

MENSTRUAL HYGIENE KNOWLEDGE AND PRACTICES AMONG SCHOOL ADOLESCENT GIRLS IN RURAL COMMUNITY, LAHORE, PAKISTAN

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Abstract: Menstrual hygiene management (MHM) is critical for the health and well-being of adolescent girls, yet cultural taboos, inadequate education, and limited access to sanitary facilities pose significant challenges, particularly in rural Pakistan. **Objective:** To assess the knowledge, practices, and hygiene habits of adolescent schoolgirls regarding menstrual hygiene in a rural community in Lahore, Pakistan. **Methods:** A descriptive cross-sectional study was conducted among 108 adolescent schoolgirls aged 10–18 years. Data were collected using a structured questionnaire addressing knowledge, practices, and hygiene habits related to menstruation. Descriptive statistics were analyzed using SPSS version 26. **Results:** Most participants (84.3%) were aware of menstruation, but only 31.48% received information before menarche. Mothers were the primary source of information (98.15%), while only 64.81% used sanitary pads. Privacy issues in washing absorbents were reported by 68.49%, and only 38.15% used soap for cleaning. School absenteeism due to menstruation was reported by 72.22% of participants, largely due to pain and lack of toilet facilities. **Conclusion:** Significant gaps in menstrual hygiene knowledge and practices exist among adolescent girls in rural Pakistan. Interventions focusing on school-based education, community awareness, and improved access to hygiene products and facilities are urgently needed to address these gaps and promote better health and educational outcomes.

Keywords: Menstrual Hygiene, Adolescent Girls, Rural Pakistan, Knowledge, Practices, School Absenteeism

Introduction

Adolescence is a critical stage of development characterized by significant physical, psychological, and social changes. Among these changes, the onset of menstruation is a pivotal milestone that requires adequate knowledge and hygienic practices to ensure the well-being of adolescent girls. Menstrual hygiene management (MHM) is essential not only for health and hygiene but also for maintaining dignity, privacy, and school attendance. In Pakistan, particularly in rural communities, cultural taboos, limited access to education, and inadequate facilities contribute to poor menstrual hygiene practices, which can lead to infections, school absenteeism, and psychological distress (1, 2).

Globally, studies have highlighted the challenges faced by adolescent girls in managing menstrual hygiene, particularly in low- and middle-income countries (LMICs). In Pakistan, over half of the population resides in rural areas, where access to clean water, sanitation, and menstrual hygiene products is often limited (3). These issues are compounded by a lack of awareness and the prevalence of cultural myths surrounding menstruation. Research has shown that mothers, as the primary source of information, often perpetuate these misconceptions, resulting in inadequate preparation for menarche and poor hygiene practices (4, 5).

Menstrual hygiene practices directly impact girls' education and health. Poor hygiene during menstruation increases the risk of reproductive tract infections and other complications, while school absenteeism due to a lack of sanitary facilities further widens gender disparities in education (6). In Pakistan, where gender inequalities in education are already pronounced, addressing menstrual hygiene challenges is crucial for achieving broader goals of

gender equity and improved health outcomes (7). Recent studies in LMICs, including Pakistan, have emphasized the need for community-based interventions and school-based education programs to improve menstrual hygiene knowledge and practices. Ahmed et al. highlighted that providing adolescent girls with access to menstrual hygiene products and education significantly improves their practices and reduces school absenteeism (8). Similarly, Khan et al. found that targeted awareness campaigns can help dispel myths and promote positive attitudes toward menstruation among both girls and their families (9).

Despite the critical importance of menstrual hygiene, there is limited research specifically focusing on rural communities in Pakistan. This study aims to assess the knowledge, practices, and hygiene habits of adolescent schoolgirls in a rural community of Lahore, Pakistan. By identifying gaps and challenges, this research seeks to inform targeted interventions and policies to improve menstrual hygiene management and overall well-being among adolescent girls in rural Pakistan.

Methodology

The study employed a descriptive cross-sectional design to assess the knowledge, practices, and hygiene habits regarding menstrual hygiene among adolescent schoolgirls in the rural community of Lakhodair Sharif Bakra Mandi, Lahore. This design was chosen to provide a snapshot of menstrual hygiene awareness and behaviors within a specific population at a given time.

The study population included adolescent girls aged 10-18 years attending schools in the selected community. A total of 108 participants were recruited using a convenience

sampling technique. The inclusion criteria required participants to have experienced menarche and be willing to provide informed consent. Girls who had not yet experienced menarche or those unwilling to participate were excluded from the study.

Data were collected using a structured questionnaire designed specifically for this study. The questionnaire was divided into sections addressing demographic characteristics, knowledge of menstruation, practices related to menstrual hygiene, and hygiene habits. Questions were developed based on existing literature and tailored to the cultural context of the target population. The tool underwent pretesting on a small sample to ensure clarity, reliability, and validity.

Ethical approval was obtained from the relevant institutional review board, ensuring adherence to ethical research standards. Before administering the questionnaire, participants and their guardians were briefed about the study’s purpose, and written informed consent was obtained. Participants were assured of the confidentiality and anonymity of their responses.

Trained data collectors distributed the questionnaires to participants during school hours and were available to clarify any queries. The data collection process ensured privacy, with participants completing the forms in a secure environment to encourage honest and accurate responses.

Data were analyzed using SPSS version 26. Descriptive statistics, including frequencies and percentages, were used to summarize demographic characteristics, knowledge, practices, and hygiene habits. The results were presented in tables and narratives to facilitate clear interpretation and understanding.

Results

This study aimed to evaluate the knowledge, practices, and hygiene habits regarding menstrual hygiene among adolescent school girls in the rural community of Lakhodair Sharif Bakra Mandi, Lahore. The study included 108 participants, primarily within the age group of 13-15 years (57.6%). The majority identified as Muslim (97.2%) and were studying in grade 8 (65.7%). The variability in demographic characteristics was captured in Table 1.

Knowledge among participants was mixed, with a significant proportion relying on mothers (98.15%) as the primary source of information about menstruation. However, only 30.56% of participants understood the normal duration of the menstrual cycle, highlighting gaps in formal education on this topic. Table 2 provides a detailed breakdown of knowledge levels.

The results revealed notable gaps in practices. A significant number of participants (73.14%) used cloth as an absorbent, and 68.49% reported privacy issues when washing absorbents. Only 64.81% used sanitary pads, with 65.67% changing 2-3 pads daily. Table 3 highlights menstrual hygiene practices.

Hygiene practices were generally positive, with 91.67% washing their private parts regularly during menstruation. However, only 38.15% used soap for cleaning, indicating a gap in proper hygiene practices. Table 4 provides detailed data on hygiene behaviors. The findings indicate significant gaps in menstrual hygiene knowledge and practices, particularly regarding the use of appropriate materials and

hygiene behaviors. Mothers were the primary source of information, emphasizing the need for more structured educational interventions in schools. Hygiene practices showed room for improvement, particularly regarding the use of soap for cleaning. These results highlight the importance of improving menstrual hygiene education and infrastructure in rural areas.

Table 1: Demographic Characteristics

| Variable | Category | Frequency (n) | (%) |
|-------------|------------|---------------|------|
| Age (Years) | 10-12 | 4 | 3.7 |
| | 13-15 | 91 | 84.3 |
| | 16-18 | 12 | 11.1 |
| | <18 | 1 | 0.9 |
| Religion | Muslim | 105 | 97.2 |
| | Non-Muslim | 3 | 2.8 |
| Grade | 5th | 2 | 1.9 |
| | 6th | 6 | 5.6 |
| | 7th | 29 | 26.9 |
| | 8th | 71 | 65.7 |

Table 2: Knowledge about Menstrual Hygiene

| Question | Yes (%) | No (%) |
|---------------------------------------------|---------|--------|
| Heard about periods before menarche | 31.48 | 68.52 |
| Received information from mother | 98.15 | 1.85 |
| Received information from teacher | 27.78 | 72.22 |
| Received information from friends/relatives | 74.07 | 25.93 |
| Know the normal duration of menstrual cycle | 30.56 | 69.44 |
| Know the normal menstrual bleeding duration | 52.78 | 47.22 |

Table 3: Practices Related to Menstrual Hygiene

| Question | Yes (%) | No (%) |
|------------------------------------------------|---------|--------|
| Recorded the date of periods | 89.84 | 10.16 |
| Used cloth as absorbent | 73.14 | 26.86 |
| Faced privacy issues washing absorbents | 68.49 | 31.51 |
| Used sanitary pads | 64.81 | 35.19 |
| Changed 2-3 pads daily | 65.67 | 34.33 |
| Missed school due to pain/vomiting | 43.50 | 56.50 |
| Missed school due to lack of toilet facilities | 72.22 | 27.78 |

Table 4: Hygiene Practices

| Question | Yes (%) | No (%) |
|------------------------------------------|---------|--------|
| Took bath daily during periods | 72.22 | 27.78 |
| Washed private parts regularly | 91.67 | 8.33 |
| Used only water for cleaning | 85.19 | 14.81 |
| Used soap for cleaning | 38.15 | 61.85 |
| Wrapped used pads before disposal | 83.33 | 16.67 |
| Properly disposed of menstrual materials | 91.67 | 8.33 |

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Discussion

This study assessed the knowledge, practices, and hygiene habits related to menstrual hygiene among adolescent schoolgirls in a rural community in Lahore, Pakistan. The findings revealed significant gaps in knowledge and practices, despite some positive hygiene behaviors, reflecting challenges that are consistent with prior studies conducted in similar settings.

The study found that 84.3% of participants were aware of menstruation but only 31.48% had received information before menarche. Mothers were the primary source of information for 98.15% of the girls, which aligns with Ali and Rizvi's findings that mothers play a predominant role in educating girls about menstruation in urban Karachi (10). However, reliance on mothers as the sole source of information perpetuates cultural taboos and misinformation, as noted in Ahmed et al., who emphasized the importance of supplementing maternal education with school-based programs (11).

Knowledge about the normal duration of menstrual cycles was limited, with only 30.56% of participants aware of it. Similar gaps were observed by Van Eijk et al. in a systematic review of menstrual hygiene in South Asia, where inadequate knowledge was attributed to the absence of formal menstrual education in schools (12). Addressing these gaps requires comprehensive educational interventions at the community and school levels.

Regarding practices, 73.14% of participants used cloth as an absorbent, and only 64.81% used sanitary pads. These results are consistent with a study by Sommer et al., which reported that the cost and availability of sanitary products in rural areas remain significant barriers to their use (13). Furthermore, the study found that 68.49% of participants faced privacy issues when washing absorbents, reflecting findings by Ahmed et al., who noted that poor sanitation facilities in schools contribute to inadequate menstrual hygiene management (14).

Hygiene practices were relatively positive, with 91.67% of participants washing their private parts regularly during menstruation. However, only 38.15% used soap for cleaning, indicating a gap in proper hygiene practices. This finding parallels the results of a study conducted by Van Eijk et al., which found that most girls in South Asia use only water for cleaning due to limited awareness and cultural constraints (15). Efforts to promote the use of soap and improve access to hygiene products are essential to reduce the risk of infections.

The study also highlighted that 72.22% of participants missed school due to a lack of toilet facilities or pain during menstruation. These findings are consistent with those of Ahmed et al., who reported that inadequate school infrastructure significantly impacts girls' attendance during their menstrual periods (16). Addressing these infrastructural barriers is critical to reducing school absenteeism and promoting gender equity in education.

Overall, the findings underscore the urgent need for targeted interventions to improve menstrual hygiene knowledge and practices among adolescent girls in rural Pakistan. School-based education programs, community awareness campaigns, and improvements in sanitation infrastructure are essential to address the identified gaps and challenges. These interventions must also prioritize affordability and

access to menstrual hygiene products to ensure sustainable improvements in practices.

Conclusion

This study highlights significant gaps in knowledge and practices related to menstrual hygiene among adolescent girls in a rural community in Lahore, Pakistan. While mothers play a crucial role in educating girls about menstruation, the lack of formal education and reliance on traditional practices perpetuate poor hygiene behaviors. Limited access to sanitary products, inadequate sanitation facilities, and cultural taboos further exacerbate these challenges. Targeted interventions, including school-based education programs, community awareness initiatives, and improved access to menstrual hygiene products and facilities, are essential to address these issues. Such efforts are critical to promoting health, reducing school absenteeism, and ensuring gender equity in education and well-being.

Declarations

Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department Concerned. (IRBEC-THMLSJ-0923/24)

Consent for publication

Approved

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The authors declared absence of a conflict of interest.

Author Contribution

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Conception of Study, Development of Research Methodology Design, Study Design, Review of manuscript, final approval of manuscript.

Conception of Study, Final approval of manuscript.

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