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Original Research Article

The Assessment of Awareness and Practices About Menstrual Hygiene Among College Students

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Abstract: *Menstrual hygiene management is an important component of women's reproductive health. In many developing countries, including Pakistan, cultural taboos, limited education, and inadequate institutional facilities may influence awareness and hygienic practices among young females.* ***Objective:*** *To assess the level of awareness and practices regarding menstrual hygiene among college students.* ***Methods:*** *A descriptive cross-sectional study was conducted at KIPS College, Kasur, Pakistan, from January 2025 to June 2025. A total of 171 female intermediate-level students were recruited using convenience sampling. Data were collected using a structured questionnaire that included demographic characteristics, menstrual hygiene awareness, and menstrual hygiene practices. Awareness was measured using a 15-item Likert scale, while practices were evaluated through 12 practice-related items. Data were analysed using SPSS, and descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated.* ***Results:*** *Among 171 participants, most students were aged 15–17 years (92.4%). Overall, 55.6% of students demonstrated moderate awareness of menstrual hygiene, while 21.6% showed high awareness. Most participants were aware of menstrual products (74.2%) and the importance of regularly changing them (92.4%). Regarding hygiene practices, 87.1% reported always using hygienic absorbents, and 86.5% used water and soap for genital cleaning during menstruation. However, only 16.4% reported taking a daily bath during menstruation, and only 39.8% indicated that their college consistently provided adequate menstrual hygiene facilities.* ***Conclusion:*** *The study indicates that college students possess moderate awareness and generally satisfactory menstrual hygiene practices; however, gaps remain in certain hygienic behaviors and institutional support. Strengthening menstrual health education and improving sanitation facilities in educational institutions may further enhance safe menstrual hygiene practices among young females.*

Keywords: Menstrual hygiene, menstrual hygiene management, awareness, practices, college students

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Introduction

Menstruation is a fundamental physiological process that marks the onset of reproductive maturity in females; however, it remains shrouded in cultural taboos, misconceptions, and inadequate health education across much of the developing world (1,2). Menstrual hygiene constitutes a critical public health concern that negatively affects the health, dignity, and empowerment of women and girls of reproductive age (2,12). Menstrual Hygiene Management (MHM) encompasses the use of clean absorbent materials, access to water and soap, and appropriate disposal of used materials — all of which are essential prerequisites for women's reproductive health (3–5).

Despite growing global awareness, college-going women in low- and middle-income countries (LMICs) continue to demonstrate significant knowledge gaps, misconceptions, and suboptimal hygiene practices related to menstruation (6,7). Poor menstrual hygiene has been directly linked to reproductive tract infections, urinary tract infections, pelvic inflammatory disease, and diminished academic performance (8–10). Studies conducted among university students have revealed persistent myths, dietary malpractices, and inadequate understanding of menstrual physiology, underscoring the need for targeted educational interventions (6,11).

Pakistan presents a particularly compelling case for investigating menstrual hygiene awareness among college students. Sexual and reproductive health issues are traditionally taboo in Pakistani society, and even among women, open discussions about menstruation are rare (1,12). A study conducted in Quetta found that 77.7% of adolescent females had never received any school-based menstrual education, and nearly 40% missed school due to menstruation-related issues (8). Similarly, research from Gilgit revealed that more than half of the participants demonstrated poor knowledge, negative attitudes, and inadequate practices regarding menstrual hygiene (2). Period poverty, cultural stigma, and the absence of menstrual health content in Pakistan's educational curriculum further compound these challenges (12,13). Given that only 48.6% of females in one Pakistani study demonstrated adequate menstrual knowledge (1), and that working and urban women were significantly more likely to possess adequate knowledge (1), assessing awareness among college students — a relatively educated cohort — is both timely and essential for informing evidence-based interventions in Pakistan.

Methodology

This study employed a descriptive cross-sectional design to assess awareness and practices related to menstrual hygiene among college students. The study was conducted at KIPS College, Kasur, Pakistan. Data collection was carried out over approximately six months during the academic year, from January 2025 to June 2025. The target population comprised female college students enrolled at the intermediate level. The sample size of 171 was calculated using Solvin's formula. Convenience sampling was used to recruit eligible students willing to participate in the study.

Data were collected using a structured questionnaire comprising three sections: demographic characteristics, awareness of menstrual hygiene, and menstrual hygiene practices. The awareness section included 15 items measured on a five-point Likert scale, ranging from strongly disagree to agree strongly. The total awareness score ranged from 0 to 75 and was categorized as poor awareness (<25), moderate awareness (25–50), and good awareness (>50). The practice section consisted of 12 items measured using a four-point Likert scale ranging from never to always. The total practice score ranged from 0 to 48 and was categorized as poor

practice (<28), moderate practice (29–37), and good practice (38–48). The questionnaire was adapted from previously published studies assessing menstrual hygiene knowledge and practices.

Data collection was performed after obtaining institutional permission from the administration of KIPS College. Participants were informed of the purpose of the study, the voluntary nature of their participation, and the confidentiality of their responses before completing the questionnaire. Ethical principles were followed in accordance with the guidelines of the ethical committee of Ittefaq College of Nursing.

Data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated to summarize demographic characteristics, awareness levels, and hygiene practices among participants. Reliability analysis was performed using Cronbach's alpha to evaluate the internal consistency of the awareness and practice scales. Validity of the measurement scale was assessed using the Kaiser–Meyer–Olkin (KMO) test and Bartlett's test of sphericity. Normality of the data distribution was evaluated using the Kolmogorov–Smirnov test. A significance level of $p < 0.05$ was considered statistically significant.

Results

The study included 171 female college students. Most respondents were aged 15–17 years (92.4%), while 7.6% were aged 18–20 years. All participants were enrolled in intermediate education, and all reported belonging to the middle-class socioeconomic group, indicating a relatively homogeneous study population (Table 1).

Table 1. Demographic characteristics of participants (n = 171)

Variable	Category	Frequency	Percentage
Age	15–17 years	158	92.4
	18–20 years	13	7.6
Education	Intermediate	171	100
Socioeconomic status	Middle class	171	100

Awareness of menstrual hygiene concepts among participants is summarized in Table 2. A majority of students reported good awareness regarding menstrual products and hygienic practices. Approximately 74.2% were aware of menstrual products, 92.4% understood the importance of regularly changing menstrual products, and 86.0% knew the correct disposal method. Awareness of menstrual health symptoms and associated risks was comparatively lower.

Table 2. Awareness regarding menstrual hygiene among participants

Awareness Statement	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
Awareness of menstrual hygiene products	1 (0.6)	16 (9.4)	27 (15.8)	71 (41.5)	56 (32.7)
Importance of changing products regularly	–	3 (1.8)	10 (5.8)	78 (45.6)	80 (46.8)
Knowledge of correct disposal	1 (0.6)	4 (2.3)	19 (11.1)	48 (28.1)	99 (57.9)
Awareness of health risks	12 (7.0)	11 (6.4)	30 (17.5)	69 (40.4)	49 (28.7)
Awareness of menstrual health symptoms	15 (8.8)	13 (7.6)	40 (23.4)	63 (36.8)	40 (23.4)
Awareness of the need for education programs	9 (5.3)	7 (4.1)	11 (6.4)	52 (30.4)	92 (53.8)
Need for awareness campaigns	3 (1.8)	4 (2.3)	19 (11.1)	50 (29.2)	95 (55.6)

Personal menstrual hygiene practices are summarized in Table 3. Most participants reported appropriate hygienic practices. The majority always used hygienic absorbents (87.1%), changed absorbents every 4–6 hours (66.7%), and maintained genital hygiene during menstruation (80.1%).

Table 3. Personal menstrual hygiene practices

Practice	Never n (%)	Sometimes n (%)	Often n (%)	Always n (%)
Use of hygienic absorbents	1 (0.6)	3 (1.8)	15 (8.8)	149 (87.1)
Changing absorbents every 4–6 hours	1 (0.6)	14 (8.2)	40 (23.4)	114 (66.7)
Carrying spare menstrual products	48 (28.1)	27 (15.8)	44 (25.7)	52 (30.4)
Washing the genital area during menstruation	4 (2.3)	7 (4.1)	23 (13.5)	137 (80.1)
Using water and soap for cleaning	4 (2.3)	4 (2.3)	15 (8.8)	148 (86.5)
Taking a daily bath during menstruation	20 (11.7)	78 (45.6)	45 (26.3)	28 (16.4)

Practices related to menstrual product disposal and institutional support are summarized in Table 4. Proper disposal behavior was common, as 89.5% always disposed of absorbents in dustbins, and 88.3% wrapped used absorbents before disposal. However, only 39.8% reported that their college consistently provided adequate menstrual hygiene facilities.

Table 4. Disposal practices and institutional support

Practice	Never n (%)	Sometimes n (%)	Often n (%)	Always n (%)
Disposal of absorbents in a dustbin	3 (1.8)	2 (1.2)	13 (7.6)	153 (89.5)
Wrapping absorbents before disposal	4 (2.3)	4 (2.3)	12 (7.0)	151 (88.3)
Avoiding unsafe disposal methods	5 (2.9)	5 (2.9)	25 (14.6)	136 (79.5)

Avoid missing college due to menstruation	17 (9.9)	27 (15.8)	43 (25.1)	84 (49.1)
Adequate menstrual hygiene facilities in college	52 (30.4)	17 (9.9)	34 (19.9)	68 (39.8)

Overall levels of awareness and practices are summarized in Table 5. Most participants demonstrated moderate awareness (55.6%) and moderate practice levels (48.5%), although a considerable proportion reported high levels of hygienic practices.

Table 5. Overall awareness and practice levels

Variable	Category	Frequency	Percentage
Awareness	Low	39	22.8
	Average	95	55.6
	High	37	21.6
Practice	Low	22	12.9
	Average	83	48.5
	High	66	38.6

Discussion

The present study found that 55.6% of participants demonstrated moderate awareness regarding menstrual hygiene, with 74.2% aware of menstrual products and 92.4% understanding the importance of regularly changing them. These findings are comparatively more favorable than those reported in the Pakistani context. Shah et al. found that more than half of girls in rural Gilgit demonstrated poor knowledge and negative attitudes toward menstrual hygiene, attributing this to pervasive cultural and social taboos (2). Similarly, Mansoor et al. reported that only 48.6% of Pakistani females possessed adequate menstrual knowledge, with urban residence and employment status being significant predictors (1). The relatively higher awareness observed in the present study may be attributable to the urban, college-going nature of the sample population.

Regarding practices, 87.1% of participants always used hygienic absorbents, and 86.5% used water and soap for genital cleaning — findings that compare favorably with prior literature. Michael et al. reported that 80.5% of adolescent females in Quetta cleaned their genitalia with water during menstruation, though 58.2% avoided bathing entirely (8). The present study similarly identified bathing as a problematic practice, with only 16.4% always taking a daily bath during menstruation, consistent with myths documented by Bukhari et al., wherein 69% of Islamabad girls avoided bathing on elders' advice (4). Mansoor et al. further corroborated that Pakistani university girls exhibited satisfactory hygienic practices but persistent dietary malpractices and misconceptions (6).

A notable finding was that only 39.8% of participants reported consistent institutional support for menstrual hygiene. Proff et al. similarly concluded that school leaders in Hyderabad, Pakistan, perceived MHM facilities as significantly inadequate in terms of resources and policies (12). Aziz et al. further confirmed that approximately two-thirds of Pakistani school girls considered institutional toilet facilities inadequate (14), underscoring a systemic gap requiring urgent policy intervention.

This study was conducted at a single college using convenience sampling, which may limit the generalizability of the findings to other populations. In addition, the data were based on self-reported responses, which may be affected by recall bias or social desirability bias.

Conclusion

Most college students demonstrated moderate awareness and generally good menstrual hygiene practices. However, gaps remain in some hygienic behaviors and in the availability of menstrual hygiene facilities within educational institutions. Improving menstrual health education and providing adequate sanitation facilities in colleges may help promote healthier menstrual hygiene practices among young women.

Declarations

Data Availability statement
All data generated or analysed during the study are included in the manuscript.

Ethics approval and consent to participate
Approved by the department concerned. (IRBEC-ICON-3434-2)

Consent for publication
Approved

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Conflict of interest

The authors declared no conflict of interest.

Author Contribution

LA (BSN Post RN Students)
Manuscript drafting, Study Design,
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Review of Literature, Data entry, Data analysis, and drafting articles.
LB (BSN Post RN Students)
Conception of Study, Development of Research Methodology Design
AB & SI (BSN Post RN Students)
Study Design, manuscript review, and critical input.
GA (Supervisor),
Manuscript drafting, Study Design,
IY (Principal)
Conception of Study, Development of Research Methodology Design

All authors reviewed the results and approved the final version of the manuscript. They are also accountable for the study's integrity.

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