



RESEARCH PAPER

Exploring Menstrual Hygiene Management in Slums of Pakistan: A Qualitative Study on Knowledge, Behaviors, and Obstacles

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PAPER INFO	ABSTRACT
<p>Received: January 22, 2022</p> <p>Accepted: February 25, 2022</p> <p>Online: March 31, 2022</p> <p>Keywords: Menstrual hygiene, Menstrual Hygiene Management (MHM), Pakistan, Period, Poverty, Slum Women</p> <p>*Corresponding Author: rahat.iscs@pu.edu.pk</p>	<p>This qualitative study investigates difficulties encountered by women living in slums in managing menstrual hygiene. Despite being a natural biological phenomenon, menstruation, and its management poses numerous challenges to this vulnerable group and inversely affect their overall health and well-being. The challenges may include menstrual hygiene-related knowledge gaps, and inadequate or insufficient resources and services. In this qualitative study, 18 women between the ages of 15 and 45 were chosen through purposive sampling from six slums of Lahore. In-depth interviews were conducted regarding their menstrual hygiene practices, knowledge, and difficulties. The findings reveal that obstacles in maintaining menstrual hygiene faced by women who reside in Lahore's slums include poverty, insufficient or incorrect knowledge, and a lack of or inadequate access to clean water, sanitation, and affordable menstrual hygiene products and services. Additionally, cultural practices and social taboos surrounding menstruation also contribute to many unhygienic practices among these women.</p>

Introduction

Menstruation is a natural biological process that every woman experiences in her lifetime. However, in many developing countries, including Pakistan, it is considered taboo, neglected, and shrouded in secrecy (Thapa & Aro, 2021; McHugh, 2020). In underdeveloped nations like Pakistan, poverty and illiteracy rates are high, and access to water, sanitary facilities, and healthcare services is constrained (Jabeen, 2021; Cooper, 2018). As such, the accumulation of these factors exacerbates the issue of menstrual hygiene, especially for individuals who live in slum regions (Michael et. al., 2020; Mumtaz et. al., 2018; Azmat et. al., 2018). Women's health and well-being are at risk due to lack of access to basic menstrual hygiene products, inadequate sanitation, and the social stigma associated with menstruation. Therefore, this article seeks to examine the understanding, usage, and challenges surrounding menstrual hygiene for women living in the slums of Pakistan.

Women in Pakistan face many difficulties as a result of living in slums, which restricts their access to fundamental rights and opportunities. These difficulties could include a lack of access to necessities, poor health, a lack of educational possibilities, and financial instability. In accordance with a 2021 World Bank report, 40% of Pakistan's urban population resides in slums with poor access to electricity, water, and sanitary facilities. Similar to this, a 2021 United Nations Development Programme (UNDP) report from 2021 discovered that only 28% of women in Pakistan's slums have access to adequate sanitation facilities. According to a PIDE (2021) report, women who live in slums are also more prone to experience reproductive health problems like anemia, childbirth complications, and sexually transmitted infections.

Menstruation hygiene management entails having access to clean absorbents, suitable washing facilities, and correct disposal of spent supplies. This also includes using an adequate frequency of change and using soap and water to clean, and having privacy to do so (Hennegan et. al., 2016b). In Pakistan, women's menstrual hygiene practices, particularly those who reside in slums, are suboptimal. However, women in slums frequently lack access to period management products and basic sanitation facilities, which can result in unsanitary behaviors and significant health issues (UNICEF, 2020). Additionally, there are social and cultural taboos linked with menstruation in many countries that may have a negative impact on the health and well-being of women (Thapa & Aro, 2021).

Improving menstrual hygiene management is crucial for promoting the health and well-being of women in low-income communities. Addressing the challenges of access to affordable menstrual hygiene products, clean water, and sanitation facilities, and the social stigma surrounding menstruation can be achieved through community-based education programs and the provision of affordable and sustainable menstrual hygiene products and water and sanitation facilities. The article highlights the issues related to menstrual hygiene management in the slums of Pakistan and emphasizes the importance of addressing these challenges to improve the lives of women and girls, while also contributing to Pakistan's commitment to achieving various Sustainable Development Goals related to health, education, gender equality, and clean water and sanitation.

Literature Review

Numerous studies have explored the challenges of women in low-income communities, including slums, around the world in managing menstruation hygiene. Bello et. al.'s (2019) study in Ghana revealed that the stigma associated with menstruation caused substantial problems for women in these communities and that inexpensive menstrual hygiene products, clean water, and sanitation facilities were not easily accessible. Similarly, a study conducted in India by Thakur and Holambe (2016) found that women in low-income communities lacked knowledge and awareness of menstrual hygiene practices, which had a detrimental effect on their health and well-being.

Hennegan et. al. (2016a) found that the cost and accessibility of menstrual hygiene products, as well as the lack of access to clean water and sanitation facilities, are all obstacles to managing menstruation hygiene in Kenya. Moreover, Joshi et. al.'s (2013) study in Nepal also discovered that a lack of seclusion and inadequate sanitation facilities were the main barriers to effective menstrual hygiene management in poor communities. The use of old clothes or rags by women in these communities forced them to use unhygienic practices that raised their risk of contracting infections and other illnesses.

In Pakistan, Mumtaz et. al. (2018) research findings revealed that only 12% of women in Lahore's slums used sanitary napkins, according to a study while the bulk (88%) depended on materials like old cloth, rags, or paper. Nearly half of the women, according to the study, did not know how to properly dispose of menstrual material. Similarly, research by Azmat et. al. (2018) found that just 14% of women living in Karachi's slums had access to clean water and soap for washing and that 85% of them utilized filthy materials during their periods. Beyond the lack of basic amenities, women in low-income communities confront many other difficulties, such as societal stigma and a lack of knowledge and awareness regarding menstrual hygiene management.

Women who engage in unsafe menstrual hygiene practices face a variety of difficulties, including poor health, lower school attendance, and psychosocial issues (Hennegan et al., 2016b). The health issues could involve different infections, irritation, or discomfort. Health issues, lack of water and sanitation facilities, and privacy contribute to school absenteeism. A low attendance increases the likelihood of dropping out of school for

younger women. In addition to physical health, these challenges also lead to psychosocial issues such as shame, anxiety, despair, or fear of stigma (Crichton et. al., 2013).

Numerous studies have revealed that Pakistani women's awareness of menstruation and menstrual hygiene is rather low. Only 28% of the women in rural Pakistan surveyed by Ali et. al. (2020)'s study were aware of the menstrual hygiene management. Thus, comprehensive knowledge of safe menstrual hygiene management is necessary to address these issues and enhance women's health outcomes, especially vulnerable women. This should include providing an understanding of the menstrual cycle, menstrual hygiene products, their usage and disposal, washing and cleaning methods, and the impact of menstrual hygiene on general health. With this knowledge, women will be better equipped to manage their periods in a way that protects their dignity, their well-being, and their safety.

Material and Methods

Study site

The study was conducted in 2020 with women of reproductive age residing in slums in Lahore. Lahore is the capital of Pakistan's largest province, Punjab with one of the nation's highest concentrations of the slum-dwelling population (Safdar et. al, 2021). The slums from which the data was collected included *Tali Wala Khoh*, Johar Town; *Karol Ghati*, near Ring Road; *Chandrai* near Chungi Amar Sidhu; *Bajri plot* near Thokar Niaz Baig; *Bagriyaan* near Green Town; and *Gujar Colony* near Chungi Amar Sidhu.

Data Collection

Purposive sampling was used to conduct 20 in-depth interviews with women of reproductive age (18-49 years) that lasted between 60 and 90 minutes. Initially created in English, a semi-structured interview guide was later translated into Urdu for data collection. It consisted of two sections: the sociodemographic survey questionnaire included questions related to age, income, marital status, husband's occupation and education, and number of children. The interview guide included open-ended questions about menstrual hygiene practices, challenges experienced by women residing in the slums of Pakistan, and the sociocultural and economic factors that contribute to insufficient menstrual hygiene management. Prior to the interview, each literate woman gave their informed consent in writing. Before starting the interview, the researchers read the informed consent to the women who had no formal education. Verbal approval was given before the interviews started. All of the interviews were audio recorded, and transcribed. They were later translated into English and accuracy checks were done.

Data Analysis

Six-phase reflexive thematic analysis was used to analyze the qualitative data (Braun and Clarke, 2012). We used a constructionist epistemology and an experiential approach to study menstrual hygiene practices, concentrating on the meaning and meaningfulness perceived by respondents. Following several readings of the transcribed interviews and active listening of the recorded interviews during the first-level phase, a preliminary set of semantic and latent codes was created. Deductive analysis was carried out to make sure that relevant themes were generated in relation to the study issue. A "dual-level" recursive review of the themes with regard to the data set and the coded data items was then conducted which resulted in the finalization of the study's themes.

Results and Discussion

Table 1

Sample characteristics of women of reproductive age living in slums in Lahore

Sociodemographic	N=20	%
Age		

18-20	2	10%
21-30	10	50%
31-40	6	30%
40 and above	2	10%
Education		
No education	10	50%
Primary	7	35%
Secondary	3	15%
Higher	-	-
Current Marital status		
Single	3	15%
Married	15	75%
Divorced/widowed	2	10%
Fathers' education		
No education	12	60%
Primary	5	25%
Secondary	3	15%
Higher	-	-
Husbands' education (n=17)		
No education	8	47.05%
Primary	7	41.17%
Secondary	2	11.76%
Higher	-	-
Husbands' occupation (n=17)		
Unemployed	5	29.41%
Unskilled	9	52.94%
Skilled	3	17.64%
Managerial	-	-
Number of children (n=17)		
No children	3	17.64%
1-3	6	35.29%
More than 3	8	47.05%
Residential status		
Local	8	40%
Migrant	12	60%

Knowledge about menstrual hygiene and its management

Knowledge of Menstrual Hygiene Products

Insufficient knowledge about menstrual hygiene products can impede their effective use, leading to discomfort, embarrassment, and potential health problems. Women and girls often lack awareness of the range of available menstrual hygiene products and their respective advantages and disadvantages. They may also be unfamiliar with the correct usage and maintenance of menstrual hygiene products, including changing pads.

In Pakistan, various menstrual hygiene products, such as cotton, pads, tampons, or cloth, are available for absorbing menstrual blood. However, the participants in this study were primarily aware of cotton and cloth, with a significant proportion also being aware of pads, but none were familiar with tampons or other products. Information sources for menstrual hygiene products included television, billboards, school, and workplace, as well as

word-of-mouth from family and friends. Only slightly over half of the participants were familiar with the use of sanitary pads, as expressed by one participant:

“I have seen it in advertisements on television. I work as a maid and I asked my *Baji* (female employer) about it. It is very clean and easy to use but they are expensive and unaffordable for women like us.” (26 years old)

A considerable proportion of women in the study demonstrated awareness and understanding of sanitary pads, while little over half of them had no knowledge of them. Two participants reported learning about pads in school, while a few mothers learned from their daughters. As one participant expressed:

“I learned about pads from my daughter who goes to a welfare school. They gave her lectures about menstruation and provided her with a pack of sanitary pads each month. However, only my daughter used them.” (45 years old)

According to four participants, they learned about menstrual hygiene products from advertisements on television and billboards. One participant opined:

“I watch television and have seen advertisements for pads many times. Although I find it embarrassing watching those advertisements, especially in the presence of men.” (23 years old)

All participants were aware of using cloth and cotton during menstruation, and they discussed the different types of fabrics and where they obtain them. They also had knowledge about which fabrics are more effective in terms of absorption and cleaning, and avoiding staining. One participant, for example, mentioned their preference for using cotton cloth because it can be washed and reused. The participants expressed that they have gained knowledge about the various fabrics used during menstruation through their experiences over the years. They considered availability as well as the durability and ease of cleaning of the fabrics. Some fabrics were noted to be more difficult to clean, making it challenging to remove stains.

In conclusion, participants had knowledge of menstrual hygiene products and made informed decisions. Modern products such as pads were learned through television or community-based health programs, while traditional products were learned through family and friends or personal experiences.

Knowledge about the Risks of Menstrual Hygiene products and Practices

In slum areas, where access to sanitation and healthcare services can be limited, poor menstrual hygiene practices can have severe consequences for women's health and well-being. During the study, the participants were asked about the potential health risks associated with various menstrual hygiene products and practices. While some participants had a limited understanding of the consequences of poor menstrual hygiene, others were aware of the potential health risks. Participants primarily gained their knowledge from women in their families and peers, with elder women in their families being the most common initial source of information. Some participants also mentioned traditional birth attendants in their communities as a source of information, but none mentioned receiving information from formal healthcare sources such as doctors, health facilities, or government/development sector health campaigns.

The participants' understanding of the health risks associated with poor menstrual hygiene was limited, with only minor challenges like itching, rashes, blisters, or burning sensations mentioned. None of the participants were aware of more serious health risks like UTIs or cervical cancer. Personal experiences were another source of knowledge, with many reporting skin irritations and other similar problems. One participant attributed her rashes and itching during menstruation to the perception that menstrual blood is dirty, while

another mentioned not changing a wet cloth for an extended period as a cause of a similar problem. One of the participants shared:

"I occasionally get bumps or rashes in the genital area during menstruation which usually disappear on their own." (27 years old)

Women showed a nonchalant attitude towards such health issues and preferred to use home remedies instead of seeking professional medical help. For instance, one participant mentioned, "Whenever I experience itchiness, rashes, or abnormal discharge after my period, I use the home remedies my mother suggested." Similarly, other participants also shared similar views.

"I know that using a cloth for too long or if it's dirty can cause irritation, but as we are poor, this is the only option we have. I realize it may not be the right thing to do, but we don't have any other choice." (31 years old)

One participant shared, "During menstruation, I sometimes experience burns and rashes in my genital area, but it's not a big problem for me." Another participant reported a similar issue, saying, "As a maid, I sweat a lot because it's always humid in Lahore. Due to the nature of my job, I don't have the space or time to change my menstrual pad, which causes my skin to rash and itch terribly in the heat." (32 years old)

In short, participants lacked awareness about the risks of using modern menstrual products and believed that they would not use them due to cost concerns. They had limited knowledge about the minor health risks of using cloth pads and were unsure about how often to change them. Participants had a rudimentary understanding of the effects of menstrual hygiene on their health and were mostly knowledgeable about minor health concerns rather than major issues.

Knowledge about safe handling and disposal of used menstrual hygiene products

Participants were asked about how they dispose of menstrual waste and the potential negative effects on health and the environment if not done correctly. The most common methods of disposal were burning, burying, or throwing away in the trash. The interviews revealed that many slum dwellers lived in unsanitary conditions with garbage scattered around. When the cloth or pad becomes unusable, most participants said they discard it in a nearby garbage pile. Participants reported burning or burying used menstrual products due to societal beliefs that menstrual blood should not be visible to others and that it could be used for black magic on them or others.

Some participants burned their used menstrual products with other trash to dispose it, as there were no garbage removal services in their neighborhood, and they wanted to avoid garbage piling up and emitting odors. However, they often burned the waste near or inside their homes. One participant shared:

"I usually burn or bury my used cloth with other garbage since there are no garbage removal services in our area, and we don't want the garbage to pile up and create a foul smell. This is a common practice in our community, and even the government does it. You might have seen it happening around the city." (30 years old)

Participants were asked about the impact of burning, burying, or throwing menstrual products in the trash on the environment. However, the responses indicated a lack of concern. One participant expressed this indifference by saying:

"Have you seen how we live? We are surrounded by garbage. This is the situation, but it has made us resilient, so nothing impacts us anymore. Only those who aren't used

to it, like you (referring to the interviewer), are harmed by an unclean atmosphere.” (30 years old)

Another participant stated that due to the lack of a proper waste disposal system, they dispose of menstrual waste as they see fit, and they do not view it as an environmental problem. As a person born and raised in a slum, they feel they have no other options. Some participants also expressed concerns about how poverty and unclean surroundings in neglected neighborhoods of cities affect their lives. One participant mentioned that they frequently fall ill, as do their children, due to the filthy environment they live in. They believe that the government should take action to ensure a clean environment for all.

In summary, participants had limited knowledge of the safe handling and disposal of menstrual hygiene products, leading to disposal decisions based on societal beliefs of secrecy and taboos. Burning, burying, or throwing products in the trash were considered suitable. In slum areas with polluted environments, participants did not view improper disposal as a problem. To address this, menstrual hygiene education and access to safe sanitation and affordable products is crucial. Ending menstrual taboos and cultural myths is also important to ensure women's overall health and well-being.

Menstrual Hygiene practices employed women living in slums

Maintaining proper menstrual hygiene is crucial for women's health and well-being. However, women in the slums of Pakistan often lack knowledge and access to proper menstrual hygiene products and facilities. According to Zafar and Wazir's (2017) study, 62.5% of adolescent girls in Pakistan use cloth during their menstrual cycle. Poor access to water and sanitation facilities further exacerbates the issue. The participants in the study were asked about their menstrual routine and personal hygiene practices. Most women were found to practice improper hygiene during their periods.

Type of Menstrual Hygiene Products used by Women living in slums

Women living in impoverished neighborhoods often have limited knowledge and access to affordable and safe menstrual hygiene products, leading them to resort to reusing or improvising products such as rags, leaves, or even sand (Balasubramanian, 2021; Wilbur et. al., 2019). This can result in health issues and infections. During the study, participants shared that they used cotton cloth which they obtained from their old clothes, bedsheets, banners, and other similar sources. One participant stated:

“I have always used rags that I acquire from discarded materials for menstruation. My mother and grandmother followed the same practice, and now my daughter also does it.” (39 years old)

Some participants talked about the materials they use during menstruation. One participant mentioned using fabric from her children's old denim jeans, while another mentioned utilizing foam from old mattresses, pillows, and cushions for extra protection during heavy bleeding.

However, some young participants and those with younger daughters had experience using pads a few times. They received pads for various durations through a project at their schools. As one participant explained:

“I once attended a lecture in school where an organization talked about menstrual hygiene and gave out free pads. I got a pack and tried them out. I found them easy to use, with a pleasant scent, and there was less risk of leakage. I used three of them and gave the rest to my mother and sister. I didn't want to go back to using cloth, but my mother explained that pads are very costly and worth more than what we earn in a week.” (18 years old)

One of the participants who received pads had reservations about their use due to certain misconceptions about the product. One participant, who received pads from school, shared her mother and aunts' initial resistance to them. This resistance was due to their views on how menstruation should be managed. The participant stated:

“When I received the free sample, my mother and aunts refused to let me use it. They had heard that pads can cause various illnesses. My mother told me that we wash the cloth ourselves so we know it's clean, but we have no idea how many dirty hands have touched the pad while making it. Despite their concerns, I insisted on using it and eventually convinced my mother to let me try it out.” (20 years old)

Providing menstrual hygiene products without complete information on their use can lead to further health challenges for women. Therefore, it is not enough to just provide these products, it is equally important to ensure continual access and education.

Reusing or improvising menstrual hygiene products

Due to limited access and affordability, around 75% of women in slums resort to using unhygienic materials like rags and foam during menstruation, increasing their risk of infections (Sato et. al., 2021; Kulkarni et. al., 2017). Additionally, limited access to clean water in slums makes it challenging for women to maintain proper menstrual hygiene practices. During the study, participants shared their washing and cleaning routines, highlighting the impact of sociocultural beliefs, access, and understanding on menstrual hygiene practices.

In some subcultures, menstrual hygiene practices can be influenced by social stigmas and views that regard menstruation as unclean or taboo. This can impact the washing and cleaning routines women use to manage their periods. For example, some participants believed that bathing during menstruation is unhealthy, while others thought that having a cold bath during periods could cause pain. Additionally, menstrual hygiene is often considered a private subject that should not be discussed in front of male family members or in public. Some participants shared that they pretend to fast or pray during their periods to avoid revealing their menstruation to male family members. As a result, some women dispose of sanitary products by burning or burying them.

“I use cloth during my period. We use one for up to three menstrual cycles. I wash it with plain water only in our washroom that we have built temporarily by using sheets. I put it under my *charpai* (traditional woven bed) to dry it so it is kept hidden as even after washing some stains are left behind; so, we cannot just put it anywhere outside as there are men and many other people living near my hut.” (27 years old)

Washing and drying menstrual fabrics can be difficult for women living in slums due to the limited indoor space and lack of privacy. Some participants found the task challenging and disliked having to wash their soiled clothes. One participant expressed this sentiment, stating:

“Washing a stained cloth is really tough, and it's part of menstruation that I hate the most. We only have one semi-permanent washroom, so I have to wait until the men are not around to wash my soiled clothes.” (21 years old)

Another participant while sharing her experience explained:

“To avoid the risk of cancer, I make sure to dispose of my cloth after one menstrual cycle. A family member once told me about someone who developed cancer from using the same cloth for an extended period, so I am cautious. I do not rely on washing alone, as plain water may not eliminate all germs and dirt.” (33 years old)

Most participants washed their menstrual cloth without soap or detergent, which suggests inadequate cleaning. This compromises both safety and hygiene. Additionally, none of the participants dried their cloth in direct sunlight, which is effective in killing bacteria and germs. This increases the risk of infections and other health issues.

Duration of Changing the Hygiene Products

Most of the participants use cloth for menstrual management and change them infrequently due to hygiene and budget constraints. Keeping the skin dry and frequently changing the absorbent is considered hygienic during menstruation, but this is challenging for women due to housing conditions and laundry problems. Some women even use the same piece of cloth for managing menstruation with their daughters due to limited supply. These behaviors can be highly risky and have serious health consequences. One of the participants said:

“I only change my menstrual cloth once or twice a day. There is limited water, and we have no private space to wash the stained cloth frequently. We have to wait for a time when no men are around to wash the cloth. The less frequently we change the cloth, the less frequently we have to wash it. In case my daughters and my periods start at the same time then we have to share the limited cloth pieces.” (37 years old)

As shared earlier, participants who received a limited supply of pads from school tended to change them less frequently in order to make them last longer. One participant stated that they would try to use the pads as sparingly as possible in order to stretch their supply. Another participant reported her menstrual routine, stating that she is a working woman and typically leaves home in the morning and returns in the evening. During her menstruation, she would put on cloth in the morning before leaving and change them once she gets back home, which means she changes her menstrual cloth twice a day.

Financial difficulties were found to be one of the biggest barriers for slum women to access sanitary pads. Many participants expressed awareness of sanitary pads but were unable to afford them due to living below the poverty line. “I hardly make both ends meet. I cannot even think of spending a single penny on buying such products. It is a luxury that I cannot afford,” said the participant.

Some participants expressed that menstrual hygiene and health take a backseat to their everyday struggles and activities. For them, spending money on period products is a luxury they cannot afford. One participant shared that they cannot even consider spending money on such products as they barely make ends meet. Another participant also mentioned the cost-effectiveness of sanitary pads and how they prioritize other expenses over buying them.

“Due to the unaffordability of safer options, we are forced to use trash. No one likes to use dirty cloth but when your life is destined like this, you have no option but to accept your fate. Here we do not have enough money to purchase food for ourselves how can we even think of buying sanitary pads, cotton, or underwear?” (26 years old)

In short, some participants were unaware of how frequently they should change their menstrual products, while others faced various obstacles such as product availability, time constraints, job requirements, lack of privacy, and restricted access to restrooms. These factors made it difficult for them to follow the scientific recommendation of changing menstrual products every five to six hours.

Personal Hygiene Practices

During menstruation, it is important to practice good hygiene by cleaning the vaginal area and taking a bath. However, women living in slums face several obstacles that hinder their ability to maintain hygiene, including limited access to clean water, lack of sanitation

facilities and privacy, and cultural beliefs. In this study, it was found that practically all participants lacked adequate hygiene practices, particularly when it came to bathing and cleaning their intimate areas. Most women were unable to take baths or wash their genitalia with clean water due to a lack of access to water and cultural beliefs.

Cultural Beliefs around cleanliness during Menstruation

The participants were asked about their personal hygiene beliefs and practices during menstruation. One participant shared that her elders had suggested that women should not put water around their external genitalia or take a bath during their period as it may have harmful effects on their fertility. A little less than half of the participants held similar views on bathing and washing intimate parts, frequently linking them to their ability to procreate. Most women believed that washing their genitalia and taking a bath were unnecessary practices during menstruation. Some shared personal anecdotes, such as one participant's mother strictly suggesting not to take a bath during her first period. As one participant shared:

“Since my periods started, I have been told that one should only take a bath at the end of the period and not during it. I never asked about it because, in my generation, one never questioned their elders.” (18 years old)

The participants' conversations made it clear that some myths were widespread and deeply ingrained in their cultural beliefs. However, a small percentage of participants admitted to taking a bath two or three days after their period began. These women recognized their discomfort and found it necessary to take baths whenever they felt like it.

Lack or inadequate Water, Sanitation, and Hygiene (WASH) Infrastructure

Poor WASH infrastructure, including lack of access to sufficient water, soap, and detergent, as well as inadequate sanitation facilities and contaminated environments, are significant challenges faced by women in slum areas during menstruation. According to one participant:

“In the absence of a direct water supply, we always have limited water as it is very difficult for us to fetch and store large amounts of water. We need it for drinking and cooking too. The water is brought from a pump that is at a distance from our homes. The timing is on is not fixed so sometimes we have to go multiple times to see if it is coming.” (45 years old)

Additionally, the poor quality of water and inadequate solid waste management system in their areas lead to various health problems. One participant shared:

“Hygiene and cleanliness are important, especially during menstruation. I have experienced a severe skin infection because once there was no water available to wash my hygiene product and I wore the same piece of cloth for two consecutive days.” (26 years old)

Toilets in slums under study varied but all of them were structures made of materials like wooden sticks, iron rods, plastic sheets, or fabric. These toilets did not have sanitation systems or privacy and were shared by multiple households. In some cases, there may not be any toilets at all, and participants were defecating in nearby fields or water bodies. Participants also voiced their worries about the inadequate solid waste management system in their areas. The lack of attention from municipal agencies in cleaning up the accumulated waste in the surroundings also contributes to a filthy environment. As one participant noted:

“The surroundings of our area are extremely dirty, and the stench of garbage is unbearable, making our lives miserable. People from nearby areas also throw their waste here, and it has been piling up for a long time. No authority ever comes to clean it. We moved from Karachi to Lahore hoping for a better life, but since we had no money, we were forced to settle in the slums.” (37 years old)

In short, the inadequate WASH infrastructure in slum areas presents significant challenges for women during menstruation, including limited access to water and hygiene products. Additionally, poor quality water and inadequate solid waste management systems contribute to various health problems for the women residing in slums.

Conclusion

Women residing in slums throughout Pakistan face significant challenges in managing their menstrual hygiene. Poverty, inadequate access to clean water and sanitation facilities, limited access to education and healthcare services, and cultural taboos lead to inadequate menstrual hygiene practices. It is important to raise awareness and educate communities especially women, on the significance of menstrual hygiene and its effects on women's health and wellness. It is crucial to ensure that women in slums also get easy access to clean water and sanitation facilities. Additionally, continuous efforts to eradicate the social stigmas surrounding menstruation should be made.

More context-specific and targeted interventions are required to address barriers to menstrual hygiene for this vulnerable group. Community-based education programs, affordable and sustainable menstrual hygiene products, and adequate water and sanitation facilities will allow us to get closer to achieving our goals. Additionally, focusing on menstrual hygiene management will assist in achieving Sustainable Development Goal 6.2, which aims to provide equitable sanitation and hygiene for all, with a special focus on the needs of women and girls and those in vulnerable situations. It is important for public health policies and programs to prioritize this issue in developing countries to ensure the health, dignity, and overall well-being of women living in slums.

References

- Azmat, S. K., Shaikh, B. T., Hadi, Y. B., & Saleem, S. (2018). Urban Slum Women's Knowledge and Attitude Towards Contraception: A Cross-Sectional Study in Karachi, Pakistan. *Journal of reproductive health and medicine*, 4(2), 8-16. doi: 10.1016/j.jrh.2018.03.001.
- Balasubramanian, K. (2021). Menstrual Hygiene Management among Adolescent Girls in Tamil Nadu: A Narrative Review. *SBV Journal of Basic, Clinical and Applied Health Science*, 4(3), 63-65.
- Bello, T. O., Olubukola, A. A., & Adeniyi, O. V. (2019). Menstrual hygiene practices among slum-dwelling adolescent girls in Lagos, Nigeria. *Journal of Pediatric and Adolescent Gynecology*, 32(6), 665-670. doi: 10.1016/j.jp.2019.05.008
- Cooper, R. (2018). *Water, sanitation and hygiene services in Pakistan*. UK Aid
- Crichton, J., Okal, J., Kabiru, C. W., & Zulu, E. M. (2013). Emotional and psychosocial aspects of menstrual poverty in resource-poor settings: a qualitative study of the experiences of adolescent girls in an informal settlement in Nairobi. *Health care for women international*, 34(10), 891-916.
- Hennegan, J., Montgomery, P., & Shannon, A. K. (2016a). Women's and girls' experiences of menstruation in low- and middle-income countries: A systematic review and qualitative metasynthesis. *PLoS Medicine*, 13(2), e1001963. doi: 10.1371/journal.pmed.1001963.
- Hennegan, J., Dolan, C., Wu, M., Scott, L., & Montgomery, P. (2016b). Measuring the prevalence and impact of poor menstrual hygiene management: a quantitative survey of schoolgirls in rural Uganda. *BMJ open*, 6(12), e012596.
- Jabeen, S., Mahmood, Q., & Nawab, B. (2020). High economic impacts of poor water and sanitation in various communities in Pakistan (an environmental economic perspective). *Central Asian Journal of Environmental Science and Technology Innovation*, 1(1), 53-60.
- Joshi, R., Garg, S., & Pandey, M. (2013). Menstrual hygiene practices in context of schooling: A community study among rural adolescent girls in Varanasi. *Indian Journal of Community Medicine*, 38(2), 112-117.
- Kaundal, M., & Thakur, B. (2014). A dialogue on menstrual taboo. *Indian Journal of Community Health*, 26(2), 192-195.
- Krenz, A., & Strulik, H. (2019). *Menstruation hygiene management and work attendance in a developing country*. CEPR Discussion Papers
- Kulkarni, S., O'Reilly, K., & Bhat, S. (2017). No relief: lived experiences of inadequate sanitation access of poor urban women in India. *Gender & Development*, 25(2), 167-183.
- Lahore School of Economics. (2012). *A Study of Slums in Lahore*. Lahore, Pakistan. Lahore School of Economics
- McHugh, M. C. (2020). Menstrual shame: Exploring the role of 'menstrual moaning'. *The Palgrave Handbook of Critical Menstruation Studies*, 409-422.
- Michael, J., Iqbal, Q., Haider, S., Khalid, A., Haque, N., Ishaq, R., & Bashaar, M. (2020). Knowledge and practice of adolescent females about menstruation and menstruation

hygiene visiting a public healthcare institute of Quetta, Pakistan. *BMC women's health*, 20, 1-8.

Mumtaz, Z., Sivananthajothy, P., Bhatti, A., & Sommer, M. (2019). "How can we leave the traditions of our Baab Daada" socio-cultural structures and values driving menstrual hygiene management challenges in schools in Pakistan. *Journal of adolescence*, 76, 152-161.

Mumtaz, Z., Salway, S., Nykiforuk, C., & Bhatti, A. (2018). Women's Health in Urban Pakistan: A Scoping Review of the Literature. *Women & health*, 58(3), 334-356. doi: 10.1080/03630242.2017.1336699.

PIDE. (2021). *Nutritional Status of Women and Children in Urban Slums of Pakistan*. PIDE

Punjab Commission on the Status of Women. (2018). *Punjab Human Development Report 2017*. Lahore, Pakistan.

Sato, K., Hamidah, U., Ikemi, M., Ushijima, K., Sintawardani, N., & Yamauchi, T. (2021). Menstruation and Menstrual Hygiene Management A Case Study of Adult Females in an Urban Slum of Indonesia. *Sanitation Value Chain*, 5(2), 83-97.

Thapa, S., & Aro, A. R. (2021). 'Menstruation means impurity': multilevel interventions are needed to break the menstrual taboo in Nepal. *BMC Women's Health*, 21(1), 1-5.

UNDP. (2021). *Pakistan National Human Development Report 2020: The State of Human Development in Times of Crisis*. UNDP.

UNICEF (2020). Report of Profile of Slums/Underserved Areas of Islamabad City – The Federal Capital of Pakistan, UNICEF.

Wilbur, J., Torondel, B., Hameed, S., Mahon, T., & Kuper, H. (2019). A systematic review of menstrual hygiene management requirements, its barriers, and strategies for disabled people. *PloS one*, 14(2), e0210974.

World Bank. (2021). *Inclusive Cities for All: Tackling Urban Inequalities in Pakistan*. World Bank.