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Menstrual Health and Hygiene Practices Among Adolescent School Girls in Nowshera: Insights and Impacts

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Abstract

Menstrual Health Management (MHM) is an important aspect of adolescent health and gender equality that is underserved. Cultural taboos and socioeconomic barriers frequently jeopardize the health and education of young girls in Pakistan. The practices of menstrual hygiene, awareness levels, and socioeconomic obstacles faced by adolescent schoolgirls in District Nowshera, Khyber Pakhtunkhwa, are the subjects of this study. In five schools in Nowshera, 200 adolescent girls between the ages of (14± 2, grades 8-10) participated in a quantitative descriptive study. A 15-item, structured, and translated into Urdu questionnaire was used to gather information about awareness, product use, and the impact of menstruation on school attendance. Both parental consent and ethical approval were obtained. A notable lack of preparedness was observed, as 22% of participants said that they had no confidence in their knowledge of menstruation ($P < 0.001$). Economic issues were also observed, as 68% of participants admitted to borrowing sanitary pads from others, which is a risky practice in terms of hygiene, and 58% used cloth pads. Sixty percent of participants from this group were absent from their classes due to their menstrual cycle, which was a remarkable number of school absenteeism ($P < 0.001$). Although 87% relied on their mothers, only 7% were "very satisfied" with education from schools. Moreover, 68.5 percent of misconceptions were due to cultural issues rather than medical facts, such as taking a bath or using cold water.

The research emphasizes a critical MHM situation that exists in Nowshera, characterized by institutional failure and "period poverty". Specific policy interventions are necessary, including the integration of MHM into the national school curriculum and the provision of government subsidies for sanitary products to address the 60% absenteeism rate and the risky sharing of menstrual resource. In order to ensure that adolescent girls are able to manage their health in a dignified manner and continue with education, the recommendations suggest that MHM should be incorporated into the curriculum, sanitary items should be subsidized, and "period-friendly" school infrastructures should be developed.

Keywords Menstrual Health Management, Adolescent Girls, Period Poverty, School Absenteeism, Pakistan, Hygiene Practices

1. Introduction

Menstrual health and hygiene are of prime importance for the well-being of females, which is linked to other major aspects of female development, such as health, educational achievement, gender empowerment, and access to improved drinking water and sanitation facilities (1,2). Though it is a biological phenomenon, managing menstruation is a major problem worldwide, especially for adolescent girls in countries like Pakistan, where social inhibitions prevent the open discussion of menstruation and access to proper facilities for managing it. The beginning of menstruation is a major milestone in the life of a female, which is of prime

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importance to her health and well-being (3). Proper management of menstruation is necessary to avoid health complications such as urinary tract infection, nephritis, and other reproductive problems that may arise because of poor sanitary habits during menstruation (4). In addition, social inhibitions regarding menstruation cause mental distress and affect the educational achievement of girls (5,6).

Puberty, accompanied by menstruation, is an important period of growth, development, and maturation from both physical, psychological, and mental viewpoints (7). However, in many underdeveloped countries, because of misinformation and deeply ingrained cultural taboo, young girls do not receive adequate education on menstruation, which often creates anxiety and restricts access to hygienic facilities (8,9). It is vital to provide menstruating women with access to adequate resources in managing their menstruation to protect their health, dignity, and human rights (10). These resources include hygienic facilities such as sanitary pads and cups, as well as education on their usage. Inadequate facilities in schools, such as poor sanitation, are still an impediment to good hygienic practices among menstruating females (11).

This can be achieved through effective education programs and policies at local, national, and international levels (12). Schools can help in spreading awareness about menstruation in an accurate manner, thus allowing girls to manage their periods in a dignified manner. Good MHM not only promotes gender equality among girls but also improves their health and education in general (13, 2).

In developing countries like Pakistan, cultural and socioeconomic factors add to the difficulties in managing menstruation. Girls in such countries often face embarrassment and discrimination during their periods, which may affect their self-confidence and education (13, 4). The lack of clean water and hygienic facilities in schools further worsens the situation, forcing girls to either face such difficulties during their periods or stay out of school (9).

Research suggests that promoting good MHM can greatly reduce school absenteeism and improve academic performance among young girls (7, 14). By empowering young girls through education and resources, it is possible to help them manage their periods in a confident manner, thus breaking the cycle of shame and inequality (6, 15).

In conclusion, it can be said that menstrual health and hygiene are not only important for the health of young girls, but it is also an important human right. The removal of barriers in managing menstruation among young girls in an effective manner is thus necessary to create an inclusive and equitable society where every individual can contribute to the development of their country in an effective manner (3, 12).

2. Materials and Method

The current study was undertaken using a quantitative descriptive design with the aim of exploring the menstrual wellness and hygiene practices of adolescent school-going girls in Nowshera District of Khyber Pakhtunkhwa Province of Pakistan. For the purpose of the current study, five schools were selected, namely the Government Girls High School Nowshera Cantt,

Al Rashid Model School Nowshera, The Pearl School and College Nowshera, Peshawar Model School Nowshera, and the Government Girls High School Nowshera Kalan. Schools were selected to represent different socioeconomic zones within Nowshera. A total of 200 adolescent school-going girls were selected for the current study, with an age range of 14 ± 2 years and studying in grades 8, 9, and 10, including pre- and post-menarcheal women. A total of 250 students were selected using the convenience sampling technique; out of these students, 200 students completed the survey instrument. The sample size was determined using the Raosoft online sample size calculator, which indicated that a minimum of 200 participants was required to achieve a 5% margin of error and a 95% confidence level, ensuring the study's findings are statistically representative of the adolescent school-going population in Nowshera.

Before conducting the current study, the researcher took approval from the Ethical Review Board (ERB) of Nowshera Medical College. In addition, consent was taken from the parents of the students regarding the current study. Permission was also taken from the District Education Officer Nowshera, the Deputy Commissioner Nowshera, and the school principals for conducting the current study in their respective schools. A structured questionnaire was used by the researcher for collecting data regarding the awareness and practices of the students regarding menstrual hygiene and other factors associated with it. The structured questionnaire was validated through a pilot study

conducted on 30 students to ensure clarity and relevance. Furthermore, the instrument was reviewed and approved by the supervisor and the Institutional Review Board (IRB) of Nowshera Medical College to ensure content validity and ethical compliance. A total of 15 questions were included in the survey instrument of the current study. In addition, the current study was undertaken in the Urdu language with the aim of increasing the understanding of the students regarding the questions included on the survey instrument. Female researchers also helped the students in understanding each question on the survey instrument, creating a conducive environment for eliciting the responses of the students.

Despite the challenges faced during the current study, the researchers maintained the highest level of ethics and dignity while conducting the current study.

3. Results

The findings of this quantitative study, which had a sample size of 200 female students between the ages of (14 ± 2, grades 8-10), indicate that there are gaps in menstrual health management due to educational and financial deficiencies. The analysis of the data indicates that there is a statistically significant absence of preparedness. Confidence in knowledge was assessed as a self-reported measure of how prepared students felt to manage their cycles. The data showed a significant psychological gap, with 22% (n = 44) of girls reporting no confidence at all in their understanding of menstruation (P < 0.001), primarily due to the dominance of cultural myths over medical facts. Concerning the utilization of menstrual products, a significant majority of 58% (n = 116) used cloth pads compared to 42% (n = 84) who used commercial sanitary pads (P = 0.024) see table 1 below.

Table 1: Menstrual Products used by the Respondents

Menstrual Products	Responses (n)	Percentages
Sanitary pads	84	42%
Menstrual cup	0	0
Tampons	0	0
Cloth pads	116	58%

Moreover, a significant majority of 79% (n = 158) are from middle-class families and claimed to have used cloth pads due to financial constraints. Furthermore, a significant majority of 68% (n = 136) who used cloth pads borrowed the pads from other people, which is significantly related to a lack of resources (P < 0.001), indicating a significant health hazard. Even though a significant majority of 30.5% (n = 61) are changing their pads every 6 hours, there is a statistically significant difference regarding the change frequency between the study participants (P = 0.015), indicating a significant difference regarding the standard of hygiene. See table 2 below.

Table 2: How often the respondents change their menstrual products.

Frequency of changing products	Responses(n)	%
Every 2-3hrs	55	27.5%
4-6hrs	54	27%
More than hrs	61	30.5%
As needed	30	15%

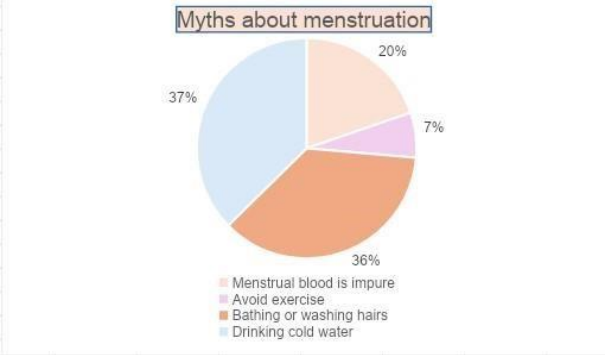

Figure 1: Common myths about menstruation in society

Moreover, a significant majority of 60 percent (n = 120) reported missing classes due to menstruation, indicating a significant correlation between menstrual cycles and classes (P < 0.001). This, in turn, affects their performance in school. Moreover, 25.5% (n=51) of the participants said that menstruation made it hard to do everyday things. When it came to what helped with menstrual symptoms, rest was more effective than medication, with 51.5% of the participants agreeing. There is also a great deal of misinformation when it comes to menstruation. For example, 37% of the participants think that bathing is bad for them, and 36% think that cold water makes menstrual cramps worse. In

both instances, it is cultural taboos, and not medical facts, that account for these myths (P < 0.005). Although 87% (n=174) of the girls rely on their mothers for support, the fact that only 7% of the participants were "very satisfied" with the education they received in school points to another area where there is a great deal of failure, namely, the institutional support systems (P < 0.001).

4. Discussion

This study provides significant insights into the menstrual health and hygiene habits of adolescent girls, which again emphasizes the need to improve education, availability of sanitary products, and hygiene habits among adolescent girls. Moreover, the study revealed that there was a variation in the confidence level of the participants with regard to menstrual education, where only 20.5% of the participants stated that they were very confident about menstrual education, and 22% stated that they lacked confidence (P < 0.001). This is alarming, as previous studies have revealed that inadequate education on menstrual health leads to misconceptions and poor hygiene habits, which puts the health and well-being of adolescent girls in peril (16).One of the most striking results was that most of the participants, due to financial constraints, used cloth pads as sanitary pads, as opposed to commercial sanitary pads, which was evident in 58 percent of the study participants (P = 0.024). The study reveals a deep-rooted state of 'period poverty' in Nowshera, defined as the lack of access to sanitary products, hygiene facilities, and basic education. This is evidenced by the 58% of participants forced to use cloth pads due to economic barriers and the risky practice of 68% of girls who borrow menstrual materials from others (P < 0.001).Financial constraints, despite the fact that 79% of the study participants belonged to the middle class, was found to be one of the most important factors, which is in line with the results that have been observed in countries with middle and low income, where the decision to use sanitary products is influenced by financial constraints (17). Although cloth pads can last for long periods, it is only possible to use them hygienically if one keeps them clean. The rate of infection can be significantly elevated if one borrows pads from friends or relatives, as was evident in 68% of the girls who used cloth pads (P < 0.001). The habits of the group in relation to menstrual hygiene were significantly varied (P = 0.015). Although 30.5% of the girls changed their pads every 6 hours, as recommended, only 27.5% changed pads every 2 or 3 hours, which is the recommended frequency to prevent infection (19). Although most of the girls in the study population changed their pads regularly, deep-rooted misconceptions persist. The study found that 37% of the population believed it was harmful to bath during menstruation, and 36% believed it was because of the cold water. Our study proves that these misconceptions are because of cultural taboos rather than medical facts, as found in 68.5% of cases (P < 0.005), which is in accordance with studies conducted in other parts of South Asia.

Sixty percent of the participants missed classes because of menstruation, which significantly affected their day-to-day life. This shows a strong correlation (P < 0.001) between the menstrual cycle and absenteeism. The high level of absenteeism is a well-known problem, especially in areas where there is poor access to facilities such as proper hygiene (21). Among the participants, 51.5 percent opted to rest to reduce the level of pain during menstruation, which is more effective than medication (36 percent). As found in previous research, the decision to opt for non-medical alternatives is probably because of a lack of knowledge about managing pain and fear of side effects of medication (22). The problems identified are similar to global problems, such as the lack of access to proper toilets and privacy. The fact that 36 percent of the participants did not have a private place to change in hurt their dignity and comfort levels (23). The issue of menstruation is difficult to discuss because of cultural taboos, which is the main cause of stigma (24). Although 87% of girls seek support from their mothers, our results indicate that only 7% of girls are satisfied with education provided at schools (P < 0.001). This implies a major lack of institutional support systems. In addition, 44.7% of respondents saw information as a tool of empowerment. Education is a key tool that can empower adolescent girls to take better care of themselves and make better choices, provided it is accurate and free of stigma. A comprehensive approach, including policy and product interventions, is necessary to tackle these problems. In conclusion, our research underscores the need to address education, cultural, and economic barriers to menstrual health interventions. Girls' school attendance, academic performance, and

quality of life can all be improved by better managing menstrual cycles. Longterm strategies for incorporating menstrual wellness education into school curricula to create more supportive environments should be the focus of future research (25).

5. Conclusion

In the context of adolescent menstrual health, this research points to a critical intersection of economic, cultural, and systemic issues. Based on the research, the prevalence of unsafe sharing of menstrual materials and the 60% attendance rate point to menstruation as a significant barrier to education for adolescent girls. Moreover, the statistically significant level of ignorance and reliance on cultural myths as opposed to medical facts point to a systemic failure of education.

To move forward, a three-pronged, all-encompassing strategy is necessary:

Policy and Infrastructure: Schools must become "period-friendly" institutions, providing access to private sanitation facilities and subsidized materials to break the financial barriers. To empower the 44.7% of students who perceive information as a tool for autonomy, Menstrual Health Management must be incorporated into the formal national curriculum to replace taboos with education about menstruation.

Community Engagement: Since mothers remain the primary source of information, there is a need to engage mothers to break down the cultural taboos that shape notions of hygiene. It is imperative that menstruation is no longer a catalyst for disadvantage, but a part of a young woman's journey to womanhood.

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Data Integrity The authors confirm that the data in this study are accurate and true and were not manipulated or falsified.

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