

Assessment of Knowledge and Practice Regarding the Menstrual Hygiene among Adolescent Girls' at Yakubia Girls High School, Bogura

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Abstract

Background: Menstruation is a universal and normal phenomenon during the reproductive age of females. Adolescent is an essential period where females are preparing and adjusting themselves to manage their menstrual bleeding in safe and clean way. Menstrual hygiene forms a definite part in the life, of the development of the girl's child in schools and the general development of women of boarder the context. Globally there were 1.2 billion adolescent girls in the year 2009 which forms eighteen percent of the world's population. In Bangladesh, there are approximately 27.7 million adolescents and 13.7 million girls, one-fifth of the total population. **Aim of the study:** The aimed was to assess the level of knowledge and practice regarding the menstrual hygiene among adolescent girls at Yakubia Girl's High School, Bogura. **Methods:** This was a descriptive cross sectional study design was used and sample size 120 that was simple random sampling technique followed those who meet the inclusion criteria and to assess the knowledge and practice regarding the menstrual hygiene among adolescent girls. The study was conducted from December, 2024 to May, 2025. The instruments for data collection were a semi-structured questionnaire which composed of three parts: Demographic variables, knowledge and practice-based information on menstrual hygiene. **Result:** The findings of the current study reported that the average knowledge score 60% were moderate and 40% were low level of practice regarding the menstrual hygiene. A possible reason for this could not be the wide availability of water and soap in schools and other facilities. **Conclusion:** Menstrual hygiene is an essential component of adolescent health, playing a pivotal role in individuals' overall wellbeing and development. The menstrual hygiene practices in Bangladesh can help policymakers and program developers design effective interventions to improve menstrual hygiene, such as promoting education, providing access to affordable hygiene products, and improving sanitation facilities for adolescent girls

Keywords: Knowledge, Menstrual Hygiene, Practice.

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INTRODUCTION

Menstruation is a universal and normal phenomenon during the reproductive age of females. Adolescent is an essential period where females are preparing and adjusting themselves to manage their menstrual bleeding in safe and clean way [1]. This is also the ideal time that girls often join different environments including high schools and tried to plan for their next adulthood life [2]. Menstrual hygiene forms a definite

part in the life, of the development of the girl's child in schools and the general development of women of boarder the context. Negative attitude, to menstruation have detrimental effect on adolescent girls. These include girls dropping out frequently absenting themselves from school [3]. Policy makers appear to lack guidelines and standard regarding this problem and most of the times are not gender sensitive during planning stage, low education and traditional social support systems are all contributory factor to inadequate hygiene

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and sanitation facilities [4]. Early adolescence is a time of physical, intellectual, emotional, and social development during which young people confront the questions. Here, physical maturation and particularly sexual maturation, has significant effects on self-concept and social relationships during this period [5]. This period is influenced by peer, parents, teachers or counselors [6]. When a healthy child is somewhere between 9 and 16 years old, he or she will enter puberty [7]. Puberty refers to the onset of sexual maturation. It is the period under the influence of hormones when the child experiences physical and sexual changes [8]. Adolescence is the period of transition between puberty and adulthood. The onset of menstruation (menarche) is one of the most visible signs that a girl is entering puberty [9]. There are many challenges during this transition period such as the challenge of understanding self, the challenges of family relationship and counseling, the challenges of peer pressure, and the challenges of physical and sexual maturation [10]. Among these challenges the maturation process with parental counseling capacity and devotion can take the lion share in shaping the maturing individual. Maturing girls seek advice and support from their parents as well as someone who is closer to them. As menarche is a powerful signifier of entry into sexual and reproductive maturity, it should be dealt with in different perspectives [11]. Despite safe menstrual hygienic practices can have a paramount importance to help millions of women suffering from such complicated and complex problems, it is the missed opportunity to address the level of understanding and hygienic practice of menstruation among girls earlier from their adolescent age in many developing countries, including Bangladesh [12,13]. Little available studies in Bangladesh had no a particular focus of adolescent school girls' knowledge and menstrual hygiene practice. Moreover, there is a need to re-examine the association between poor menstrual hygienic practice and obstetric and gynecological factors among adolescent school girls. This is unrecognized and unaddressed public health concern in developing countries like Bangladesh. This study aims to assess the knowledge and practice of menstrual hygiene and its associated impacts among adolescent girls at Yakubia Girl's High School, Bogura.

METHODOLOGY & MATERIALS

This study was conducted in Yakubia Girl's High School, Bogura. The study spanned 6 months, from December 2024 to May 2025, and focused on adolescent girls to assess the level of knowledge and practice regarding menstrual hygiene. Using a simple random sampling method, a total of 120 students from classes 7, 8, 9, and 10 were enrolled, forming a clearly defined study cohort. Participants were selected based on strict inclusion criteria to ensure the study's validity and relevance.

Inclusion Criteria

- Students studying in Yakubia Girl's High School, Bogura.
- Students willing to participate in the study.
- Students available during the data collection period.

Exclusion Criteria

- Students unwilling to participate in the study.
- Students not available during the data collection period.

Data Collection

Data were systematically gathered using a semi-structured questionnaire developed by the researchers according to the objectives and variables of the study. The instrument consisted of three parts: demographic information, knowledge on menstrual hygiene, and practice regarding menstrual hygiene. To ensure linguistic accuracy, the back-translation technique was applied, involving translation from English to Bengali and back into English by bilingual experts, followed by discussion for final approval.

A pilot study was conducted on 10 respondents from classes 9 and 10 at Govt. Girls' High School, Bogura, to evaluate the validity, reliability, and acceptability of the questionnaire. Necessary corrections and modifications were made with guidance from the supervising teacher. Data were collected by face-to-face interviews at the school during times convenient for the participants.

Ethical Considerations

Ethical approval was obtained from the Ethical Committee of Bogura Nursing College. A formal permission letter was issued by the Principal of Bogura Nursing College and submitted to the Headmaster of Yakubia Girl's High School, Bogura. A covering letter explained the study's purpose, ensuring voluntary participation, and each respondent provided informed written consent. Participants were assured of confidentiality and anonymity, with the right to withdraw at any stage without penalty.

Statistical Analysis

Collected data were checked, organized, and edited manually before being entered into a master sheet. Simple descriptive statistics were used for analysis. Data were analyzed both manually and with computer assistance and presented through tables and figures (bar charts and pie charts). Results were interpreted in terms of frequency and percentage.

RESULT

Table 1 represented that among the 120 respondents, the majority were aged 13–15 years (72.50%). In terms of class distribution, the highest proportion was in class nine (30.83%), while equal numbers were in classes seven and ten (25.00% each), and 19.17% were in class eight. Regarding fathers'

education, 71.67% had completed higher secondary education, while 23.33% had secondary and 5.00% had only primary education. Mothers' education was mostly higher secondary (55.00%), followed by secondary (43.33%) and primary (1.67%). The most common mode of going to school was by rickshaw (66.67%), followed by bus (16.67%) and auto (11.67%), while only 5.00% of respondents went on foot. The majority of respondents resided in urban areas (78.33%), while 21.67% were from rural areas (Figure 1). Among the respondents, almost all (98.33%) reported having some idea about menstruation and menstrual hygiene, and 93.33% considered menstruation a normal physiological process. However, only 33.33% had received information before menarche. Additionally, 61.67% were aware that poor menstrual hygiene could predispose to infection (Table 2). The majority of respondents (81.67%) reported their mother as the main source of information about menstrual hygiene. Regarding the normal duration of a menstrual period, 78.33% answered 5–7 days, while 11.67% mentioned 2–4 days, and 8.33% reported 8–10 days. Most respondents (79.17%) experienced their first menstruation between 10–12 years of age. When asked

about problems resulting from uncleanness during menstruation, 68.33% mentioned infection and 10.00% reported itching only. Concerning unhygienic practices, the most common response (76.67%) was using a single sanitary pad for the whole day, followed by using the same underwear after bathing (16.67%), and not washing hands after changing pads (4.17%) (Table 3). Among the respondents, 60.00% demonstrated a moderate level of knowledge, 30.00% had a high level of knowledge, while only 10.00% showed a low level of knowledge (Figure 2). 81.67% of respondents always used commercially made sanitary pads, while 8.33% reported always using homemade absorbent materials. More than half (56.67%) reported changing pads or clothes more than three times a day, while 35.00% did so sometimes. In terms of disposal, disposal of sanitary pads in a dustbin was reported always by 48.33%. Handwashing before cleaning the genital area was less common, with only 26.67% practicing it consistently, whereas 53.33% reported never doing so (Table 4). Figure 3 showed that 40.00% of respondents had a low level of practice, while 30.00% each demonstrated a moderate and high level of practice.

Table 1: Socio-Demographic Characteristics of the Respondents (N = 120).

Variables	Frequency (N)	Percentage (%)
Age (years)		
10-12	4	3.33
13 -15	87	72.50
16-18	29	24.17
Class		
Seven	30	25.00
Eight	23	19.17
Nine	37	30.83
Ten	30	25.00
Father's educational qualification		
Primary	6	5.00
Secondary	28	23.33
Higher secondary	86	71.67
Mother's educational qualification		
Primary	2	1.67
Secondary school	52	43.33
Higher secondary	66	55.00
Monthly Family income		
<10,000 taka	22	18.33
10,000- 19,000 taka	32	26.67
20,000-29,000 taka	25	20.83
>29,000 taka	41	34.17
Way to go school		
By walk	6	5.00
By Rikshaw	80	66.67
By bus	20	16.67
By Auto	14	11.67

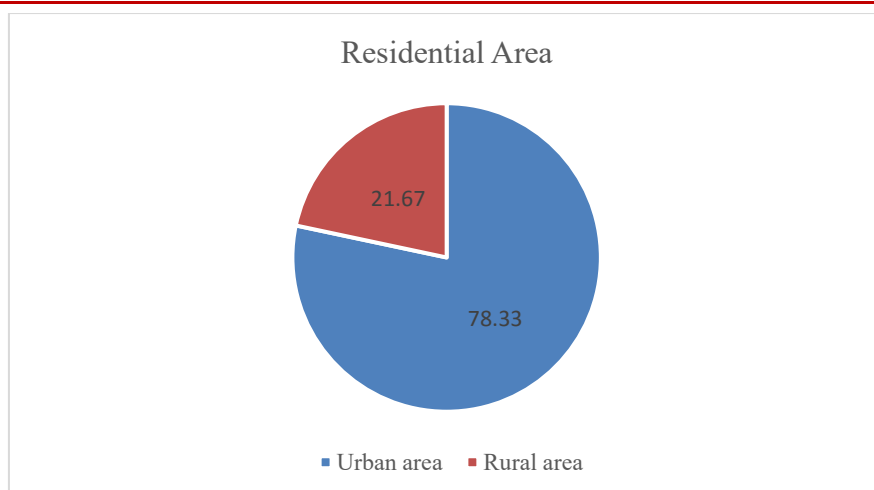


Figure 1: Distribution of Respondents by Residence (N = 120)

Table 2: Knowledge Regarding Menstruation and Menstrual Hygiene (N = 120).

Knowledge Variables	Frequency (N)	Percentage (%)
Having any idea about menstruation and menstrual hygiene	118	98.33
Considering menstruation as a normal process	112	93.33
Receiving information related to menstruation before menarche	40	33.33
Knowing that poor menstrual hygiene predisposes to infection	74	61.67

Table 3: Knowledge and Sources of Information Regarding Menstrual Hygiene (N = 120).

Variables	Frequency (N)	Percentage (%)
Sources of information about Menstrual Hygiene		
Mother	98	81.67
Relatives	7	5.83
Friends	13	10.83
Others	2	1.67
Knowledge on menstrual blood come from		
Uterus	64	53.33
Urinary Bladder	9	7.50
Anal canal	2	1.67
Don't know	45	37.50
Knowledge on duration of a normal menstrual period		
2-4 days	14	11.67
5-7 days	94	78.33
8-10 days	10	8.33
Don't know	2	1.67
Knowledge on first menstrual period		
Below 10 years	4	3.33
10-12 years	95	79.17
10-15 years	21	17.50
Knowledge on happened due to uncleanliness during menstruation		
Itching only	12	10.00
Infection	82	68.33
Foul smell	4	3.33
Don't know	22	18.33
Knowledge on menstrual blood unhygienic		
Putting one sanitary pad on the whole day	92	76.67
No washing hands after changing pad	5	4.17
Using the same underwear after bathing	20	16.67
Type of menstrual material used	3	2.50

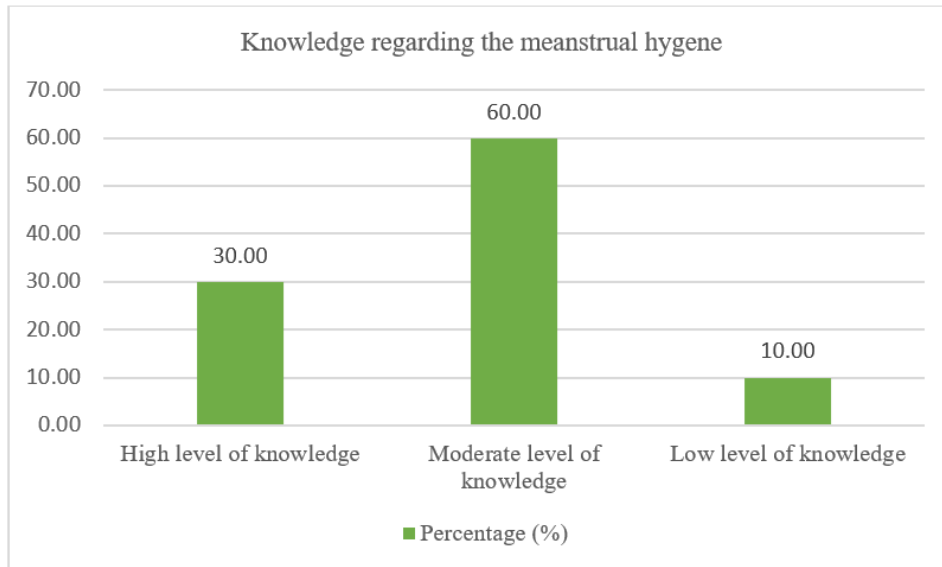


Figure 2: Levels of Knowledge Regarding Menstrual Hygiene (N = 10)

Table 4: Distribution of Menstrual Hygiene Practices Among Respondents (N = 120)

Practices	Always	Sometimes	Never
	N (%)	N (%)	N (%)
Use of homemade absorbent materials during menstrual flow	10(8.33)	28(23.33)	82(68.33)
Drying sanitary clothing in sunlight	76(63.33)	40(33.33)	4(3.33)
Use of commercially made sanitary pads during menstruation period	98(81.67)	17(14.17)	5(4.17)
Changing pads or clothes more than three times a day during menstruation	68(56.67)	42(35.00)	10(8.33)
Taking a bath daily with soap during menstruation	110(91.67)	8(6.67)	2(1.67)
Use of clean clothes and washing with soap and water during menstrual bleeding	72(60.00)	36(30.00)	12(10.00)
Disposal of the pads by wrapping them with paper	22(18.33)	32(26.67)	66(55.00)
Disposal of used sanitary pads in a dustbin	58(48.33)	34(28.33)	28(23.33)
Regular bathing during menstruation	104(86.67)	14(11.67)	2(1.67)
Hands wash before cleaning the genitals or the area around it during the period	32(26.67)	24(20.00)	64(53.33)

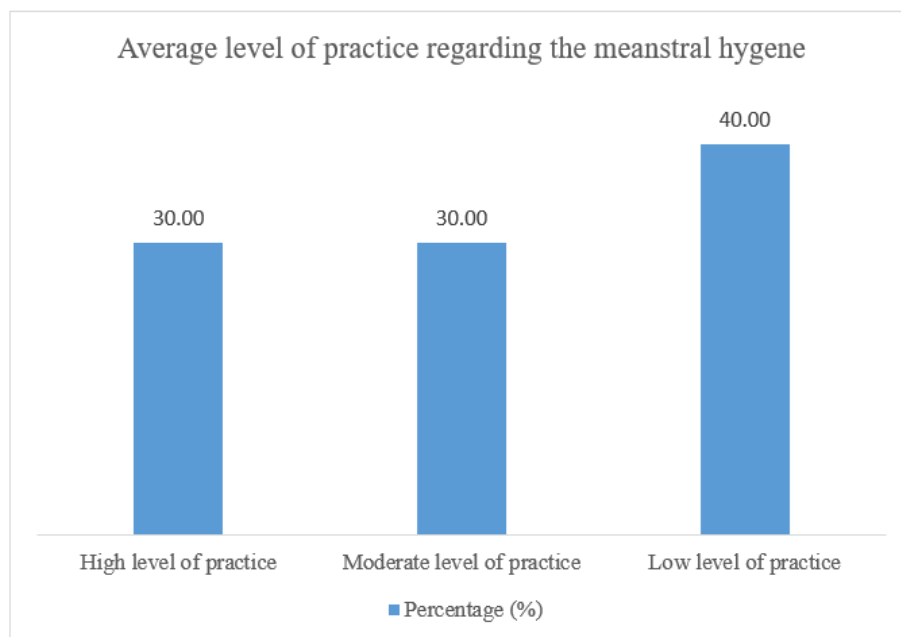


Figure 3: Levels of Menstrual Hygiene Practice (N = 10)

DISCUSSION

A descriptive cross-sectional study was used to assess the knowledge and practice regarding the menstrual hygiene among adolescent girls at Yakubia Girl's High School, Bogura. In this study result found that the maximum respondents 73% were within 13-15 years of age and mean age of the respondents was 17.6 years. There were 90% were Muslim, 31% were class nine in general education in addition to the father's educational status 72% were higher secondary level of education, as well as the mother's educational status 55% were higher secondary school among the respondents. Moreover, the highest 62% were Government job of father's occupational status where as 75% were House wife of mother's Occupational status and 34% were >29,000 taka of monthly family income, 78% were answered the urban area on residential area and 67% were By Rikshaw for way to go school among the respondents in the present study. A similar study conducted in India by Boruah, Hakmaosa and Hajong, reported that the 60% of the adolescents belonged to the 13–15 years age group and 40% of them were studying in higher secondary school [14]. Another study was conducted in Bangladesh by Haque, *et al.*, and revealed that monthly family income of most of them was ≤ 20000 taka [15]. In addition, current study finding be dissimilar with a study conducted by Shah *et al.* Who found that the 33% were fathers' education whereas, nearest regarding their mothers' education were 65% [13]. In regard to knowledge, the findings of the present study revealed that the average level of 30% were high level of knowledge, 60% were moderate level of knowledge and 10% were low level of knowledge regarding the menstrual hygiene. These results may due to their parent's educational background for awareness of menstrual hygiene. A similar study by Boruah, Hakmaosa and Hajong, found in India indicated that the 91.76% of the adolescents knew that menstruation was a normal process [14]. About 27.65% of the study participants did not know the cause of menstruation. About 54.12% did not know about the source of menstrual bleeding. Only 33.53% knew that the uterus is the source of bleeding; 61.76% of the study participants knew about the duration of the normal menstrual period. About 42.94% of the adolescents knew that poor menstrual hygiene predisposes them to infection. 28.24% of the adolescents knew about menstruation before menarche and 71.76% did not know about it, which is similar to the study conducted by Barathalakshmi *et al.* [16]. In the present study, 53% were reply the option of menstrual blood comes from Uterus and 38% were the option of don't know about the menstrual blood comes from, however in a study conducted by Thakre SB. *Et al.* 80.62% did not know the cause of the menstrual bleeding, only 2.5% of the study girls stated that menstrual bleeding came from the uterus, and 76.23% were unaware of the source of the menstrual bleeding [17]. Barathalakshmi *et al.* Found that 30.5% of the girls knew that menstruation is due to cyclical uterine bleeding [16]. In the current study, 12% were reacted the

option of 2-4 days, 78% were reacted the option of 5-7 days, 8% were reacted the option of 8-10 days and 2% were the option of Don't know for the duration of a normal menstrual period. Similarly, Prateek S. Bobhate *et al.*, found that 75.5% were aware of the duration for a normal period and 69.3% were aware that poor hygiene predisposes to infection [18]. In our study showed that the 3% were responded the option of Below 10 years, 79% were responded the option of 10-12 years and 18% were responded the option of 10-15 years about the first menstrual period. Another study revealed that the Barathalakshmi *et al.* Found that 45.7% of the respondents expressed fear and 30.5% of the girls expressed worry on seeing their first menstruation [16]. In the present study showed that the 77% were answered the option of Putting one sanitary pad on the whole day, 4% were answered the option of No washing hands after changing pad, 17% were answered the option of Using the same underwear after bathing and 2% were answered the option of type of menstrual material used for knew the menstrual blood unhygienic. Khanal *et al.*, reported that 59.2 percent of girls used commercial hygienic pads during menstruation, while the study conducted by Karki S *et al.*, found 65.5% [19,20]. Moreover, present study reported that the majority 82% were answered the option of mother about the sources of information of Menstrual Hygiene. In regard to practice, the findings of the present study revealed that the 30% were high level of practice, 30% were moderate level of practice and 40% were low level of practice regarding the average level of practice on menstrual hygiene. 63% were answered always on Drying sanitary clothing in sunlight, 82% were answered always of Use of commercially made sanitary pads during menstruation period respectively, 57% were answered always of Changing pads or clothes more than three times a day during menstruation, 92% were answered of Taking a bath daily with soap during menstruation, 60% were answered of Use of clean clothes and washing with soap and water during menstrual bleeding, 55% were answered the option of never of Disposal of the pads by wrapping them with paper, 48% were answered always of Disposal of used sanitary pads in a dustbin, 87% were answered always of Regular bathing during menstruation and 53% were answered the option of never on Hands wash before cleaning the genitals or the area around it during the period. A study conducted by Boruah, Hakmaosa and Hajong, revealed that the regarding menstrual hygiene practices, 74.12% of the adolescents used sanitary pads during menstruation, 18.82% used cloth, and 7.06% used both cloth and sanitary pads. The most common method of disposal of used absorbent was throwing with domestic waste (63.53%). Cleaning of external genitalia on daily basis was practiced by 67.06% of the adolescents, whereas 32.94% cleaned only during menses. For cleaning purposes, the majority (80%) used soap and water [14].

Limitations of the study:

There was a small sample size in this study, and it represented only a limited group of adolescent girls at Yakubia Girl's High School, Bogura; therefore, the results may be restricted to one particular area. The small sample size and selection of participants solely from this school were significant limitations, reducing the generalizability of the findings. Consequently, large-scale studies with bigger sample sizes randomly selected from different parts of society are recommended to obtain more generalized results in the educational sector. Another important limitation was that the study period coincided with the SSC examination, which restricted data collection during office hours, and data had to be collected only on examination off-days.

CONCLUSION AND RECOMMENDATIONS

Menstrual hygiene is an essential component of adolescent health, playing a pivotal role in individuals' overall wellbeing and development. The adolescent girls who possess a better understanding of menstruation tend to adopt safe and clean methods for managing their menstrual bleeding. While adopting safe menstrual hygiene practices can significantly benefit millions of adolescent girls facing complicated health challenges. The study reveals that while most adolescent girls possess 60% were moderate level of knowledge about menstrual hygiene, significant gaps of 40% were low level remain in areas such as menstrual hygiene practices. The menstrual hygiene practices in Bangladesh can help policymakers and program developers design effective interventions to improve menstrual hygiene, such as promoting education, providing access to affordable hygiene products, and improving sanitation facilities for adolescent girls in Yakubia Girl's High School, Bogura to embrace menstrual health with confidence, dignity, and informed choices. Based on the study results, it is recommended that the study can be replicated on a large sample to validate and generalize the findings, and it can also be conducted in different settings like at the national level. Furthermore, educational interventions should be developed to improve further knowledge of menstruation and hygiene practices, targeting school girls and their communities to address cultural influences. Schools and parents should be actively involved in disseminating accurate menstrual health information, while health programs should emphasize proper menstrual hygiene management and provide access to sanitary materials for all girls. The government should subsidize the cost of sanitary pads to enable adolescent girls to buy them. Finally, there is a need to improve the knowledge and positive practices of adolescent girls at Yakubia Girl's High School, Bogura and its consequences.

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Conflict of Interest: None declared.

Ethical Approval: The study was approved by the Institutional Ethics Committee.

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