	46
No	94	54
Sites of drying menstrual cloth after washing (n=174)		
Inside the house hidden under cloth	32	18.4
Outside the house hidden under cloth	36	20.6
Inside the house without hidden under cloth	8	4.6
Outside the house without hidden under cloth	9	5.2
Outside the house where proper sunlight present	89	51.2
Place of keeping used menstrual cloth (n=174)		
Personal almirah/wardrobe	47	27
In the bath room	9	5.2
In between other cloth	21	12.1
In a separate bag	97	55.7
Frequency of changing pad/rag every day (n=300)		
Once	32	10.7
Twice	132	44
Thrice	106	35.3
Four time	28	9.3
> fifth time	2	0.7
Material use for genital cleansing during menstruation (n=300)		
Water With Soap	198	66
Only Water	102	34
Take shower every day during menstruation(n=300)		
Yes	267	89
No	33	11

## DISCUSSION

Although menstruation is a vital part of pubertal development, it is still admitted as unclean or dirty in Bangladeshi society. A lot of misconceptions and myths about this physiological phenomenon exist to this day and to a greater extent is responsible for poor knowledge and hygienic practices during menstruation. In this study, the most of the girls (55.7%) had attained menarche at age <14 years and the mean age of menarche was 12.96 ( $\pm 2.214$ ) years. This is comparable to other studies conducted by Patavegar et al, Kumar et al, Thakre et al and Shanbhag et al where the mean age of menarche was 12.7  $\pm$  1 years, 13 years, 12.8 years and 14.8  $\pm$  1.06 years respectively.<sup>5,6,7,8</sup>

Majority of the respondents were tribal (54.30%) and many of the respondents were Muslims (40%). Other religions like Hinduism (34.7%), Buddhism (24.3%) and Christianity 3 (1%) were also present. A study done in Pulprahadpur of India revealed that maximum respondents (90.68%) were Hindus followed by Muslims (7.27%) and others (2.05%).<sup>5</sup>

In case of educational qualifications of the respondent's mothers, 185 (61.7%) of the respondents' mothers had only primary education, 35.7% mothers were illiterate and only 8 (2.7%) mothers had secondary education. These findings are contrary to the study by Salim et al where 15.5% mothers were illiterate and 47% were primarily educated and rest of them (37.5%) had secondary to above level of education.<sup>9</sup> Since this study was conducted in a rural hilly area of Bangladesh such a pattern on education status of women is expected. Among the girls, 140 respondents (46.70%) had lower abdominal pain, 12 (4%) had scanty bleeding problem, 6 (2%) had profuse bleeding problem, 1 (0.3%) had discomfort and 87 (29%) had others problems like low back pain or headache and only 54 respondents (18%) did not face any problems. Many others studies have also reported such findings, since these symptoms are common during menstruation.<sup>10,11</sup> Regarding the opinion of the respondents about menstruation before menarche, majority of the respondents (72%) had no idea about menstruation before menarche. A similar observation was found in another Bangladeshi study by Alam et al where 64% girls had no idea of menstruation before menarche.<sup>12</sup> Out of 264 respondents, who faced restriction during menstruation 70.5% of them were religious restriction, 13.6% were cultural, 15.9% were related to food habit. In contrast, a Nigerian study by Fehintola et al, showed that majority of the respondents had restriction on cultural issues like avoiding celebration and festivals rather than religious reasons.<sup>13</sup> Such differences are more likely due to variations in culture and religion across different nations.

During menstruation, 42% of the respondents used only sanitary pads, 16.7% used only cloth and 41.3% used both pad and cloth. Among the cloth users 76% reused the same cloth every month. In comparison, a study from Delhi reported that 63.3% girls used sanitary pad, 25.3% girls used cloth and 11.4% girls used both pad and cloth. 65.3% girls reused the same cloth.<sup>1</sup> In our study, use of pads with or without cloth had

the highest prevalence unlike studies from India where at least 25% of the girls used clothes alone. Majority of the girls (87.3%) of Bhavnagar (Gujarat) used old plain cloth during menstruation and only 10.6 % used sanitary pad in a study conducted by Verma et al in India.<sup>14</sup> One plausible reason for the high number of 'pad with cloth' users in our study could be the high cost of pads and the inability to afford this necessity in adequate quantity at rural places. Another reason could be the fact that school going girls fear staining of school dress when attending classes during menstruation, and hence use cloth as a precautionary method to prevent such accidents.

In case of hygiene measures during menstruation, majority of the girls who used cloth (94.82%) washed it with soap and water, with only 46% of them using antiseptic solution while doing so. The status of hygiene in our study is much better than that in a study by Tegegne et al where only 37% girls washed their reused cloth with soap and 1% with ash and rest of the respondents washed their used menstrual cloth only with water.<sup>15</sup> For drying menstrual rags, 51.2% of the respondents dried their used menstrual cloth outside the house in adequate sunlight. These findings contrast those in the study of Tegegne et al where only 9.96% respondents dried their cloth outside in proper sunlight.<sup>15</sup> However, for storage after drying, this study showed similar findings to the Tegegne study where majority of them kept such clothes in a separate bag.

Most of the respondents (44%) changed their pad/rag twice per day, in similarity with the findings by Chauhan et al, where 52% respondents changed their pads at least twice in a day<sup>16</sup>. For genital cleansing, 66% respondents used soap and water. This is similar to another study where 55% girls used soap and water for cleaning genitalia.<sup>17</sup> Most of the girls (89%) took shower every day during menstruation. This finding was also comparable with a study conducted by Yasmin et al where 85.7% girls took daily bath.<sup>18</sup>

The findings in this study showed a better practice of hygiene among school going girls when compared to similar studies from developing or underdeveloped nations.<sup>15,17</sup> This suggests that with time, even girls from rural areas are capable of adhering to proper hygiene practices during menstruation. One limitation in our study is that data for non-school going children of similar age were not included. Hence, we were unable to observe if education played any role in hygiene practices during menstruation.

### CONCLUSION

The study revealed that menstrual hygiene was not so far from satisfactory among most adolescents. However, there was lack of knowledge about genital hygiene among the girls. Female adolescents had certain misconceptions and also faced different types of restrictions regarding menstruation because of poor access to health education. Majority of the girls faced physical problems during menstruation and most of the girls did not have any idea about menstruation before menarche. Menstrual hygiene can play major role to improve future outcomes with regards to reproductive health. Providing comprehensive information to girls, families, educators, policy makers and other relevant stakeholders on menstruation and menstrual hygiene is necessary to empower and prepare girls for menstruation and reproductive behavior.

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### DISCLOSURE

Both the authors declared no competing interest.

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