

Original Research Article

Exploring the knowledge, attitude and practices about menstrual hygiene management among the reproductive age group women of urban slums in Ahmedabad, Gujarat

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ABSTRACT

Background: Menstruation is a typical physiological process resulting from hormonal changes in the body. Many social and cultural misconceptions, as well as taboos, surround menstruation. The study aims to determine knowledge, attitude and practice about menstrual hygiene and menstruation in the reproductive age group women of the urban slum of Ahmedabad.

Methods: A cross-sectional study was carried out in Ahmedabad, Gujarat's west zone slums, from February to April 2022. In the west zone, Ambawadi and Vasna were chosen randomly from the four slum regions. Convenient sampling was used to recruit 120 women in total. A standardized questionnaire including sociodemographic information, menstrual history, knowledge, attitude and hygiene behaviours was used to gather data.

Results: The majority of responders (71.66%) were between the ages of 15 and 34. 85% of those surveyed used public restrooms. 33% were aware that menstruation is a typical physiological occurrence. 63.33% of respondents were unaware of the true reason and source of monthly bleeding. 92.5% of women used cloth during their periods, despite 100% of respondents believing that sanitary napkins should be used. Sanitary napkins were used by only 7.5%. Menstruating women should be treated differently, according to the majority (61.66%). 94.16% of respondents agreed that females should get education about menstruation before to menarche.

Conclusions: The study draws attention to the participants' poor cleanliness habits, ingrained cultural taboos and notable gaps in their understanding of menstruation health. The persistent preference for cloth despite widespread awareness of sanitary napkins suggests obstacles relating to accessibility, cost, or cultural norms.

Keywords: Reproductive age, Knowledge, Attitude, Habits, Menstruation

INTRODUCTION

In females, menstruation is a physiological process that begins when puberty begins.¹ The most significant biological milestone in women's lives is menarche, which signifies the beginning of the reproductive age.² In the least developed countries, only 27% people have facilities

for handwashing and water access at home and around 2.3 billion people around the world have limited access to basic sanitation facilities. Women and adolescent girls who do not have access to these essential resources at home face significant difficulties in managing their periods.³ The percentage of women between the ages of 15 and 24 who use menstruation-related items is one of

the measures of women's empowerment included in the fifth National family health survey (NFHS-5).⁴ The NFHS 2015-16 survey conducted in India found that 121 million (36%) of India's 336 million women who are menstruating use sanitary napkins made domestically or commercially.

Menstrual hygiene management is using clean material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary for the duration of menstruation, using soap and water for washing the body is required and access to facilities for disposing used menstrual managing materials as stated by JMP's definition on menstrual hygiene management.⁵ The women and girls residing in low-income households are not well informed on menstrual hygiene practices. The main causes of this ignorance are social taboos, adults' feelings of shyness and discomfort, and their reluctance to talk about it because of sociocultural and theological prejudices. Children's development and growth are greatly aided by education, which enables them to deal with the obstacles of daily life. However, educators tend to overlook the issue of managing menstrual hygiene, viewing it as a private matter best dealt in the home. Menstruation necessitates the availability of supplies for collecting or absorbing menstrual blood, maintaining personal cleanliness, properly disposing of waste and protecting privacy.⁶

Achieving other SDGs also depends on women and girls having access to menstrual health and hygiene. Unwanted pregnancies may result from ignorance of puberty and menstruation; women's mental health may be impacted by the shame, shyness and untouchability that come with menstruation. Additionally, unsanitary practices increase the risk of urinary tract infections and reproductive tract infections in women, which impacts the SDG health result (Goal 3: Good health and well-being). Many girls experience menarche unaware and unprepared, particularly in low-income and rural areas. In these situations, mothers serve as the primary information source, thus they receive very little information because of misunderstandings or even shyness.⁷

Lack of water for washing, lack of soap, lack of privacy, dirty or non-functional toilets and lack of safe disposal facilities make it extremely difficult for women to follow proper menstrual hygiene practices in low-income settings.⁸ Due to a lack of appropriate procedures and techniques for disposing of menstrual waste, women in underdeveloped nations often dispose of their waste in garbage bins or home solid waste, which eventually turns into solid waste.

Women's perceptions of their periods also influence their sanitary practices; for example, women who understand menstruation better tend to manage it in a safe and clean manner and vice versa.⁹ The current study was conducted to understand the knowledge, attitude and practices in relation to menstrual hygiene management among

reproductive age group women in urban slum area. The factors influencing menstrual hygiene habits and the state of menstrual hygiene practices among women of reproductive age were identified by the study.

METHODS

In Ahmedabad, Gujarat, a community-based cross-sectional study was conducted to evaluate the knowledge, attitudes, and practices of women in the reproductive age group living in urban slums about the management of menstrual hygiene. The study was conducted in two slum areas of Ahmedabad in Gujarat. The study was conducted in 2022 between February and April.

Vasna and Ambawadi are two randomly chosen slum neighbourhoods from the four slum areas that make up Ahmedabad's West zone, which was chosen for the study. There are 1389 homes in the West zone overall, and 120 of them participated in the study using a convenient sampling technique. Households in each slum were chosen by simple random sampling and all women of reproductive age were chosen from each home. The women who were in reproductive age group (15-45 years of age), gave consent and were present on the day of study were included. Women who did not provide the consent due to any reason were excluded from the study. The houses which were locked on the day of the study were not included in the study.

Semi-structured surveys were used to gather data. The questionnaire was created based on extensive literature search. The questionnaire included sections on knowledge, attitude, practice, obstetric history, menstrual history, sociodemographic profile and other topics. For socio-economic classification in the study, modified Prasad classification was used.¹⁰ The data was entered in excel and analysed using SPSS 28.0 version. Informed consent was taken from each participant before the study in the local language. Before commencing the study, permission from institutional ethics review committee was taken.

RESULTS

Of the 120 individuals, the majority were in the 15-24 (35.83%) and 25-34 (35.83%) age groups. Married people made up 66.66% of the respondents. In terms of educational attainment, 90% of participants had completed primary school or higher, while 10% of respondents were illiterate. Class IV, or lower middle class, accounted for about 84.17% of the respondents. (Table 1).

The public bathrooms were utilised by 85% of respondents, while 15% of respondents were using open defecation. The majority of respondents (80%) mentioned municipal water, while 20% said their water supply was a tanker. 77.5% of the respondents kept their water in drums, whilst 21.6% used a tank.

Table 1: Socio-demographic profile of study participants (n=120).

Characteristics	N	Percentage (%)
Age (years)		
15-24	43	35.83
25-34	43	35.83
35-44	34	28.33
Marital status		
Married	80	66.66
Unmarried	33	27.5
Divorce	2	1.6
Widow	5	4.1
Education		
Illiterate	12	10
Primary school	105	87.5
Secondary school	2	1.6
Graduate	1	1
Occupation		
Unemployed	67	55.83
Employed	53	44.1
Socio-economic class		
Class IV (lower middle class)	101	84.17
Class V (lower class)	19	15.83

Table 2: Distribution of the study participants according to their menstrual history (n=120).

Characteristics	N	Percentage (%)
Age of menarche (years)		
<12	3	2.5
12-15	117	97.5
Duration of menses flow (days)		
<3	3	2.5
3-5	111	92.5
>5	6	5
Pain during menstruation		
Yes	28	23.33
No	92	76.66

The most common age for attaining menarche was between 12 to 15 years noted among 97.5% of respondents. Nearly every respondent reported a normal menstrual cycle. 92% of respondents said their menstrual cycles lasted three to five days.

Of those surveyed, 76.66% reported no pain throughout their periods. (Table 2). When asked about physical symptoms, 80% of respondents said they had no menstrual symptoms.

Of those who did, 10% reported having cramps in their abdomens, 8.33% reported cramps and muscle pain and 0.83% reported headaches and 0.83% reported diarrhoea. When participants were assessed for their knowledge

majority i.e., 76.67% of respondents were un-aware that menstruation is a normal phenomenon.

Table 3: Distribution of the study participants according to their knowledge on menstruation and menstrual hygiene (n=120).

Characteristics	N	Percentage (%)
Is menses a normal phenomenon?		
Yes	28	23.33
No	92	76.67
Is menses a sign of conception?		
Yes	117	97.5
No	3	2.5
Is menses a lifelong process?		
Yes	37	30.83
No	83	69.16
Source of bleeding?		
Abdomen	9	7.5
Uterus	7	5.83
Vagina	28	23.33
No idea	76	63.33
Cause of menses		
Hormonal	3	2.5
Disease	25	20.83
Curse	24	20
No idea	68	56.66
Do you think women should use sanitary napkins?		
Yes	120	100
No	0	0
Why should women use sanitary napkins?		
Safety	1	0.83
To avoid clothes getting dirty	77	64.16
To avoid embarrassment	40	33.33
To prevent infection	1	0.83
No idea	1	0.83

97.5% respondents said it is a sign of conception while 69.16% respondents said that menstruation is not a lifelong process. Only 5.83% had knowledge about the actual source of bleeding during menstruation, from the remaining, 7.5% said abdomen, 23.33% said vagina and 63.33% had no idea about the source of bleeding. For majority of them 56.66% had no knowledge regarding the cause of menses, few stated it as disease (20.83%), few said it was a curse from God (20%), only 2.5% said it was hormonal. When asked regarding women should use sanitary napkins all of them responded yes (100%). 64.14% of the respondents said the reason to use sanitary napkin is to avoid clothes getting dirty, 33.33% of the respondent said they use it to avoid embarrassment. Only 0.83% said they use it to prevent it from infection (Table 3).

Table 4: Distribution of the study participants according to their menstrual practices (n=120).

Characteristics	N	Percentage (%)
Absorbent material used during menstruation		
Cloth	111	92.5
Sanitary napkins	9	7.5
If you use sanitary napkins, what kind of napkins do you use		
Stayfree	4	3.33
Whisper	3	2.5
Comfort	2	0.83
Number of sanitary napkins/cloths consumed per day		
1	10	8.33
2	105	87.5
3	2	1.66
4	3	2.5
Avoidance of certain kinds of food during menstruation		
Yes	15	12.5
No	105	87.5
Disposal of used sanitary napkin		
Dustbin	5	55.5
Indiscriminate throwing far from house	4	44.4

Upon assessment of the respondents' menstrual practices, just 7.5% of them used sanitary napkins, while 92.5% of them utilized cloth as an absorbent medium. Majority of the respondents (87.5%) changed their sanitary napkins/cloth 2 times a day. All the respondents (100%) stated that they take bath every day during menstruation, after each bathroom visit clean their genitalia and wash their hands after replacing the absorbent material.

The majority of respondents (87.5%) said they do not avoid eating anything at all during their periods, while 12.5% said they do avoid foods like milk, pickles, and other items that are deemed "hot food" during their periods. The majority of respondents (55.5%) stated that they dispose of their used sanitary napkins in the public restroom's dustbin, while the remaining respondents (44.4%) claimed they dispose of them outside, away from their homes (Table 4). In terms of respondents' attitudes on menstruation, 61.66% of them thought that females who experience periods ought to receive special treatment and be subject to limitations at this time.

The majority of respondents (72.5%) indicated they were afraid during their first menstrual cycle, whereas 9.16% claimed their first menstrual cycle was normal, 14.16% said they were uncomfortable and 4.16% said they were humiliated about it. Girls should be educated about menstruation before they reach menarche, according to 94.16% of respondents. The monthly cycle irritated over 90.83% of the responders. According to 95.83% of the respondents, menstruation interferes with their daily

activities, therefore women should avoid going to temples (95.83%) (Table 5).

Table 5: Distribution of the study participants according to their attitude (n=120).

Characteristics	N	Percentage (%)
Menstruating girls should be treated differently?		
Yes	74	61.66
No	46	38.33
Restrictions should be practiced during menstruation		
Yes	74	61.66
No	46	38.33
Reaction to your first menstrual cycle		
Normal	11	9.16
Scared	87	72.5
Discomfort	17	14.16
Embarrassed	5	4.16
Girls should be addressed about menstrual cycle and hygiene before achieving menarche		
Yes	113	94.16
No	7	5.83
What are your views on every month cycle?		
Good for health	11	9.16
Annoying	109	90.83
Does menstruation affect your day-to-day activity?		
Yes	115	95.83
No	5	4.16
While menstruating should not enter temples/or touch holy books		
Yes	115	95.83
No	5	4.16
Do you feel shy in talking about menstruation?		
Yes	97	80.83
No	23	19.16

When asked about if they were infected with COVID-19 and did they notice any changes in their menstrual cycle, 14 (11.66%) said they were infected, but did not notice any change in their menstrual cycle.

DISCUSSION

1.8 billion people menstruate each month all around the world. Millions of women, girls, transgender males and non-binary people struggle to properly and healthily control their menstrual cycles.

Due to gender inequity, cultural taboos, discriminatory social norms, poverty, and a lack of basic amenities like sanitary products and bathrooms, menstrual health and hygiene needs are not satisfied.¹¹ The goal of the current study was to evaluate the knowledge, attitudes and practices of women in the reproductive age group who lived in Ahmedabad's urban slums. The majority of women (70%) in the urban slum in the current study were between the ages of 15 and 34. Similar to a study by

Divya Arvind Prabhu et al, which found that 70.4% of the respondents had reached menarche before the age of 14, the majority of the respondents (97.5%) experienced their menarche between the ages of 12 and 15.¹² The mean age at menarche was 13±1.4 years. 90% of participants had at least an elementary education, compared to just 10% who were illiterate. Class IV, or lower middle class, accounted for about 84.17% of the respondents. The results differed from those in a study by Divya Arvind Prabhu et al, in which almost one-third of the participants had extremely low living conditions (51.3%) and were either illiterate or school dropouts (39%). Different study areas, community perspectives, and socioeconomic level could be the cause of the discrepancy. When the respondents' knowledge was assessed, only 23.33% of them were aware that menstruation is a normal phenomenon. This is in contrast to a study by Gupta M et al that found that 78.1% of urban women were aware that menstruation is a natural process.¹³ Given that the current study was carried out in an urban slum neighbourhood and the Gupta M et al study involved women visiting the outpatient department of a tertiary hospital, the discrepancy might be the result of differing study settings. In contrast to research by Gupta M et al (79.66%) and Vijayakeerthi R et al (55.5%), which demonstrated a larger percentage of women knowing the source of bleeding during menstruation, only 5.83% of women knew the true cause of bleeding during menstruation.^{13,14} This may be because the majority of study participants were either illiterate or only had a primary education, underscoring the need for women to be more aware of their periods.

According to an assessment of the respondents' menstrual practices, just 7.5% of them used sanitary napkins, while 92.5% of them utilized cloth as an absorbent medium. According to research by Divya Arvind Prabhu et al and Gupta M et al, 50% and 53%, respectively, of study participants used sanitary pads.^{12,13} The discrepancy might result from the fact that the majority of study participants were from lower middle and lower socioeconomic classes, which suggests that study participants had concerns about affordability and knowledge.

Approximately 87.5% of research participants changed their cloth or sanitary napkins twice daily. Every responder stated that they take a bath every day while menstruating, wash their hands after replacing the absorbent material and clean their genitalia after each bathroom visit. Similar study results were found by Vijayakeerthi R et al (88.4%), Adwitiya Das et al (83.0%) and Anjua de et al (91.2%) , who found that most participants changed their pads two to three times a day.¹⁴⁻¹⁶ Women who practice good menstrual hygiene, such as changing their pads regularly, washing their hands and washing their genital area with lots of soap and water, are less likely to get reproductive tract infections. 44.4% of respondents disposed of their sanitary pads in the open, away from their homes, but the majority (55.5%) disposed of them in the public restroom dustbin. According to a study by Hema Priya S et al, 29% of the

girls disposed of their spent absorbent in household waste and the majority of study participants (60.8%) burned it.¹⁷ Sanitary pads must be disposed of properly to avoid health risks and to protect the environment. Menstruating females should be treated differently and should follow limits during their periods, according to 61.66% of respondents in the current survey. Similar results were observed in the study by Srinivasan D et al, where 48.4% of young women and 78.5% of males agreed that women should adhere to specific restrictions during their periods.¹⁸

The majority (72.5%) of those surveyed said they experienced fear during their first menstrual period. The results were consistent with a study by Kartik Ramachandra et al in which 88.5% of individuals in an urban setting reported having unpleasant menstrual effects.¹⁹ Fear during the first menstrual cycle could be caused by a lack of prior information about menstruation. Girls should be educated about menstruation before they reach menarche, according to 94.16% of current responders.

Limitations

Sample size is relatively small due to time and resource limitations.

CONCLUSION

The study draws attention to the participants' poor cleanliness habits, ingrained cultural taboos and notable gaps in their understanding of menstruation health. The persistent preference for cloth despite widespread awareness of sanitary napkins suggests obstacles relating to accessibility, cost, or cultural norms. The unfulfilled demand for thorough menstrual education is reflected in misconceptions like the idea that menstruation is a curse or an indication of conception. The majority of participants were supportive of community-based programs, acknowledging the significance of teaching females before to menarche. Promoting menstrual health and dignity, particularly in low-resource environments, requires targeted awareness campaigns, better access to period hygiene products, and culturally responsive educational initiatives. Women can safely manage their periods with the provision of hand-washing stations, gender-neutral restrooms and enough water. Women who practice good hygiene can reduce their risk of developing reproductive tract infections.

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