

Menstrual Hygiene Practices amongst Reproductive Age Group Females Visiting a Tertiary Care Hospital, Lahore

Rozina Shahadat Khan¹, Sarah Khalid², Mubeen Saeed³, Michelle Gillani⁴

Abstract

Objective: To assess the relation menstrual hygiene practices about age, educational level, marital status, and area of residence among the females of the reproductive age group attending the gynaecology outpatient department (OPD) of a tertiary care hospital.

Methods: This cross-sectional study was conducted amongst conveniently selected 385 reproductive age group females. A questionnaire was developed, and data entry and analysis were done using SPSS version 25.0. The scoring system was developed by allocating 0 to 2 scores for individual variables with a total score of 24 for the 12 variables of menstrual hygiene practices. Individuals scoring 19 and above were considered to follow exclusive menstrual hygiene practices. The chi-square test of significance was used to find the relation between age, educational level, marital status, and area of residence with menstrual hygiene practices.

Results: The majority 237/385 (61.6%) females were between 21-30 years and 293/385 (76.1%) were married. The educational status of the majority of females (31.2%) was primary/middle pass followed by 29.6% matric pass females. Most females 202/385 (52.5%) attending gynaecology OPD were from Main Lahore city. The mean score for menstrual hygiene practices remained at 19.21 with a minimum to a maximum of 9.50 (0.3%) to 24 (4.4%) respectively. Only 232/385(60.26%) who opted for exclusive menstrual hygiene practices had a mean scoring of 21.75 with minimum to maximum scoring of 19 to 24 respectively.

Conclusion: A significant relation was found between the area of residence, education, and menstrual hygiene practices. Females residing in Lahore's main city had better menstrual hygiene scores as compared to females from peripheral Lahore and other cities. The menstrual hygiene scores also improved with the increase in the educational level. However, the place of living is creating more impact than education most probably due to the non-availability of other absorbents or financial constraints.

Keywords: Menstruation, Menstrual hygiene Practices, Reproductive Age group females.

IRB: Approved by Ethical approval letter, Post Graduate Medical Institute/Ameer-ud-din Medical College, Lahore General Hospital, Lahore. Ref# 00-23-A-2023, Dated: 16th Dec 2023.

Citation: Khan RS, Khalid S, Saeed M, Gillani M. Menstrual Hygiene Practices amongst Reproductive Age Group Females Visiting a Tertiary Care Hospital, Lahore. [Online]. *Annals of ASH & KMDC* 2024;29(3): 291-297

Introduction

Menstruation, being an exclusively female phenomenon¹, is one of the most significant changes that occur among girls during the adolescent years². Menstruation is the regular, monthly release of blood and uterine tissue from the vagina as part of the menstrual cycle³. Menarche (first mens-

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Date of Submission: 7th May, 2024.

Date of 1st Revision: 16th August, 2024.

Date of Acceptance: 30th August, 2024.

truation) mostly occurs between the ages of 11 to 15 years with an average age of onset being 13 years. Despite being a natural process, the myths, misapprehension, and poor hygiene practices associated with menstruation in society often lead to health challenges such as increased risk of reproductive tract infections⁴. Menstrual hygiene means the practices are done for personal hygiene during menstruation which include the use of a clean absorbent such as a pad, sanitary napkin, tampons, menstrual cups, or similar products and changing the absorbent with a clean one vigilantly after 3-4 hours to avoid odor along with the thorough washing of external genitalia with clean water⁵. Menstrual

health means that women, girls, and other people who menstruate, are provided with the information and education about it, the menstrual products they need; water, sanitation, and disposal facilities, privacy; competent and empathetic care when needed; and an environment in which menstruation is seen as positive and healthy phenomenon rather than something to be ashamed of so that they can fully participate in work and social activities⁶. Provision of safe absorbent material, maintenance of body hygiene with adequate safe water with the right to privacy and dignity are essential to menstrual hygiene management⁷. In developing countries like Pakistan, where a significant portion of the population is rural, a major portion of the female population is not very well educated, and where the discussion related to menstrual hygiene practices is considered a taboo among common masses, it is really important to educate the women to provide them with the basic facilities to create awareness and to practice better menstrual hygiene practices. The social and cultural stigma attached to it has further deteriorated the self-confidence of female students to seek help or advice due to lack of access to menstrual health management (MHM) resources⁸. According to a study done by U-report in Pakistan, 49% of young girls did not even know about the phenomenon of menstruation before they had their first period and the majority of them did not take baths during their periods because they believed it could lead to infertility⁹. Another study from Pakistan was conducted among 353 participants, out of which 176 were from the general population and 177 were healthcare workers. Only 28.4% of the general population had an idea of menses and proper placement of absorbent at menarche. Awareness about tampons and menstrual cups was relatively very low among the females of the general population (15.9% and 11.4% respectively). The mean age of the general population was 29.89 ± 9.17 with the age range being 14-50 years. Most of the females in the general population were uneducated (26.1%). Approximately 53% of the general populace avoided doing any sort of physical exertion or rigorous activity during their menstruation for example most of them avoided lifting any

heavy weights etc. Approximately 52.8% of the general population at the time of menstruation used sanitary pads, followed by cloth by 30.1% of the general population. A large fraction of females disposed of the menstrual products by throwing them in the waste¹⁰. Previously, a limited number of published and unpublished researches have been done on menstrual hygiene management, especially among the women visiting the tertiary care hospitals of Pakistan. The above-mentioned attributes to this setting deemed it a promising field of research so the current study is designed to assess the menstrual hygiene practices about age, educational level, marital status, and residence among the females of reproductive age group attending gynae OPD of A tertiary care hospital (Lahore General Hospital) in Lahore.

Methodology

This cross-sectional study was conducted amongst 385 reproductive age group females visiting the Gynae Outpatient Department of Lahore General Hospital from July 2023 to December 2023 after ethical clearance. Using Z value as 1.96 at 95% confidence level, estimated prevalence, P value taken as 50% (for unknown population), the margin of error 5% with unknown population size using formula $n = z^2 \cdot p(1-p) / d^2$, the sample size was calculated¹¹. Convenience sampling was used. A self-designed questionnaire was filled out by the researchers themselves upon asking questions from the consenting females in their preferred language. The data was entered and analyzed using statistical package for social science SPSS version 25.0. Frequency tables were used to present demographics, absorbent material & its disposal and menstrual hygiene, age, residence, education & absorbent material, used cross-tabulation, Menstrual Hygiene Practices Scoring, menstrual hygiene practices in different age groups, educational level, residence, and marital status. Charts were used to present differences in the use of different absorbent materials depending upon residence and education and menstrual hygiene practices scoring. A scoring system was developed allocating 0 to 2 scores for individual variables with a total score of 24 for the 12 variables of menstrual hygiene practi-

ces. Nineteen or above score achieved was considered as exclusive menstrual hygiene practices. A chi-square test of significance was used to find the relation between age, educational level, marital status, and residence with menstrual hygiene practices. Females of the reproductive age group visiting the gynaecology outpatient department of a tertiary care hospital (Lahore General Hospital) in Lahore, who have consented to answer the questions asked by the researchers to fill the proforma were included.

The reproductive age group in females was defined as the period during which a female is capable of getting pregnant and reproducing i.e. from puberty to menopause¹². According to WHO, it is estimated to range from 15 to 49 years among healthy females¹³. Menstruation was taken to mean the monthly process of blood and mucosal tissue discharge from the vagina of females from puberty till menopause¹⁴. Hygiene was defined as the set of practices followed to keep oneself and the environment clean enough to prevent disease and discomfort¹⁵. Menstrual hygiene Practices were defined as the use of clean absorbent material such as clean cloth, sanitary pad, tampon, or menstrual cup, etc. to absorb the menstrual blood, washing the reusable absorbent material with an adequate amount of clean water, and cleaning products like detergents/soaps, taking bath and washing genitals with water, adopting a safe and unexposed mode for the disposal of absorbent material used during menstruation by women in the reproductive age. A nineteen or above score achieved was considered for the exclusive use of hygienic methods (Exclusive Menstrual hygiene Practices) during menstruation.

Results

The majority of 237/385 (61.6%) females were between 21-30 years and 293/385 (76.1%) were Married. The educational status of 120/385 (31.2%) females was primary/middle and 202/385 (52.5%) belonged to the main city of Lahore (Table 1). Only 169/385 (43.9%) were using cloth as an absorbent material out of which 63/385(16.4%) exclusively used cloth as an absorbent material. While 106/385 (27.53%) were using any spare cloth as absorbent.

The majority 318/385(82.6%) dumped the used absorbent material in the dustbin of their house. The majority of women 380/385(98.7%) follow hand hygiene after changing absorbent material during menstruation. The majority of women 202/385(52.5%) washed their genitalia more than twice and 152/385(39.5%) twice while menstruating. (Table 2).

| Socio-demographics | Frequency (N) | Percent % | |
|-----------------------|-------------------|-----------|-------|
| Age | 16 to 20 | 44 | 11.4 |
| | 21 to 30 | 237 | 61.6 |
| | 31 to 40 | 81 | 21.0 |
| | 41 to 45 | 22 | 5.7 |
| | Above 45 | 01 | 0.3 |
| | Total | 385 | 100.0 |
| Education | Illiterate | 80 | 20.8 |
| | Primary/Middle | 120 | 31.2 |
| | Matric | 14 | 29.6 |
| | Intermediate | 60 | 15.6 |
| | Undergraduate | 11 | 2.9 |
| | Total | 385 | 100.0 |
| Marital status | Married | 293 | 76.1 |
| | Unmarried | 92 | 23.9 |
| | Total | 385 | 100.0 |
| Residence | Peripheral Lahore | 154 | 40.0 |
| | Main Lahore city | 202 | 52.5 |
| | Out of Lahore | 29 | 7.5 |
| | Total | 385 | 100.0 |

Table 1. Frequency distribution table of age, education, Marital status and residence

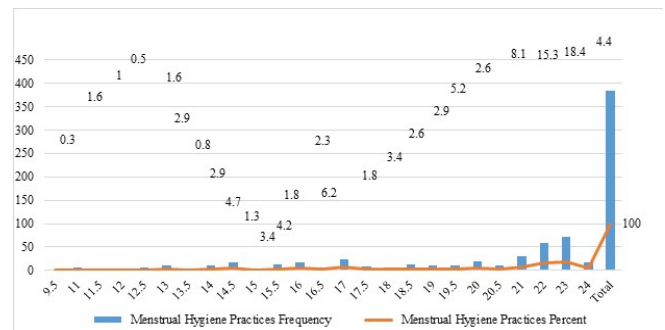


Fig 1. Menstrual Hygiene Practices Scoring

Table 02. Menstrual hygiene and disposal practices

| Absorbent Material And Its Disposal | N | % | |
|---|-----------------|------|-------|
| Absorbent material used | Cloth | 169 | 43.9 |
| | Sanitary pad | 206 | 53.5 |
| | Tampon | 10 | 2.6 |
| | Total | 385 | 100.0 |
| Cloth as absorbent during menstruation | Exclusively use | 63.0 | 16.4 |
| | Any spare cloth | 106 | 27.5 |
| | Other | 216 | 56.10 |
| | Total | 385 | 100.0 |

| | | | | |
|---|----------------------------------|------------|--------------|--|
| Washing and reuse of absorbent | | | | |
| | Once | 23 | 6.0 | |
| | Twice | 67 | 17.4 | |
| | More than twice | 45 | 11.6 | |
| | Never washed or reused | 250 | 65 | |
| | Total | 385 | 100.0 | |
| Products to be used in washing of absorbent material | | | | |
| | Water | 9 | 2.3 | |
| | Soap and Water | 54 | 14.0 | |
| | Detergent and water | 72 | 18.7 | |
| | Never washed or reused | 250 | 64.9 | |
| | Total | 385 | 100.0 | |
| Place of drying the washed absorbent | | | | |
| | Outdoors | 85 | 22 | |
| | Indoors | 50 | 13 | |
| | Never washed or reused | 250 | 65 | |
| | Total | 385 | 100.0 | |
| Place of the storage of unused absorbent | | | | |
| | With clothes and luggage | 29 | 7.5 | |
| | Segregated place or cabinet | 356 | 92.5 | |
| | Both | 0 | 0 | |
| | Total | 385 | 100.0 | |
| Mode of disposal | | | | |
| | Thrown in an open dump | 25 | 6.5 | |
| | Thrown in a dustbin at home | 318 | 82.6 | |
| | Burnt | 31 | 8 | |
| | Flushed down the toilet | 11 | 2.9 | |
| | Total | 385 | 100.0 | |
| Manner of disposal | | | | |
| | Exposed (not wrapped) | 48 | 12.5 | |
| | Unexposed (wrapped) | 337 | 87.5 | |
| | Both | 0 | 0 | |
| | Total | 385 | 100.0 | |
| Menstrual Hygiene | | | | |
| Hand washing and changing of absorbent material (AM) | | | | |
| | Before changing AM | 05 | 1.3 | |
| | After changing AM | 308 | 80.0 | |
| | Before and after changing the AM | 72 | 18.7 | |
| | Don't wash | 0 | 0 | |
| | Total | 385 | 100.0 | |
| Frequency of washing genitalia during menstruation | | | | |
| | Once | 27 | 7.0 | |
| | Twice | 152 | 39.5 | |
| | More than twice | 202 | 52.5 | |
| | Avoid washing | 04 | 1.0 | |
| | Total | 385 | 100.0 | |
| Frequency of changing underwear during menstruation | | | | |
| | Once | 113 | 29.4 | |
| | Twice | 157 | 40.8 | |

| | | | | |
|---|-------------------|-----------------|--------------|--------------|
| | | More than twice | 106 | 27.5 |
| | | Doesn't change | 09 | 2.3 |
| | | Total | 385 | 100.0 |
| Frequency of taking baths during one cycle of menstruation | Once | 128 | 33.2 | |
| | Twice | 135 | 35.1 | |
| | More than twice | 56 | 14.5 | |
| | Avoid taking bath | 66 | 17.1 | |
| | Total | 385 | 100.0 | |

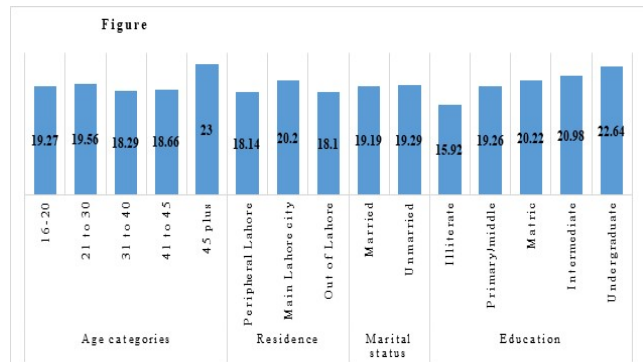


Fig 2. Menstrual Hygiene Practices Mean Scores according to Demographics

Only 86/385 (22.34 %) cloth users were from peripheral Lahore (Figure 1). Only 67/385 (17.40 %) using cloth were illiterate while 59/385(15.32 %) & 31/385(8.05%) were of primary or middle & matric Level educated respectively. Surprisingly 12/60(20%) of intermediate level education were using cloth as absorbent during menstruation, out of which 8/12 (66.67%) were from peripheral Lahore and the majority 7/8 (87.5%) were of 21 to 30 years of Age group. The mean score for menstrual hygiene practices remained at 19.21 with a minimum to a maximum of 9.50 achieved by only 0.3% and a score of 24 achieved by only 4.4%. Although a Significant relationship was found between Age, residence, education, marital status, and Menstrual Hygiene practices only 18.4 % achieved 23 scores followed by 15.3%, 8.1%, 6.2%, and 5.2% achieving 22,21,17 & 20 respectively. Only 59.5% achieved exclusive use of hygienic methods during menstruation scoring 19 or above out of 24 points. Out of 47.53% females from peripheral & out of Lahore 43.169 % achieved a 19 or above score indicating exclusive use of hygienic methods during menstruation.

Discussion

The mean score for menstrual hygiene practices remained at 19.21 with a minimum to a maximum of 9.50 achieved by only 0.3% and a score of 24 achieved by only 4.4%. Although a significant relationship was found between ages, place of residence, education, marital status, and menstrual hygiene practices only 18.4 % achieved 23 scores followed by 15.3 %, 8.1%, 6.2 %, and 5.2% achieving 23,22,21,17 & 20 respectively. Out of 47.53% females from peripheral & out of Lahore 43.169 % achieved a 19 or above score indicating exclusive use of hygienic methods during menstruation. Comparative to a study conducted in 2022 in rural India 42% of women reported exclusive use of hygienic methods during menstruation¹⁶. While another study published in August 2022 from Pakistan reported only 25% of women in rural Pakistan followed proper menstrual hygiene practices¹⁷. The current findings have shown improvement in proper menstrual hygiene practices compared to similar populations of our country and have crossed the findings of neighboring country statistics. Schoolgirls in Ethiopia and Malawi mainly used homemade pads or cloth. Urban Indian schoolgirls mostly used sanitary pads while a very few number of girls in Zimbabwe, India, and Uganda used tampons¹⁸. Another study has shown that during menstruation cloths have been used as absorbent by adolescent girls as they are less expensive and less polluting, but pads have progressively replaced them, especially in urban areas. Commercial pads were preferred but their cost prohibits widespread usage, particularly in rural regions. The majority use sanitary pads, bathe every day, and cleanse their genitalia with soap and water¹⁹. A Study conducted amongst 25305 adolescents and young women 15-23 years of age living in rural Pakistan reported old clothes being used by 61.9% of participants¹⁷. Another study from Pakistan has shown that due to a lack of awareness and resources women mostly resort to using washable cloth pads especially in rural areas given the unavailability of sanitary pads in those areas²⁰, comparatively, the current findings of 53.5% of using Sanitary pads and 47.53% using cloth have

shown improvement in the selection of absorbent material. According to a research conducted in India 36% of the study population belonged to the 21-30 year age group, 75% were married, 43.3% had primary education and 54.3% belonged to the lower middle class. The majority of women 51.8% used cloth during menstruation; about 45.7% used the same cloth by washing and reusing every month²¹. In another study conducted amongst females visiting the Gynecologic and Obstetrics Outpatient Department (OPD), Civil Hospital Karachi, and Dow University Hospital Ojha, 176 were from the general population with a mean age of 29.89 ± 9.17 with the age range being 14-50 years. Most of the females were uneducated and 77.8% avoided bathing during menstruation contrary to current findings which have shown only 20.8% were illiterate, and only 17.1 % avoided baths during menstruation. The most common product used by women at the time of menstruation was sanitary pads (52.8%) followed by cloths (30.21%) compared to current findings with the highest use of Sanitary pads (53.5%), and then clothes (43.9%), and tampons (2.6%) respectively. Amongst those using cloth, 58.6% were found to be using the fabric torn from an old, worn-out shirt contrary to current findings in which only 27.53% were using spare cloth. The majority disposed of the menstrual products by throwing them in the waste contrary to current findings where 82.6% were disposing of it properly¹⁰. Surprisingly 12/60 (20%) of intermediate level education were using cloth as absorbent during menstruation, out of which 8/12 (66.67%) were from peripheral Lahore and the majority 7/8 (87.5%) were of 21 to 30 years of Age group. These findings suggest that place of living is creating more impact than education most probably due to non-availability of other absorbents or financial constraints amongst educated females and lack of awareness among illiterate. According to report's study in Pakistan, the most women avoid taking baths during their periods with the fear of developing infertility⁹ which is contrary to current study findings which show majority take a bath during menstruation and the majority were washing genitalia during menstruation and change underwear during one menstrual cycle might

be due to specified population reporting to a tertiary care hospital.

Conclusion

A significant relation was found between the area of residence, education, and menstrual hygiene practices. The menstrual hygiene scores improved with the increase in the educational level. Residents of Lahore's main city had better menstrual hygiene scores as compared to the residents of peripheral Lahore and other cities. Hence the studies showed that the educational level and residence do affect the menstrual hygiene practices among females visiting a tertiary care hospital in Lahore. However, a small portion of females with an intermediate level of education were found to be using cloth as an absorbing material, but all of them, except one, were from peripheral Lahore reflecting that place of living has more impact on menstrual hygiene practices than education most probably due to non-availability of other absorbents or financial constraints.

Conflict of Interest: None

Funding Source: None

Acknowledgments: We would like to express our heartfelt gratitude to all those who contributed to the completion of this manuscript.

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