

Sociological Research and Innovation (SRI)

Volume 1 Issue 2, Fall 2023

ISSN(P): 3007-3251 ISSN(E): 3007-326X

Homepage: <https://journals.umt.edu.pk/index.php/SRI>



Article QR



Title: Understanding Knowledge, Attitude, and Practices Regarding Menstruation among Educated Young Adult Females in Urban and Rural Areas of Pakistan

Author (s): Pernian Sanawar, Saman Raheel


Affiliation (s): Government College University, Lahore, Pakistan

DOI: <https://doi.org/10.32350/sri.12.02>

History: Received: July 24, 2023, Revised: September 15, 2023, Accepted: October 28, 2023, Published: December 11, 2023

Citation: Sanawar, P., & Raheel, S. (2023). Understanding knowledge, attitude, and practices regarding menstruation among educated young adult females in urban and rural areas of Pakistan. *Sociological Research and Innovation*, 1(2), 20–36. <https://doi.org/10.32350/sri.12.02>

Copyright: © The Authors

Licensing:  This article is open access and is distributed under the terms of [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

Conflict of Interest: Author(s) declared no conflict of interest



A publication of
Department of Sociology, School of Social Sciences and Humanities
University of Management and Technology Lahore, Pakistan

Understanding Knowledge, Attitude, and Practices Regarding Menstruation among Educated Young Adult Females in Urban and Rural Areas of Pakistan

Pernian Sanawar Tiwana and Saman Raheel*

Government College University Lahore, Pakistan

Abstract

The primary objective of this research is to investigate the knowledge, attitudes, and practices regarding menstruation among educated young adult females in urban and rural settings of Lahore (Pakistan). In pursuit of our research objectives, a total of six in-depth interviews were conducted with young adult females enrolled in both undergraduate and postgraduate programs within a public sector university in Lahore (Pakistan). The collected data underwent meticulous analysis utilizing a thematic approach. The study's findings highlighted the lack of sufficient knowledge among females upon the onset of menarche. Primary sources of information included mothers and elderly sisters; however, open discussions are frequently evaded or postponed on maintaining hygiene during the monthly cycles. Further, cultural, societal norms and religious considerations significantly influenced the imposition of restrictions and practices related to menstruation among females. The research elucidated the experiences of young females as they reflected on their initial encounters, and highlighted the challenges faced including religious and social constraints during menstruation in local settings. The study strongly advocated for the compulsory integration of sex education for both girls and boys at the adolescence stage in Pakistan, based on the identified gaps in knowledge and practices.

Keywords: urban and rural females, menstruation, young adult females, knowledge of menstruation, attitude and practices of menstruation.

Introduction

Menstruation, a natural biological process, is significantly shaped by social, cultural, and religious beliefs in developing nations (Maqbool et al., [2021](#)). The onset of menstruation, known as menarche, is a crucial event in a woman's life, as it marks the beginning of her reproduction (Mulazimah et

*Corresponding Author: samanraheel15@gmail.com



al., [2022](#)). Unfortunately, many adolescent girls experience their first periods without adequate knowledge and preparation. Mothers, typically the main source of information, often provide insufficient or delayed guidance, leading to the perpetuation of misconceptions and poor hygienic practices.

Menstruation is brought on by pubertal changes in hormone levels within the female body. Nevertheless, while occurring often, menstruation is frequently seen as taboo in many cultures and societies (Anbesu & Asgedom, [2023](#)). Due to the stigma associated with menstruation, the lack of conversation about puberty, and false information spread by peers, young girls usually have limited awareness regarding the management of menstrual hygiene, which can have a detrimental effect on both the physical and emotional health of women at large and girls in particular. In many communities, women and girls experience shame and embarrassment related to the regular menstrual cycle (Atari et al., [2021](#)). Consequently, this societal perspective elevates the likelihood of engaging in unhygienic practices, thereby increasing the risk of severe reproductive and urinary tract infections (Hennegan et al., [2019](#)).

Menarche, the onset of menstruation, can be a source of anxiety and surprise for young girls if they lack prior knowledge. To mitigate these negative experiences, proactive education is crucial (Ghandour et al., [2022](#)). This education should be delivered in a developmentally appropriate manner, gradually increasing in depth and complexity as a girl matures (Mohammed & Larsen-Reindorf, [2020](#)). However, cultural norms can pose a significant barrier to effective communication. In Pakistan, for example, societal stigmas associating menstruation with shame and taboo lead to communication challenges for 26% of the overall female population, and a staggering 52% of women of reproductive age (Michael et al., [2020](#)).

The stigma around menstruation, often rooted in social and religious contexts, hinders young girls' access to crucial menstrual hygiene education (Kaur et al., [2018](#)). Additionally, their existing beliefs, habits, misconceptions, and embarrassment further complicate their ability to comprehend and address menstrual issues (Dhar et al., [2023](#)), including infections and disorders like Dysmenorrhea and Premenstrual Syndrome.

Studies across Asia have shown that many young girls don't know enough about periods when they first start (Ray & Dasgupta, [2012](#)). This can lead to confusion and problems. For instance, one study in India found

a link between poverty, how girls manage their periods, and infections (Sultan & Sahu, [2017](#)). Another study in Malaysia showed that restrictions on what girls can do and who they can see during their period can negatively impact their well-being (Chew, [2021](#)).

In Pakistan, few studies have delved into the connection between menstruation and socio-cultural and religious influences (Proff et al., [2023](#)). Therefore, this study aims to explore the impact of social, cultural, and religious beliefs on shaping the knowledge, attitudes, and practices related to menstruation among young adult girls from urban and rural backgrounds. Following research questions were formulated:

1. How do cultural, familial, and peer influences impact young females' knowledge and practices regarding menstruation?
2. What are the social and academic implications of managing menstrual pain among university-going females in Pakistan?
3. How do girls in Pakistan from diverse socio-cultural backgrounds perceive and express experiences of menstrual pain?

Applying the sociological lens to understand the menstrual knowledge, attitudes, and behaviors of educated young adult females in urban and rural areas of Pakistan is an important academic endeavor, because it sheds light on the complex interactions between education, culture, and gender.

In order to remove deeply ingrained cultural taboos, advance gender equality, and improve educational initiatives centered on menstruation, a thorough understanding of these processes is essential.

Method

Research Design

The present study intended to explore the subjective knowledge, attitude, and exclusive menstruation practices among young adult girls. The qualitative approach was used, enabling researchers to identify issues from the perspective of the study participants along with understanding the meanings and interpretations that they give to behavior, events, or objects (Hennink et al., [2012](#)). We adopted an epistemological approach with an interpretive view to reveal contextualized experiences.



Strategy

A total of six female students from the public sector university were recruited through purposive sampling. These females were between the age group of 20-25. Three of these female students had an urban background, while the remaining three belonged to various rural areas of Punjab, Pakistan. The purpose of selecting both urban and rural but educated girls was to achieve more diversification in responses. And furthermore, to understand whether residential status or background plays any role in shaping different ideas and perceptions about menstruation in young educated adult girls in Pakistan.

The study being exploratory in nature used in-depth interviews to draw data from the participants. A thematic interview guide was utilized for conducting these interviews. This facilitated the researchers to bring to light the participant's views through open-ended questioning (Maguire & Delahunt, [2017](#)). This guide was formulated using both deductive and inductive ideas. These ideas were borrowed from the literature and by the researcher's prior knowledge and experiences about the topic.

Ethical Considerations

Before data collection, appropriate rapport was established with the participants, and their verbal consent was obtained (Reñosa et al., [2021](#)). The nature of our research project and its potential risks were also discussed in advance. Further, participants were assured that their personal information would be kept confidential and anonymous. However, in qualitative studies, ethical considerations are an ongoing process that continues long after approval has been granted (Reid et al., [2018](#)). Therefore, throughout the interviews, the participants were reminded of their right to withdraw or not respond to a particular question. All participants were very open during the conversation and frankly shared their experiences. Hence, at the end of each interview, the researchers expressed gratitude for the participant's cooperation.

Data Analysis

A thematic analysis approach was used. All interviews were conducted in the native Urdu language. Therefore, before transcribing, the verbatim from the audio recorded interviews were translated into English. Participants' expressions, gestures, and quotes were also transcribed during the translation process. The manuscript was read multiple times by the

authors until no error or discrepancy was found in it. Keeping in view the research questions, basic codes were mapped from the data script and later condensed into categories. An initial codebook was developed containing both deductive and inductive codes. Then, considering the inferred themes, these codes were carefully evaluated, discussed, and analyzed.

Result

Knowledge and Awareness regarding Menstruation

When asked whether the female participants had any sort of knowledge or awareness about menstruation while entering the age of puberty. Almost all of them reported to be uninformed and unaware. One of the participants said the exact following words:

I had no proper awareness. I used to watch ads for sanitary pads at home. My mother did not tell me anything. I had an elder sister, she got them before me but I wasn't aware of that... Also, we never had such discussions with peers, and when I used to watch ads I used to think that it must be water or something white. I wasn't aware that it was blood that came out. Because in ads they show white or blue liquid).

Many female participants also had to face embarrassment when they got their periods in school. As they were unprepared and had no idea how to tackle them. Their peers were also uninformed and made fun of them. One participant talked about her experience in the following way;

I was in school when I got my period for the first time. My uniform was white. I had this strange feeling that something was wrong and leaking underneath. My friend was sitting beside me. I got up and checked my shirt and it was red. My friend started laughing and made fun of me.

Some of the girls with rural backgrounds reported that their mothers were hesitant to discuss periods until the girls started menstruating. One of the participants said; "My elder sister was more supportive than my mother. She helped me out and taught me how to stick or use a pad properly. While my mother was a bit hesitant." Similarly, another participant commented, "It was bad that my mom did not tell me anything about it." Another mentioned:



I have studied in co-education till college so these topics were never openly discussed. And at home, my mom was a bit conservative. She believed that it's not good to discuss such things before time because it will take a child towards maturity. So, she was of the view that when a girl is going to get them for the first time she will eventually know and learn about it. It's not important to be informed beforehand.

On a whole, the analysis revealed a wider gap in communication, where mothers, peers, and even educational environments fall short in providing essential information and support during a crucial period of a female's life.

Socio-Cultural and Religious Influences

Culture, societal norms, and religion have a persuasive influence on the lives of people in Pakistan. Several negative and obsolete practices regarding menstruation are still practiced in our society (Wasan et al., [2022](#)). When we asked our respondents to talk about the restrictions they might have faced or still face while being at home, university, or work. A majority of the individuals said that they still get to hear from the people around them that they are not supposed to have cold water or take a bath until their period ends. One participant added; "My mom used to tell me not to have cold water". Another girl belonging to a rural village in Punjab stated that;

There is this concept that you are not supposed to take a bath at all during periods. So, I got to know from one of my friends at university that you can take a bath after the first two days when the flow is normal. So, your body does not get dehydrated. I got to know this for the first time. Because in our town and family, old women often tell us to not take baths while menstruating. But my mother was a bit different in this case. She used to tell me that it's your fourth day you can take a bath.

But such practices and thinking are not limited only to the rural areas. One of the urban girls shared that she had to be careful about the clothes she wore as after her periods the people around her started seeing her differently. She commented;

I used to wear jeans... however during my periods I was dressed in more Eastern clothes. I started covering myself and carrying a dupatta. Before I was not supposed to do such things. I was a tomboy

but after I got my periods, I had to face restrictions regarding my clothes.

One of the interviewees shared; “My grandmother does not allow me to come over to her bed while I’m menstruating”. She further added, “I was also restricted from playing with my cousins as most of the cousins of my age were boys”.

When we investigated the religious restrictions a girl shared; “You can’t touch the Quran... my mother also tells me not to touch the prying mat. You can’t go to the mosque or any other religious gathering such as Milad.” While another commented; “I was on my period and my Aunt told me that it does not matter that you can’t read the holy book. You can recite it without touching it. Because your tongue is not impure”.

We also questioned our participants about whether their bond with their fathers and brothers changed after they got to their period. To which one participant responded; “It has not changed but it’s like that you get more alarmed while being around them on those days” Another girl said;

I used to sleep with my father so when I got my period my mother told me that I could no longer sleep with him. I was supposed to sleep in my room afterward. I was saddened and wondered why it is like this now?

In conclusion, the socio-cultural and religious influences on menstruation in Pakistan reflected a complex web of traditions, beliefs, and practices that continue to shape the lives of individuals, regardless of their urban or rural backgrounds. The narratives revealed enduring taboos and restrictions, from prohibitions on bathing to altered clothing choices, impacting the daily experiences of women. These restrictions extended to religious aspects, with limitations on participation in religious activities during menstruation.

Socialization during Menstruation

Nearly all girls experienced menstrual cramps, albeit with varying levels of severity. Managing daily tasks became challenging when in pain, affecting normal functioning. When we inquired about the impact of menstruation on the daily lives of our participants, one girl candidly shared her experience.



The first two days are challenging due to the pain. There is pain in the back, and in the legs, you get mood swings, and you are not in the mood to talk to someone. Moreover, you can't tell someone, especially in the family, what's wrong with you. Only your mother and sisters are aware. Your brothers when they ask you to make tea or something you cannot just say no. You have to do it. Because what reason would you give them for not doing it?

Some girls mentioned that, despite the pain, they attempted to maintain regular routines, such as attending university and lectures. Even when they feel the need to isolate, rest, or simply do nothing. One girl emphasized; "I try my best not to make it evident. Because you have to socialize. You might have to be in university while on periods. You can't just go back home. So, you have to bear it". Some girls also shared instances where they had to miss important events due to menstrual pain. For instance, one interviewee recounted a significant setback: "After my graduation, I was supposed to appear in a competitive exam but I could not go. As suddenly out of the blue I got my period. I could not go for the test as I had severe pain"

In conclusion, the experiences shared by these girls shed light on the often overlooked challenges posed by menstrual pain in their daily lives. From navigating familial expectations to persevering through academic commitments, these young women faced a multitude of difficulties during their menstrual periods.

Hygiene practices and altered nutrition

The majority of girls, whether from urban or rural areas, have access to and utilize sanitary pads. A girl presently residing in a hostel shared that she occasionally resorts to using tissue paper or cotton for specific situations;

I mostly use Pads but I also use a tissue when there is spotting. I have also used cotton back at home. My mother used them because in her time there were no pads. So, she told me that using cotton was fine.

When we inquired about their perspectives on newer and more contemporary menstrual products, such as tampons and menstrual cups, the majority expressed awareness but remained skeptical about adopting them. One girl conveyed her reservations, stating:

I stick to using pads. While I am aware of alternative methods, like tampons and menstrual cups, they seem intimidating to me. Despite reading blogs that vouch for their safety, the idea feels unfamiliar and unsettling, making it difficult for me to consider using them.

During the interviews when we asked the participants about do, they avoid certain foods during their periods. A few girls said that even despite being told not to have certain food, as they will either disturb periods or increase menstrual pain, they don't follow it. Because to them it's a misconception and you can eat anything. As one girl stated; "No, I have heard that you should try to avoid certain foods while taking some foods as they treat pain. But I have never tried both." Another one commented; "My mother does not allow me to have cold water and chicken. But I take them and don't avoid them."

Another interviewee stated that; "I don't drink juice and things taken straight out of the fridge, as cold stuff makes my cramps worse." One of the participants also mentioned that even when she knows that these might be just misconceptions, she still avoids having certain foods just because she has been told so. Her exact words were;

"I don't avoid food and stuff on my own, only the things that are told to me by others. I have a close attachment with my mother so she has fed some things in my mind. So, I just follow them. I know they might be wrong sometimes but I still don't ignore them. So, when it comes to food, I only avoid certain foods that I was told once not to eat".

When we brought up the topic of hygiene and sanitation, most of them said that they take a proper bath on the seventh or the last day. Some said that they avoid taking a bath only during the first two or three days. While a few mentioned taking a bath on all days of periods. We also probed them to share their views on vaginal hygiene and period complications. The majority of them were aware of these and were taking all necessary measures to avoid them. One of the girls narrated her experience in the following way;

"I was using gel pads of a certain brand which gave me a vaginal infection. The doctor told me once that what I was using had chemicals. So, she recommended me to use cotton pads or make cotton pads using a clean cloth myself"



In summary, the participants highlighted diverse practices in menstrual hygiene. While most girls, irrespective of urban or rural backgrounds, use sanitary pads, some resort to traditional methods like tissue or cotton. Modern alternatives like tampons and cups face skepticism. Views on dietary restrictions during periods vary, with some disregarding advice due to misconceptions. Hygiene practices also differ, with preferences for bathing habits and increased awareness of vaginal hygiene. These diverse perspectives emphasized the importance of tailored menstrual health education and product choices.

Discomforts and Coping Strategies

Recognizing the subjective nature of pain, we sought to understand how individuals might articulate their experiences. To explore this, we prompted the girls to describe their menstrual pain as if they were explaining it to someone naive. One of the responses received was: “It feels that somebody is crushing your veins. As the cramps are very bad.” Another commented; “It feels as if your lower body has become numb and someone is constantly stroking you on it. It feels like someone is cutting your uterus”. While a few girls reported that they don’t get severe menstrual cramps but just minor abdominal pain.

We also inquired about the emotional or psychological challenges they encountered. In response, one of the girls shared her experiences by stating:

Well, I don’t get mood swings like others. But yeah, to some extent I feel psychological challenges. Like when on the first day you are not in your senses as you’re experiencing a lot of pain and you could not get up from the bed. And your father and brother are at home and they are observing what’s happening to her. So, this is a bit challenging.

Discussing the topic of seeking support and assistance during menstruation, all the girls expressed their comfort in reaching out to fellow females, sharing their challenges openly without the fear of judgment. Several mentioned their readiness to provide help, including pads, medicine, or emotional support, when they notice other girls in need. While only one girl reported otherwise. She said;

I isolate myself. Because I guess some people do not understand what is happening as everyone has different capacities to perceive

things. Some think that she is exaggerating her pain. So, I think isolating myself is better at that time.

Concluding our discussions, we inquired about their perspectives on preparing daughters for menstruation. The consensus among them strongly favors adopting positive and healthy strategies for educating young girls about menstruation. Some participants emphasized the importance of comprehensive sex education for both girls and boys. We also sought recommendations on how universities or departments could better support girls during menstruation. The majority suggested the provision of a small pharmacy or, at the very least, a restroom stocked with menstrual products where girls can find relief. One participant expressed:

I highly recommend that my department should make a separate section for women to cater to their needs during periods and hire a female counselor in this section. At the ages of 17 and 18 when girls are entering universities their hormonal imbalance is at its peak so you never know when you will get your next period as your cycle fluctuates.

In summary, our exploration into menstrual experiences revealed diverse descriptions of pain. Despite variations in pain intensity, the emotional and psychological challenges during menstruation were evident. However, the girls emphasized the comfort and support found within their female community.

Discussion

Our study revealed that almost all the participants had no significant amount of knowledge regarding periods before menarche. This is in concordance with the findings of similar studies conducted in other developing countries. For instance, Gold-Watts et al. (2020) reported a similar outcome in Tamil Nadu, India. Moreover, this naivety caused them to face embarrassment in public especially in school as most of them had no idea how to manage things. Another study conducted by McCammon et al. (2020) in India supports this evidence. However, studies in Indonesia, Nepal and Afghanistan showed contradictory results, indicating higher levels of menstrual knowledge among females (Andani, 2020; Bhusal, 2020; Neyazi et al., 2021). Additionally, our study revealed that many participants had no understanding of menstruation when they experienced their first period, unlike a study in China where mostly had prior knowledge, often learned



from their mothers (Borjigen et al., [2019](#)). When participants reached menarche, majority of the females in India and Pakistan had no prior knowledge of menstruation, similar to our findings (Mathiyalagen et al., [2017](#); Usman et al., [2020](#)). This lack of awareness may be related to cultural norms and social taboos in low- and middle-income countries (LMICs), where discussing menstruation openly is considered embarrassing (Zakaria et al., [2019](#)). That is why prior information and awareness about menstrual hygiene is important.

No matter what their residential background was, a majority of the girls reported how growing up they were constantly told not to openly discuss periods, especially in front of males, and to keep it a secret. Also, some of the girls belonging to rural areas mentioned that their mothers were hesitant, had conservative attitudes, and thought it was not important to educate girls regarding menses. While in school their teachers never discussed such things. A Mexican study involving both rural and urban women suggested similar results but Marván and Trujillo ([2009](#)) further revealed that the mothers only hesitated because they thought the teachers were a better source of information for the girls.

One of the most frequently reported restrictions mentioned by almost every woman was not taking a bath during periods. According to Mumtaz et al. ([2017](#)), one possible explanation for this could be that menstruation is viewed as an unclean procedure in Pakistani society, and taking a bath during one's period is regarded to cause swelling in the body and increases bleeding. Studies from Saudi Arabia and India (Patel et al., [2019](#)) revealed similar results. Additionally, a large number of the girls in this study reported feeling comfortable discussing menstruation with their mothers and elderly sisters, whereas few said they would rather not talk about it at all. This is due to the fact that females in Pakistani society have a stronger bond with their mother and elderly sister. In addition, it is regarded inappropriate to discuss feminine matters with male family members in this region because menstruation is a delicate subject. Our study also revealed that most of the participants while knowing that certain practices were false still practiced them as they learned them young. And now it was difficult for them to unlearn them. Talking about religious restrictions, some women are not allowed to pray, recite the holy Quran, enter Mosques, or participate in religious gatherings. Parallel to our study Chew et al. ([2021](#)) highlight that Christians (mostly Orthodox) along with Muslims and Hindus have to

face certain restrictions when it comes to religion. Apart from this our participants also had to face food restrictions.

When it comes to social participation and emotional challenges, the participants shared that they like to rest to cope with pain. But sometimes they have to socialize as they have no other option. Some also mentioned missing events because of pain. Rizvi and Ali (2016) in their study conducted in Quetta, Pakistan states similar pieces of evidence. The majority of the girls used pads while a few used cotton and also tissue only when there was spotting. The majority of the studies conducted in Indian rural areas and urban slums found that women were using rags and clothes.

In the end, majority of the participants in our study also complained about the absence of dispensaries or separate sanitary sections for girls. Whereas only a few universities in Pakistan have such facilities. This suggests a need to implement such initiatives that will tackle and provide period care to women.

Conclusion

This study tries to explore the knowledge, attitudes, beliefs, challenges, and practices concerning menstruation of young adult rural and urban girls from, Lahore. This study highlights how religious misinterpretations, cultural beliefs and negative societal norms restrict the mothers and teachers to educate girls about menstruation prior to menarche. Our study revealed that young adult girls belonging to both urban and rural backgrounds almost faced similar challenges and experiences when it came to menstrual knowledge, hygiene practices, restrictions, socialization, etc.

This research suggested that it's important to give awareness to girls and make them prepared, as this will save them from public shaming and stress. It is suggested to regularly organize seminars and counselling sessions along with a proper system of sanitation in universities and schools to support females to avoid embarrassment. In schools, it's crucial to introduce sex education for both girls and boys in urban and rural areas. This fosters awareness about body changes, helping dispel stereotypes surrounding menstruation. One limitation of this research is that the findings are specific to a public sector university Lahore, and may not be fully generalizable to the broader population due to the localized nature of the study.



References

- Anbesu, E. W., & Asgedom, D. K. (2023). Menstrual hygiene practice and associated factors among adolescent girls in sub-Saharan Africa: A systematic review and meta-analysis. *BMC Public Health*, 23(1), 1–14. <https://doi.org/10.1186/s12889-022-14942-8>
- Andani, P. R. (2020). Knowledge, attitude and practice of menstrual hygiene among primary school adolescents in Surabaya, Indonesia. *Indian Journal of Forensic Medicine & Toxicology*, 14(3), 1109–1114.
- Atari, D. O., Tariquzzaman, S. K., & Nancy, A. (2021). Knowledge and perceptions on menstrual hygiene management among school-going adolescent girls in South Sudan. *Journal of Adolescent Research*, 39(2), 361–386. <https://doi.org/10.1177/074355842111043293>
- Bhusal, C. K. (2020). Practice of menstrual hygiene and associated factors among adolescent school girls in Dang district, Nepal. *Advances in Preventive Medicine*, 2020, Article e1292070. <https://doi.org/10.1155/2020/1292070>
- Borjigen, A., Huang, C., Liu, M., Lu, J., Peng, H., Sapkota, C., & Sheng, J. (2019). Status and factors of menstrual knowledge, attitudes, behaviors and their correlation with psychological stress in adolescent girls. *Journal of Pediatric and Adolescent Gynecology*, 32(6), 584–589. <https://doi.org/10.1016/j.jpag.2019.08.007>
- Chew, K. S., Wong, S. S. L., Hassan, A. K., Po, K. E., Zulkhairi, N., & Yusman, N. A. L. (2021). Development of a validated instrument on socio-cultural and religious influences during menstruation in Malaysia. *Medical Journal of Malaysia*, 76(6), 814–819.
- Dhar, S., Mondal, K. K., & Bhattacharjee, P. (2023). Influence of lifestyle factors with the outcome of menstrual disorders among adolescents and young women in West Bengal, India. *Scientific Reports*, 13(1), Article e12476. <https://doi.org/10.1038/s41598-023-35858-2>
- Ghandour, R., Hammoudeh, W., Giacaman, R., Holmboe-Ottesen, G., & Fjeld, H. E. (2022). Coming of age: A qualitative study of adolescent girls' menstrual preparedness in Palestinian refugee camps in the West Bank and Jordan. *Sexual and Reproductive Health Matters*, 30(1), Article e2111793. <https://doi.org/10.1080/26410397.2022.2111793>

- Gold-Watts, A., Hovdenak, M., Daniel, M., Gandhimathi, S., Sudha, R., & Bastien, S. (2020). A qualitative study of adolescent girls' experiences of menarche and menstruation in rural Tamil Nadu, India. *International Journal of Qualitative Studies on Health and Well-Being*, 15(1), Article e1845924. <https://doi.org/10.1080/17482631.2020.1845924>
- Hennegan, J., Shannon, A. K., Rubli, J., Schwab, K. J., & Melendez-Torres, G. J. (2019). Women's and girls' experiences of menstruation in low- and middle-income countries: A systematic review and qualitative metasynthesis. *PLoS Medicine*, 16(5), Article e1002803. <https://doi.org/10.1371/journal.pmed.1002803>
- Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative research methods*. Sage Publication.
- Kaur, R., Kaur, K., & Kaur, R. (2018). Menstrual hygiene, management, and waste disposal: Practices and challenges faced by girls/women of developing countries. *Journal of Environmental and Public Health*, 2018, Article e1730964. <https://doi.org/10.1155/2018/1730964>
- Maguire, M., & Delahunt, B. (2017). Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *All Ireland Journal of Higher Education*, 8(3), 3351–3363.
- Maqbool, R., Maqbool, M., Zehravi, M., & Ara, I. (2021). Menstrual distress in females of reproductive age: a literature review. *International Journal of Adolescent Medicine and Health*, 34(2), 11–17. <https://doi.org/10.1515/ijamh-2021-0081>
- Marván, M. L., & Trujillo, P. (2009). Menstrual socialization, beliefs, and attitudes concerning menstruation in rural and urban Mexican women. *Health Care for Women International*, 31(1), 53–67. <https://doi.org/10.1080/07399330902833362>
- Mathiyalagen, P., Peramasamy, B., Vasudevan, K., Basu, M., Cherian, J., & Sundar, B. (2017). A descriptive cross-sectional study on menstrual hygiene and perceived reproductive morbidity among adolescent girls in a union territory, India. *Journal Of Family Medicine and Primary Care*, 6(2), 360–365. <https://doi.org/10.4103/2249-4863.220031>
- McCammon, E., Bansal, S., Hebert, L. E., Yan, S., Menendez, A., & Gilliam, M. (2020). Exploring young women's menstruation-related challenges in Uttar Pradesh, India, using the socio-ecological



- framework. *Sexual and Reproductive Health Matters*, 28(1), Article e1749342. <https://doi.org/10.1080/26410397.2020.1749342>
- Michael, J., Iqbal, Q., Haider, S., Khalid, A., Haque, N., Ishaq, R., Saleem, F., Hassali, M. A., & 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, Article e4. <https://doi.org/10.1186/s12905-019-0874-3>
- Mohammed, S., & Larsen-Reindorf, R. E. (2020). Menstrual knowledge, sociocultural restrictions, and barriers to menstrual hygiene management in Ghana: Evidence from a multi-method survey among adolescent schoolgirls and schoolboys. *PLOS ONE*, 15(10), Article e0241106. <https://doi.org/10.1371/journal.pone.0241106>
- Mulazimah, M., Nurahmawati, D., & Trishastuti, I. H. (2022). The correlation of knowledge and the attitudes of class VII teenage girls in readiness to face menarche. *Jurnal Ners dan Kebidanan*, 9(2), 232–240.
- 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. <https://doi.org/10.1016/j.adolescence.2019.07.008>
- Neyazi, A., Faizi, G., Afzali, H., Ahmadi, M., Razaqi, N., Frough, Z., & Bhattacharya, S. (2021). Assessment of knowledge, attitude and practice about the menstruation among secondary school girls in Herat, Afghanistan-A cross sectional study. *Research Square*. <https://doi.org/10.21203/rs.3.rs-847912/v1>
- Patel, S., Vernekar, S. P., & Desai, A. M. (2019). A study on the knowledge, attitude and practices regarding menstrual hygiene among adolescent girls in schools in a rural area of Goa. *Journal of Clinical & Diagnostic Research*, 16(2), Article e14.
- Proff, A. A., Fatima, S., & Limón, M. L. S. (2023). Becoming women: Period. Perceptions of barriers and facilitators to menstrual hygiene management programs for Pakistani girls. *Frontiers in Public Health*, 11, Article e1083688. <https://doi.org/10.3389/fpubh.2023.1083688>
- Ray, S., & Dasgupta, A. (2012). Determinants of menstrual hygiene among adolescent girls: A multivariate analysis. *National Journal of Community Medicine*, 3(2), 294–301.

- Reid, A. M., Brown, J. M., Smith, J. M., Cope, A. C., & Jamieson, S. (2018). Ethical dilemmas and reflexivity in qualitative research. *Perspectives on Medical Education*, 7, 69–75. <https://doi.org/10.1007/s40037-018-0412-2>
- Reñosa, M. D. C., Mwamba, C., Meghani, A., West, N., Hariyani, S., Ddaaki, W., Sharma, A., Beres, L. K., & McMahon, S. A. (2021). Selfie consents, remote rapport, and Zoom debriefings: Collecting qualitative data amid a pandemic in four resource-constrained settings. *BMJ Global Health*, 6(1), Article e004193. <https://doi.org/10.1136/bmjgh-2020-004193>
- Rizvi, N., & Ali, T. S. (2016). Misconceptions and mismanagement of menstruation among adolescents girls who do not attend school in Pakistan. *Journal of Asian Midwives*, 3(1), 46–62.
- Sultan, S., & Sahu, D. S. (2017). Knowledge, attitude and practices about menstruation and related problems in adolescent girls. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 6(12), 5235–5240. <http://dx.doi.org/10.18203/2320-1770.ijrcog20175088>
- Usman, G., Abbas, K., Arshad, R., Muneer, A., Syed, H. S., Iqbal, A., Dar, F. N., Anum, U., Ahmed, M., Tehreem, K., Zulfi, M. H., & Khan, J. (2020). Knowledge and practice of menstrual hygiene management among women living in a low-income neighbourhood, Karachi, Pakistan. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 9(10), 3953–3959. <https://doi.org/10.18203/2320-1770.ijrcog20204277>
- Wasan, Y., Baxter, J. B., Rizvi, A., Shaheen, F., Junejo, Q., Abro, M. A., Hussain, A., Ahmed, I., Soofi, S. B., & Bhutta, Z. A. (2022). Practices and predictors of menstrual hygiene management material use among adolescent and young women in rural Pakistan: A cross-sectional assessment. *Journal of Global Health*, 12, Article e0405. <https://doi.org/10.7189/jogh.12.04059>
- Zakaria, M., Xu, J., Karim, F., & Cheng, F. (2019). Reproductive health communication between mother and adolescent daughter in Bangladesh: A cross-sectional study. *Reproductive Health*, 16, Article e114. <https://doi.org/10.1186/s12978-019-0778-6>

