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Urban women's access to water and hygiene kits during menstruation in Dhaka city

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ABSTRACT

Girls reach their menarche at the age of 11.9 years on average and around 60% of them lack knowledge of menstruation before they reach menarche. Despite being one of the major health concerns, discussion on menstrual hygiene is still regarded as taboo in many rural and urban communities of Bangladesh. The study is mainly based on primary data. Both qualitative and quantitative methods were used to collect data. Also, secondary resources were reviewed for support. More than 98 percent of respondents were positive that they have physical access to continuous water supply around their residence with a very low flow of water in the slum areas. More than 57.5 percent of respondents get only 10-20 liter water for bathing and cleaning purposes during menstruation days which is very low. Women in slum areas spent more than 200-500 BDT monthly to get water. There is a disparity between getting access to water between respondents from two study areas. From respondents of slum areas, more than 17 percent of respondents face a shortage of water to use for cleaning purposes. More than 16.7 percent of respondents replied that they don't get enough menstrual and hygiene kits from their family when they asked for it. Only 14.2 percent of respondents ever received any menstruation products for free for once or twice. More than 51 percent of respondents perceive it is very expensive to purchase menstruation products. The study concluded that practices and management of menstrual hygiene are not up to the mark yet in urban areas of Bangladesh. Women and girls still lack behind in terms of knowledge and information about menstrual hygiene. There is a need for special care to support women and girls for the betterment of their health.

INTRODUCTION

Bangladesh has gained wonderful ground by dint of maintainable monetary and GDP development. As per the ADB report on GDP development, this monetary year of 2019-2020 it will grow up to 8 percent and would be the most elevated among the nations in Asia following the GDP 6.9 in 2018. Undoubtedly this is a leading purpose of financial improvement as it is a prime pointer of financial advancement (ADO, 2019). The number of inhabitants in Bangladesh is 160.4 million and one-fourth of it has a place with ladies of 15-54 age gathering and prophylactic or contraceptive pervasiveness rate is 61.2 percent (Worldometers, 2020). There are various substances for adapting to the advanced system of the nation, the medical problem is getting more need than some other also. As indicated by the World Health Organization, cervical malignant growth or cervical cancer is the second most regular sort of disease in Bangladesh, with roughly 12,000 new cases distinguished each year and more than 6,000 passing because of the seriousness of the disease (Yakupitiyage, 2020). Here's a matter of concern is menstrual cleanliness and the executives aren't prime worry in the division of conceptive wellbeing and water, sanitation, and cleanliness. Menstrual health risks are mainly the result of unhealthy practices and behavior of girls during the bleeding period which depend on the type of absorbent they use and ways of cleaning absorbents and genital. Around 77.4 percent of girls change their clothes/pads 2-3 times a day during menstruation and 35% don't clean

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external genitalia (Haque et al., 2014). Cleaning genitals and having a bath with clean water regularly can keep women safe from menstrual infections and diseases. But, women often take a bath with dirty water. A study in Chittagong, Bangladesh says 62 percent girls take bath daily while 26 percent on an alternate day and the rest after 3-4 days though on an average girls clean their genital 4 times a day (Muhit and Chowdhury, 2013) while the similar study showed that 16.1 percent don't take bath during menstruation and 14.3 percent don't even wash external genital after visiting toilets (Omidvar and Begum, 2010). The safety measure of basic hazard factors about women's mindfulness is still released. Teenage girls establish a helpless gathering as for their societal position as well as corresponding to wellbeing. Menstrual hygiene management should be part of an expanded definition and agenda for sexual and reproductive health services. Because at its essence, menstruation is about reproduction. Poor menstrual hygiene can negatively affect women's health. Following the Millennium development goal (MDG) by UNDP to Sustainable Development Goal (SDG) the significance of women's reproductive health is being a substantial affair in both qualitative & quantitative ways. In SDG, the goal is to indicate good health and wellbeing for people and illustrating clean water and sanitation.

To achieve these goals in Bangladesh it is very important to ensure clean water for women and supporting them with menstruation and hygiene kit in the coming periods. There is certainly a relationship between access to water and menstrual hygiene. But there are hardly studies on access to water of women and girls and the relation between access to water and hygiene during menstruation. The main objective of the study is to assess the accessibility of water and menstrual and hygiene kits of women and girls during menstruation. In terms of assessing accessibility, the study focused on four different indicators which were physical accessibility, affordability, acceptability, and adequacy.

DATA AND METHOD

Sampling method

The study followed a non-probability sampling method for selecting the sample. In a non-probability sampling method, the sample size is not determined before the study (Neuman, 2014). From different non-probability sampling techniques, this study used a purposive sampling technique. Through the use of purposive sampling technique, the study tried to reach all the possible cases suited for the study. Purposive sampling technique is mostly used in the exploratory study (Neuman, 2014). For purposive sampling size, the researcher focused on areas with communities of similar social and economic backgrounds.

Sample size and study area

The study included 120 respondents as a sample from two different study areas. One of the study areas was a slum in Dhaka city and another one was a university women's residential hall. As the study was small in the research scale the researchers followed a purposive sampling method for the study. In the slum area, 60 respondents were involved in the study. The respondents were selected through simple random sampling process where every woman in the slum had the chances to be a respondent of the study. From the residential hall, 60 respondents were selected in a similar simple random sampling process. Respondents who are from slum areas have similar characteristics and represent more than 1000 women in the area. On the other hand, the respondents from the residential hall area have similar characteristics and represent at least 1000 women in the area. From the scenario, it can be understood that though the study included small sample size, the samples represent a big number of population.

Data collection and analysis method

The study was mainly focused on primary data collected from the study area. Some secondary data was also reviewed for the study. The study used both qualitative and quantitative tools for data collection and analysis. A semi-structured questionnaire was developed for quantitative data collection. Respondents were allowed to select options from the questionnaire and also select answers which were not included in the questionnaire. For the qualitative part, case study

and observation tools were used where respondents shared their views about the objective of the study. For quantitative analysis, IBM SPSS Version 25 was used. Mainly frequency analysis, percentile analysis, mean and median analysis were performed. Qualitative data was included to support the quantitative data.

Ethical consideration

The study ensured the ethical issues that were involved, including the risks and benefits of the respondents. Before conducting data collection, each respondent was informed about the purposes, type of information coverage, and confidentiality. The respondents participated in the study voluntarily and they had the opportunity to terminate participation at any stage of the study. The study tools development and analysis process followed the Ethical Guidelines 2003 by Social Research Association (Social Research Association, 2003).

RESULTS AND DISCUSSION

The study was conducted on 120 women in two areas. Both of the study areas covered 60 respondents. The study was mainly focused on young women who have been going through early or mid-age of menstruation period. More than 46 percent of the respondents belonged 17-21 year age group. Also, 35.7 percent of the respondents were between 22-26 years old (Table 1).

Table 1: Aged based respondents' distribution (n=120, μ=21.9667, SD=3.98091, Source: Field Study, 2020)

Age Group	Percent
12-16	5
17-21	46.7
22-26	35.7
27-31	9.1
32-36	3.3

As per the description in the method, the study was focused on two different areas. One of the study areas was a women's residential hall of the University of Dhaka and another one was a slum. For this reason, there was a mixture of educational qualifications.

Table 2: Educational distribution of the respondents (n=120, Source: Field Study, 2020)

Categories	Percent
No formal education	10
Primary equivalence level	20.8
Secondary equivalence level	17.5
Higher secondary equivalence level	0.8
Graduation level	45
Post-graduation level	5
Others	0.8
Total	**100**

Respondents from the slum areas had a lower level of education which also creates impacts on their lifestyle and cautiousness about sexual and reproductive health (Table 2). In the study more than 57 percent of respondents were single and 40.8 percent of respondents were married. Most of the respondents were from low household income levels.

It was observed that most of the respondents were from lower-income class to lower-middle-income class (Figure 1).

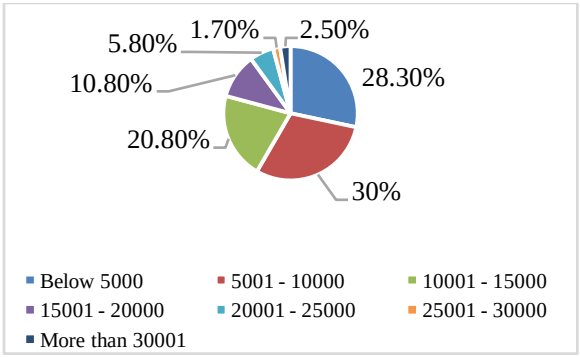

Figure 1: Respondents' household monthly income in BDT (n=120, Source: Field Study, 2020)

Responding to the first menstruation age, more than 94 percent of respondents had their first menstruation at the between12-18 years. Most of the respondents agreed that they were very shy about menstruation at an early age and were not able to share their needs. It refers that there should be more support for women who are at an early age.

In response to physical access to continuous water supply, the result shows tremendous development in both residential and slum areas. More than 98 percent of respondents were positive that they have physical access to continuous water supply around their residence. But the qualitative research part showed some challenges. In slum areas, the flow of water doesn't remain the same all around the day. The flow of water increases at noon and evening. For this reason, even if there is water and women have physical access to continuous water supply, the water demand wasn't fulfilled. Only 35.8 percent of respondents get 30-50 liter of water every day for bathing and cleaning their genital during the menstruation period. From this 53.4 respondents are from the residential hall area.

A total of 40.8 percent of the respondents get only 20 liters of water for bathing and cleaning purposes during menstruation days (Table 3). On the other hand, 37.5 percent of the respondents receive 30 liters of water for cleaning purposes. The respondents who get a limited amount of water are from the slum. Here, we can see the disparity in access to water.

Table 3: Quantity of water for bathing, washing, cleaning during menstruation in Liter (n=120, Source: Field Study, 2020)

Quantity of Received Water (Liter)	Percent
10	9.2
15	7.5
20	40.8
25	0.8
30	37.5
40	3.3
50	0.8

Women in slum areas don't get a similar quantity of water as women in residence hall areas. Lack of access to water for cleaning and bathing purpose increase the danger level of living an unhygienic life which can lead to severe diseases.

Only 36.7 percent of the respondents got access to use hot water during menstruation for reducing cramps. More than 62 percent of respondents lack behind to get access to hot water. This indicates women face not only limited access to water but also access to other resources during the menstruation period. More than 32 percent of respondents use cloths and rags during menstruation. From this, 86.7 percent of respondents get access to clean water to wash menstruation products like cloths and rags. This means the quality of water for cleaning menstruation products is better. But 11.7 percent of the respondents don't clean their used clothes and rags regularly. A qualitative study found that limited access to water is one of the reasons. The water they get from the water line can be used only for important household works. For this reason, women in slums don't waste water by cleaning menstruation products every day.

Respondents from the residential hall don't know the monthly cost of water supply. All of the female residential students need to pay 3000-3500 BDT as hall fee for staying in the residential area. Here, the residential cost is highly subsidized as a public university. On the other hand, all the respondents from the slum area need to pay 200-500 BDT monthly for water service. This cost is included in the slum room rent. For this reason, most of the women don't know the exact monthly cost of water service. From this scenario, it can be concluded that women in residential halls are privileged to get water service with limited expense, and on the other hand, women in slum areas pay more for the water service.

Cleaning genital regularly during menstruation is very important. It is recommended by doctors to wash the genital at least twice a day during menstruation for reducing the possibility of bacterial infection. More than 77.5 percent of respondents use water every time during changing menstruation products (Figure 2).

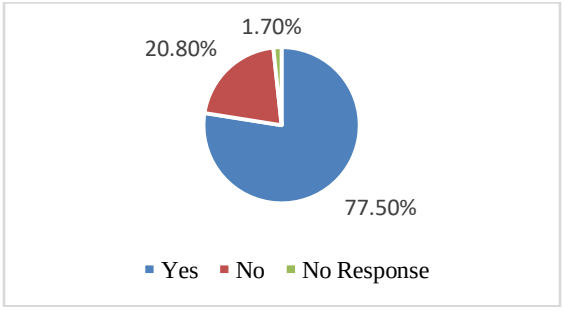

Figure 2: Percentage of respondents who use water during changing menstruation products (n=120, Source: Field Study, 2020)

It is alarming that 20.8 percent of respondents don't use water to clean the genital. Which means they do not clean genital regularly during menstruation which can bring health hazard? The rate of not cleaning the genital is higher in slum women than women of the residential hall. Which also indicates that there is a lack of knowledge among slum women about the importance of cleaning genital?

Also, 68.3 percent of respondents take shower only once during the menstruation period. If they took shower more than one time there was a possibility of cleaning their genital regularly during menstruation. One of the reasons for not cleaning the genital regularly was a shortage of water. More than 17 percent of respondents face a shortage of water to use for cleaning purposes. All of them are women who are living in the slum. The qualitative data shows the condition clearly. As the flow of water is really low around the day in the slum, women do not get enough water to take a bath or clean their genitals regularly during menstruation. Even if there is a continuous supply of water, the quantity is low.

It is advised by the medical practitioners to drink more fluid during menstruation days than normal days to keep body water balance stable. More than 46 percent of respondents don't drink more water during the menstruation period than the normal period (Table 4). Respondents from the slum mainly are not concerned about drinking more water during menstruation.

Table 4: Respondents drinking more water during menstruation (n=120, Source: Field Study, 2020)

Response	Percent
Yes	49.2
No	46.7
Don't Know	1.7
No Response	2.5

The qualitative observation revealed that there are two reasons behind this. One of them was lack of awareness and another one is the limited availability of clean water. Respondents who live in university residence halls are not aware of the importance of drinking more fluid during the menstruation period. But respondents from slum areas not only unaware of the importance of drinking more water but also have limited clean water access.

Following that, 34.2 percent of respondents said the water supplied by the designated authority is moderately clean. Sometimes the respondents get solid materials and bad smell in the supplied water. In the end total, 72.5 percent of respondents accepted the system of water supply as they don't have any other choice to get a better supply of water. On the other hand, 19.2 percent of respondents don't think the water supply system is acceptable and want development of the system (Table 5).

Table 5: Percentage of respondents' regarding accepting the current water supply system (n=120, μ=1.4333, SD=0.84747, Source: Field Study, 2020)

Response	Percent
Yes	72.5
No	19.2
Don't Know	0.8
No Response	7.5

In response to access to menstruation and hygiene kits related questions, the respondents were very conservative as talking about menstruation and the kits are kind of a taboo. More than 16.7 percent of respondents replied that they don't get enough menstrual and hygiene kits from their family when they asked for it (Figure 3). Most of the respondents who don't get enough support from their family about menstruation and hygiene kits are from the slum area.

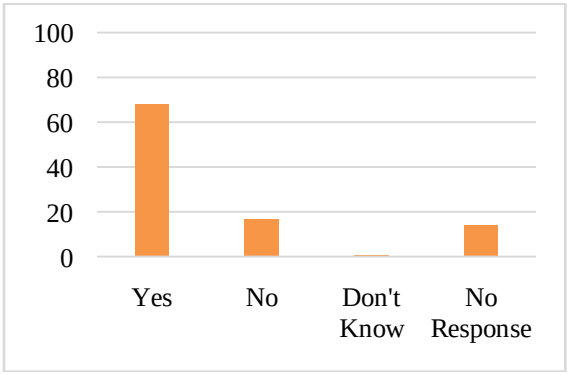

Figure 3: Percentage of respondents getting enough menstrual hygiene kits from the family when asked (n=120, Source: Field Study, 2020)

Only 14.2 percent of respondents ever received any menstruation products for free for once or twice. More than 82 percent of the respondents never received any menstruation kit for free from any organization (Table 6).

Table 6: Percentage of respondents' receiving menstrual kits for free once or twice (n=120, μ=1.9250, SD=0.52119, Source: Field Study, 2020)

Response	Percent
Yes	14.2
No	82.5
No Response	3.3

Also, 92.5 percent of respondents never received any hygiene kit for free from any organization (Table 7). These responses indicate that there is no or limited program by government or non-government organizations support women with free menstruation and hygiene kits. Due to the high cost of menstruation and hygiene kits, most of the women from poor or middle-income families face difficulties using them. In this scenario, it is important to initiate programs to support women from poverty-driven communities with free menstruation and hygiene kits.

Table 7: Percentage of respondents' receiving hygiene kits for free once or twice (n=120, μ=2.0500, SD=0.44627, Source: Field Study, 2020)

Response	Percent
Yes	3.3
No	92.5
No Response	4.2

Almost 35 percent of respondents use 100-150 BDT monthly to purchase menstrual products. Also, 16.7 percent of respondents use 160-300 BDT monthly to buy menstrual products. On average each of the respondents uses 100 BDT monthly for getting access to menstruation kits. Including this 34.9 percent of respondents use 100-150 BDT per month for buying hygiene kits like soap, washing powder, etc. Also, 15 percent of the respondents use 160-300 BDT per month to buy similar hygiene kits. On average, every respondent uses more than 108 BDT monthly for getting access to hygiene kits. In total respondents one an average use 208 BDT monthly for getting access to menstrual and hygiene kits. For a woman from a poor or middle income with monthly income below 5000 BDT, it is very difficult to use more than 200 BDT every month for getting access to menstruation and hygiene kits. More than 58 percent of respondents think it is expensive to get access to menstruation kits. Table 8 shows the level of the expensiveness of menstrual kits according to respondents.

Table 8: Level of the expensiveness of menstrual kits (n=120, μ=1.9583, SD=1.26621, Source: Field Study, 2020).

Level of expensiveness	Percent
Very Expensive	51.7
Moderately Expensive	20.8
Cheap	5.0
No Response	22.5

In terms of access to hygiene kits, the respondents perceive the cost is still low. But for some respondents, it's high at present. More than 21 percent of respondents perceive that access to hygiene kits is expensive. Also, 51.7 percent of respondents perceive that hygiene kits are still affordable Table 9 shows the level of the expensiveness of hygiene kits according to the respondents.

Table 9: Level of the expensiveness of hygiene kits (n=120, μ= 2.2667, SD=1.03496, Source: Field Study, 2020.

Level of Expensiveness	Percent
Very Expensive	18.3
Moderately Expensive	54.2
Cheap	6.7
No Response	20.8

Following the expensiveness of menstrual and hygiene kits, the study also wanted to know how readily respondents can afford menstrual and hygiene kits. More than 62 percent of respondents can afford menstrual products in a time of need (Table 10). On the other hand,19.2 percent of the respondents face difficulties while affording menstrual products readily in time of needs.

Table 10: Percentage of respondents' about affording menstrual products readily (n=120, μ=1.7167, SD=1.10144, Source: Field Study, 2020)

Response	Percent
Yes	62.5
No	19.2
Don't Know	2.5
No Response	15.8

In terms of hygiene kits like soap, shower gel, washing soap, washing powder, 68.3 percent of respondents can somehow afford them readily in time of needs (Table 11). Here also, 18.3 percent of the respondents face difficulties while affording hygiene kits when needed. Due to expensiveness most of the respondents don't change clothes/pads frequently during menstruation.

Table 11: Percentage of respondents' about affording hygiene kits readily (n=120, μ=1.5667, SD=0.99354, Source: Field Study, 2020)

Response	**Percent**
Yes	68.3
No	18.3
Don't Know	1.7
No Response	11.7

More than 43 percent of respondents change cloths/pads 1-2 times in a day during menstruation. Also, 50.8 percent of respondents change cloths/pads3-5 times in a day during menstruation. Women in the low frequently changing group are at risk of facing sexual and reproductive health complications than the high frequently changing group.

More than 9 percent of the respondents face restrictions in using menstruation products. As talking about such restriction is a taboo for the respondents, 24.2 percent of respondents didn't respond to this question. In terms of using hygiene kits, 69.2 percent of respondents face restriction. Here also, 16.7 percent didn't respond to the question. The qualitative case study indicated that the respondents face restrictions from family to use menstruation and hygiene products. Due to limited household income, most of the respondents from slum areas don't get support from families to use high-quality menstruation products and hygiene kits. Access to proper menstruation and hygiene kits is really difficult for women in slum areas than for women living in residential halls.

In terms of washing menstruation products like cloths/ rags women are very cautious and use closed space. In terms of disposing of used menstruation products, 88.3 percent of respondents use a waste bin (Table 12). Though there is still a scope of increasing awareness about cleaning and disposing of menstruation products, the positive percentage indicates that the women are aware of ensuring the safety of the environment.

Table 12: Respondents' preferred places to dispose of used menstruation products (n=120, Source: Field Study, 2020)

Disposal place for used menstruation products	**Percent**
In the toilet commode	0.8
In dustbins	88.3
In open places	1.7
In any water body	3.3
Others	5.8

Mainly respondents from slum areas use reusable cloths during menstruation. From 60 respondents of the slum area, 80 percent use washing soap or powder during cleaning the reusable menstruation products. But 20 percent of the respondents from slum areas don't use any cleaning materials like soap or powder for washing reusable menstruation products. There is a high risk of facing diseases due to not cleaning menstruation products perfectly. The study is already showing that more than 19 percent of respondents are currently facing negative health impacts related to menstrual hygiene. This is very much alarming. Respondents face different restrictions during menstruation inside the family including not eating sour food, not cooking, not attending any event, not attending workplace/educational institutions, sleeping separately, etc. The last part includes respondents' access to training and awareness-raising campaigns related to menstrual hygiene. More than 71 percent of respondents never participated in any training or awareness-raising program related to menstrual hygiene. Only 27.5 percent of respondents participated in such a program. This condition summarizes that there is a need of taking

major initiative to aware and training women in study areas about menstrual hygiene.

CONCLUSION

Through the synthesis of extant quantitative and qualitative studies of menstrual experience, we tried to highlight consistent challenges faced by the respondents of the research and developed the scenario of the persisting situation of Bangladesh. This report mainly focused on the difficulties and interventions which impede women's and girls' health and well-being. The practice and management of menstrual hygiene have been avoided for long. The data underscored the practices and management of menstrual hygiene by the respondents of slum areas and that of the women living in the residential hall of the University of Dhaka and clearly showed the inadequate access to water and hygiene kits during menstruation. Menstruation is not openly discussed in Bangladesh due to social norms and cultural beliefs around the body and blood. As a result, girls are often not prepared for their first period and women and girls lack the necessary skills and information to hygienically manage their periods. Besides, women and girls face several restrictions during their periods that prevent them from participating in normal daily life.

RECOMMENDATIONS

To end this distressing issue we can adopt these following steps:

- The government should ensure a proper and adequate supply of water at every household in formal and informal settlements of the country, especially in the urban areas.
- Special focus should be provided to ensure access to water of women and girls in developing water distribution-related plan and programs.
- The government should integrate menstrual hygiene awareness from the primary school level. This will address the issue of menstrual hygiene amongst the girls and the boys and also the challenge of menstrual napkins disposal in a sanitary manner.
- Introducing sustainable menstrual pads can open new doors of possibilities and have an extensive effect on menstrual hygiene. Sustainable menstrual pads can be washed after using and can be used much longer than the mainstream pads/clothes/ rags. It is beneficial for the environment too.
- Sanitary pads are not a luxury product. The market should consider the issue of keeping their social responsibilities in mind, instead of tending to generate more profit.
- The community being reached out using local leaders, non-governmental organizations, and clinics could raise awareness regarding the subject and emphasize practicing menstrual hygiene management.

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DISCLOSURE OF INTEREST

None

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