

## Practice on Personal Hygiene Maintenance during Menstruation Cycle among School Girls in Dhaka City, Bangladesh

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### Abstract

**Introduction:** Menstruation is the normal and regular process for every woman. It can affect both physical and mental status of the women. The main thing of menstrual period is personal hygiene maintenance. Improper management of personal hygiene maintains can causes infectious disease and causes severe gynecological problems. In Bangladesh, most of the adolescent girls cannot ask any question about their physiological changes to their mother or relative because of their shyness and social stigma. Good hygiene management during menstruation can increase personal confidence, while inadequate management can lead to mentally depression and also hamper in their daily activities. This study was aimed to assess the practice on personal hygiene maintenance during menstruation period among school girls in selected schools of Dhaka city, Bangladesh.

**Methods:** A cross-sectional and descriptive type of study was carried out in three randomly selected schools in Dhaka city of Bangladesh with 384 systematic randomly selected adolescent girls. The data were collected from the respondents using semi-structured questionnaire by face-to-face interview, after taking verbal consent form the participants and written consent from their parents and school authority. Data entry and analysis were done by using Statistical Package for Social Sciences (SPSS) statistical software version 20 for the analysis. The anonymity and confidentiality of the respondents were maintained strictly and study participants were informed that they can be able to leave the study at any stage of data collection.

**Findings:** The finding reported that nearly 80% (79%) of the respondent use sanitary napkin and among the non-users, 95.2 percent (77) use piece of cloths. The majority (66%) of the respondents change napkin/other materials after 4 hours and 90% take genital care regularly. Almost all (99.5%) the respondents take bath regularly and 99.5 percent wash their hand with soap and water. About 98 percent used to wear clean dresses and 94.5 percent normally take healthy food. Using sanitary napkin was found to be associated with age, parent's income whereas it was not associated with mother's educational level.

**Conclusion:** Awareness regarding the need for information about good menstrual practices is very important and should be given to enhance the good level of knowledge and practices. Mass media should also emphasize on health information about menstrual hygiene. Therefore, policy makers and stakeholders should take necessary initiatives to setup health education program to create awareness and practice of good menstrual hygiene among the adolescents.

**Keywords:** Menstrual Hygiene; School Girls; Practice; Dhaka

### Introduction

Hygiene refers to the set of practice of keeping oneself and one's living and working areas clean in order to prevent illness and disease to maintain one's freshness and healthy this set of practices associated with the preservation of health and healthy living.

Hygiene is an old concept related to medicine, as well as to personal and professional care practices related to most aspects of living, although it is most often wrongly associated with cleanliness. In medicine, hygiene practices are employed as preventative measures to reduce the incidence and spreading of disease. Other uses of the term appear in phrases including: body hygiene, mental hygiene, domestic hygiene, dental hygiene, and occupational hygiene, used in connection with public health. Personal hygiene may be described as the principle of maintaining cleanliness and grooming of the external body. It is in general looking after you. Personal hygiene can be controlled by sustaining high standards of personal care and humans have been aware of the importance of hygiene for thousands of years. The ancient Greeks spent many hours in the bath, using fragrances and make-up in an effort to beautify themselves and be presentable to others. In fact, hygiene is actually a scientific study. Maintaining a high level of personal hygiene will help to increase self-esteem and confidence whilst minimizing the chances of developing imperfections (WHO, 2018).

In Bangladesh, a study showed that 95% of women and 90% of adolescent girls use rags during menstruation to absorb the flow of menstrual blood. The same study showed that 40% of women change their rags only once a day, 60% of women wash the rags in unsafe water and 80% of adolescent girls' reuse the rag (Ahmed and Yesmin, 2011). Menstrual hygiene management has been neglected by water and sanitation practitioners in the past, but there is now an emerging consensus that this activity should be an important part of integrated WASH programmes. To practice safe menstrual hygiene, women and girls require access to basic WASH services, including clean water for washing clothes used to absorb menstrual blood, and facilities to dispose of used cloths and sanitary napkins; in addition to these 'hardware' components, information is required to help young girls understand the menstrual cycle, correct misconceptions and learn how to manage menstruation safely (Aioye, 2000). Failure to address this issue will result in continued negative health impacts: poor menstrual hygiene is one of the main causes of Reproductive Tract Infection (RTI), and has been associated with a greater risk of HIV infection, cervical cancer, poor pregnancy outcomes and human Papillomavirus infection (skin disease). There are also major social and economic impacts: for example, social stigma and lack of menstrual hygiene facilities in schools can lead to reduced attendance and lower educational attainment, helping to perpetuate gender inequality in developing contexts (Montgomery and Hewett, 2004, cited in World Bank 2008).

Menstruation is the normal and regular process for every woman. It can affect both physical and mental status of the

women. The main thing of menstrual period is personal hygiene maintenance. Improper management of personal hygiene maintains can causes infectious disease and causes severe gynecological problems. Thus, this study was aimed to assess the practice on personal hygiene maintenance during menstruation period among school girls in selected schools of Dhaka city, Bangladesh.

## Materials and Methods

It was a cross-sectional and descriptive type of study that was carried out in three randomly selected schools in Dhaka city of Bangladesh. The study population was all the girls from the selected schools whose menstruation period has been started. Sample size was determined using appropriate statistical formula ( $n = z^2pq/d^2$ ). The sample size was calculated in 95% confidence interval and 5% level of significance. The value of  $p$  was considered 0.5 (50%). The final calculated sample size was 384. Systematic random sampling technique was used to select the sample respondents where the samples were selected from the study population by maintaining a specific interval. The data were collected from the respondents using semi-structured questionnaire by face-to-face interview, after taking verbal consent form the participants and written consent from their parents and school authority. A set of semi-structured questionnaires were used in this study. After data collection, all interviewed questionnaires were checked for completeness, correctness and internal consistency to exclude missing or inconsistent data. Corrected data were entered into Statistical Package for Social Sciences (SPSS) statistical software version 20 for the analysis. The anonymity and confidentiality of the respondents were maintained strictly and study participants were informed that they can be able to leave the study at any stage of data collection.

## Results

The study findings show that above half (53.0%) of the respondents were between the age of 12-14 years, followed by 15-17 (39.5%). The mean age of the respondents was 14.02 and SD was 1.78 years. Majority (76.5%) of the respondent's family income was in between 11000-31000 taka, followed by 32000-52000 taka (15.5%), ≤10000 taka (4%) and the mean family income was 27200 taka. 38.5% of the respondent's mother had secondary school level of education, followed by primary (33.5%), degree (23%), master's level of education (4%) and the rest were illiterate. Little above three-fourths (75.5%) of the respondents were housewife, followed by service holders (14%), business (7%) and the rest were others (Table 1).

Variables	Frequency	Percentage
<b>Age group of the respondents</b>		
≤11	13	3.5
12-14	204	53.0
15-17	152	39.5
18 and above	15	4.0
Mean ± SD	14.02 ± 1.78 years	
<b>Respondent's parent's monthly income</b>		
≤10000	15	4.0
11000-31000	294	76.5
32000-52000	60	15.5
53000-73000	12	3.0
74000-94000	4	1.0
Mean ± SD	27200 ± 13083.4	
<b>Respondent's mother's level of education</b>		
Primary	129	33.5
Secondary	148	38.5
Degree	88	23.0
Masters	15	4.0
Illiterate	4	1.0
<b>Respondent's mother's occupation</b>		
Housewife	290	75.5
Service	54	14.0
Business	27	7.0
Others	13	3.5

**Table 1:** Socio-demographic information of the respondents.

**Table 2** is displaying some menstruation related information. The result shows that more than half (54%) of the respondents started the menstruation at the age of 11 years, followed by 12 years (25%). The major problem respondents first at first time of menstruation was shyness (40.5), followed by afraid (36.5%), excessive blood loss (18.5%). The majority (77%) of the respondents talk to mother and the mother manage it during first time of menstruation, followed by talk to sister and sister manages it (9.5%).

Variables	Frequency	Percentage
<b>First menstrual age (Years)</b>		
10	67	17.5
11	207	54.0
12	96	25.0
13	13	3.5
Mean age ± SD	11.15 ± 1.53	
<b>Major problems faced at first time</b>		
Shyness	156	40.5
Afraid	140	36.5
Excessive blood loss	71	18.5
Ignorance to manage it	17	4.5
<b>Managing it at first time</b>		
Talk to mother, she managed	296	77.0
Talk to friend, she managed	35	9.0
Talk to sister or cousin	36	9.5
Self	12	3.0
Others	6	1.5

**Table 2:** Menstruation related information.

The result shows that close to four-fifths (79%) of the respondent use sanitary napkin and among the non-users, 95.2 percent (77) use piece of cloths. The majority (66%) of the respondents change napkin/other materials after 4 hours and 90% take genital care regularly. Almost all (99.5%) the respondents take bath regularly and 99.5 percent wash their hand with soap and water. About 98 percent used to wear clean dresses and 94.5 percent normally take healthy food (**Table 3**).

Variables	Frequency	Percentage
<b>Using sanitary napkin</b>		
Yes	303	79.0
No	81	21.0
<b>If not, which material used? (n=81)</b>		
Piece of clothes	77	95.2
Gauze & cotton	4	4.8
<b>Frequency pf changing napkin/other materials in a day</b>		
After 4 hours	253	66.0
After 6 hours	52	13.5
Others	73	19.0
No response	6	1.5
<b>Take genital care regularly</b>		
Yes	346	90.0
No	38	10.0
<b>Take regular bath</b>		
Yes	382	99.5
No	2	0.5
<b>Wash hands with soap and water</b>		
<b>Yes</b>	382	99.5
<b>No</b>	2	0.5
<b>Wear clean dress</b>		
Yes	376	98.0
No	8	2.0
<b>Take healthy foods</b>		
Yes	363	94.5
No	21	5.5

**Table 3:** Practice on personal hygiene maintenance during menstruation cycle.

**Table 4** shows that using sanitary napkin was found to be significantly associated with age ( $p=0.000$ ), parents' income ( $p=0.003$ ) and mother's occupation ( $p=0.000$ ).  $=0.002$ ). However, using sanitary napkin was not associated with respondent's mother's level of educational.

Variables	Using Sanitary Napkin			Statistics
	Yes	No	Total	
Age group (Years)				
≤11	10	1	11	X <sup>2</sup> =47.146 P=0.000
12-14	125	81	206	
15-17	150	1	151	
18 and above	15	1	16	
Respondent's parent's monthly income				
≤10000	12	1	13	X <sup>2</sup> =16.332 P=0.003
11000-31000	215	81	296	
32000-52000	57	2	59	
53000-73000	11	1	12	
74000-94000	2	2	4	
Respondent's mother's level of education				
Primary	112	17	129	X <sup>2</sup> =5.975 P=0.201
Secondary	111	33	144	
Degree	68	26	94	
Masters	12	1	13	
Illiterate	2	2	4	

Respondent's mother's occupation				
Housewife	233	57	290	X <sup>2</sup> =44.762 P=0.000
Service	54	2	56	
Business	4	21	25	
Others	12	1	13	

**Table 04:** Association between using sanitary napkin and socio-demographic characteristics of the respondents.

**Discussion**

Adolescents are a large and growing segment of the world’s population. More than half of the world’s population is below the age of 25, and one in every two young people in the world is adolescent. During adolescence, young people develop their adult identity, move toward physical and psychological maturity. Physiologically, the hypothalamus produces growth hormone and gonadotropins which initiates pubertal changes (Adhikari et al, 2007). Menstruation, the periodic vaginal bleeding that occurs with the shedding of the uterine mucosa is one of the signs of puberty and occurs one- or two-years following appearance of secondary sexual characteristics. Once established, every mature female menstruates on the average 35 days (minimum 2 days, maximum 7 days) each month until menopause. A study of Amhara, northern Ethiopia with similar population showed that 39.9 % of the respondents had good practice of menstrual hygiene. The finding of this study shows that nearly 80% of total respondents use sanitary napkin and more than 90% of all the respondents take genital care regularly. Almost all the respondents take regular bath and wash their hands regularly with soap and water. Comparatively, lower level of practice of menstrual hygiene was recorded from similar study conducted on Gujjar girls which was indicated that only 3.1 % of the study participants practice good menstrual hygiene. In the study with Gujjar girls, educational status of the parents was important predictors of menstrual hygienic practice (Dasgupta et al, 2008). The girls whose mothers’ educational statuses was secondary and above were two times more likely to have good practice of menstrual hygiene than their counterparts. This aligns with the studies done in Ethiopia, Lebanon, India and Nigeria (Upashe et al., 2015). This study findings show that practice of using sanitary napkin is highly associated with the respondent’s parent’s monthly income and respondent’s mother’s occupation. This indicates that the income and mother’s occupation play a significant role to generate awareness and do good practice during menstruation period which is very similar to the study findings of Patel et al., 2006.

**Conclusion**

Our finding revealed that more than half of the respondents started the menstruation at the age of 11 years. Nevertheless, the major problem respondents faced at first time of menstruation was shyness and afraid. It also reported that close to nine-tenths of the respondent knew about menstruation since before they started and among them the majority has heard it from their mothers. However more than eight-tenths of the respondents have been menstruating for more than 1-4 years. It has been reported that close to four-fifths of the respondent were using sanitary napkin and among the non-users about ninety percent were using piece of cloths. Almost all the respondents take bath regularly. The finding reported that using sanitary napkin was found to be associated with age, parent’s income, mother’s occupation and water sources of the respondents. However, using sanitary napkin was not associated with mother’s educational level. Thus, it can be said that awareness regarding the need for information about good menstrual practices is very important and it should be given to the adolescent girls to encourage good hygiene practice during menstruation.

**Limitation of the study**

The limitation of this study was the cross-sectional nature of the data that could obscure the causal effect relationships of different factors and it will lack qualitative data. The sample size is calculated as 384. However, more samples could posturize the findings more accurately.

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**Conflict of interest**

The authors declared no conflict of interest for this study.

**Consent for publication**

All authors have given their consent to publish this article

References

1. Abioye EA (2000) Menstrual knowledge and practices amongst secondary school girls in Ile Ife, Nigeria. J R Soc Health 20: 23-26.

2. Adhikari P (2007) Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal. Kathmandu Univ Med J 5: 382-386.

3. Ahmed R, Yesmin K (2008) Menstrual hygiene: breaking the silence

4. Dasgupta A, Sarkar M (2008) Menstrual hygiene: How hygienic is the adolescent girl? Indian J Community Med 33: 77-80.

5. Montgomery Mark R, Paul C Hewett (2004) “Urban Poverty and Health in Developing Countries: Household and Neighborhood Effects.” Policy Research Division Working Paper no. 184. Population Council, New York City, New York.

6. Upashe SP, Tekelab T, Mekonnen J (2015) Assessment of knowledge and practice of menstrual hygiene among high school girls in Western Ethiopia. BMC Women's Health 15: 84.

7. V Patel, V Tanksale, M Sahasrabhojane, S Gupte, et al. (2006) “The burden and determinants of dysmenorrhoea: a population based survey of 2262 women in goa, india, 2006FebWorld Health Organization 113: 453-63.