

Assessment of Knowledge, Attitudes, and Practices Related to Menstrual Hygiene
among Female Adolescents

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Abstract

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Background:Menstrual hygiene is a crucial aspect of adolescent reproductive health. Poor knowledge, negative attitudes, and unsafe practices can lead to reproductive tract infections, urinary infections, and long-term complications including infertility. In many developing settings, cultural stigma, lack of awareness, and inadequate

facilities contribute to poor menstrual hygiene management among adolescent girls.**Aim:** The aim of the study was to "Assessment of Knowledge, Attitudes, and Practices Related to Menstrual Hygiene among Female Adolescents". **Methodology:** A descriptive cross-sectional research study design was used. Study used purposive sampling technique. The study population was female adolescent and sample sizes were 172. **Result:** The study was descriptive cross-sectional so descriptive statistics was applied, frequency distribution was calculated, and data normality was checked. The study reported that the participants with poor knowledge were 78(45.3%) the participants with moderate knowledge were 58 (33.7) and the participants with high knowledge were 36(20.9%). participants with negative attitude were 102(59.3%) and participants with positive attitude were 70(40.7%). the participants with bad practice were 112(40.65.1%) and

participants with good practice were 60(34.9%). **Conclusion.** The study concluded that the majority of participants had poor knowledge, practice and negative attitude regarding menstrual hygiene in female adolescent.

Key word: (Menstrual hygiene) knowledge, attitude and practice.

Introduction

Menstruation is the monthly shedding of the lining of the womb, which leads to vaginal bleeding, as part of the reproductive cycle. Menarche refers to the first episode of menstruation and the beginning of puberty in girls. Menstrual hygiene management (MHM) is the practice of using clean menstrual management materials, appropriate body hygiene, appropriate facilities to change materials and appropriate disposal of materials. Reproductive tract infections (RTIs) are infections of the reproductive organs, related to hygiene. Infertility is the inability to have a child after regular unprotected sex. Knowledge, attitude and practices (KAP) are the awareness and perceptions and practices about menstrual hygiene. (Bhusal, C. K. 2020).

Menstrual hygiene is a critical public health issue for millions of girls around the world. Globally, 500 million women and girls do not have access to menstrual hygiene facilities (Yongsi, 2021). Research shows 40-45% of schoolgirls have inadequate knowledge and unsafe practices (Belayneh & Mekuriaw, 2019). Developed nations have a large number of girls using unhygienic absorbents like rags, with 11% changing menstrual products only once a day (Upashe et al., 2015). At the national level, countries such as Pakistan are affected by low awareness, cultural taboo and poor sanitation facilities. At the local level, rural and underdeveloped areas have a greater prevalence of poor menstrual hygiene practices, owing to poverty, limited education, and limited access to menstrual products.

Menstruation is a normal biological phenomenon that occurs during puberty, around the ages of 10-19. Menstruation is a result of the thickening and shedding of the uterus lining due to hormonal changes. Biological and psychological changes at puberty affect girls' attitudes towards menstruation. Menstruation is often shrouded in taboos and beliefs that contribute to secrecy, shame and misconception (Johnston-Robledo & Chrisler, 2020). Lack of awareness before menarche also leads to a negative emotional response such as fear and shame (Seyed Hosseini, 2018).

Menstrual hygiene is essential for reproductive health. Good hygiene practices involve using clean absorbent materials, frequent changing of menstrual products, cleaning of the genital area and disposal of used materials (Bhusal, 2020). Failure to maintain menstrual hygiene is associated with increased risks of infections as the genitourinary tract is more vulnerable to infections during menstruation (Yaliwal et al., 2020). Improper practices such as the use of dirty cloths, poor washing and drying techniques are associated with infections and other complications.

Poor menstrual hygiene is a burden at local, national and global levels. At the local level, adolescent girls in low-income communities are hindered by privacy, inadequate sanitation and finances. At the national level, policies, health education and cultural constraints affect menstrual hygiene. Internationally, it is connected to gender disparities, school absenteeism and quality of life among adolescent girls (Sahiledengle et al., 2022). It also leads to school dropout and low academic performance.

Poor menstrual hygiene can lead to reproductive tract infections, urinary tract infections, pelvic inflammatory disease, and even infertility (Garg et al., 2012). Bacterial vaginosis, which can be caused by poor hygiene, makes women more susceptible to infections like HIV and human papillomavirus (Coudray & Madhivanan, 2020). Failure to prioritise

menstrual hygiene may result in complications with current and future reproductive health. Lack of knowledge among adolescents leads to risky behaviours, posing health threats. Menstrual knowledge and attitude impact hygiene. Parents are crucial in providing information about menstruation to adolescent girls prior to menarche (Al Omari et al., 2016). A lack of knowledge and taboo around the topic inhibits discussions and results in misconceptions and unsafe practices. Enhancing knowledge, attitude and practices are important to minimise health risks. This research aims to determine the knowledge, attitude and practice of adolescent girls to prevent problems like reproductive tract infection and infertility due to poor menstrual hygiene.

Methodology

This study employed a descriptive cross-sectional design to evaluate the knowledge, attitude and practices of menstrual hygiene among adolescent girls. The research was carried out in secondary schools with female adolescents between 10-19 years who had started menstruating. The accessible population for the study were female students who were present at the time of data collection and consented to participate. Purposive sampling was used to determine the sample from the target population. A sample of 172 was determined using Slovin's formula, with a population size of 300, a margin of error of 0.05 and a confidence level of 95%. Eligible participants included adolescent girls who had reached menarche, were available at the time of the study and provided written informed consent or assent and parental consent where needed. Girls aged less than 10 years or more than 19 years, those who had not reached menarche, mentally disabled persons and those who refused to participate in the study or were unwilling to answer all questions were excluded from the study.

Data collection was preceded by permission from the appropriate school authority. The selected secondary school setting was then approached for participation. Participants were briefed on the study and written informed consent was sought and obtained. Participants' anonymity was guaranteed. Data were collected using a pre-tested questionnaire. The questionnaire was divided into four parts: demographic, knowledge, attitude and practices. The questions on demographic information covered age, class, presence of toilets and living with parents or siblings. The questionnaire was administered to the participants, and data were collected under supervision to ensure proper filling of the questionnaire.

Data were analyzed using SPSS Version 27. Descriptive statistics were used to describe the population's demographic characteristics, knowledge, attitude and practices of menstrual hygiene. Normality tests were carried out before data analysis to determine statistical tests. Reliability and validity of the tool were checked to ensure accurate and consistent results. The findings were summarized in frequency, percentage and tables to allow easy interpretation.

Results

Table 1 presents the demographic characteristics of the study participants. The majority of respondents were aged 15–18 years (52.9%), while 47.1% were aged 12–14 years. Regarding education, 51.7% were in grade 9 and 48.3% in grade 10. All participants (100%) reported having toilet facilities at home. The main source of information on menstrual hygiene was parents (72.7%), followed by teachers (18.6%), friends (2.9%), social media (2.3%), and other sources (3.5%). In terms of family structure, 31.4% had one sister living together, 29.7% had two sisters, 19.8% had three sisters, and 19.2% had

no sisters. Most participants (71.5%) lived with both parents, while 18.6% lived with their mother only, 8.1% with their father only, and 1.7% with other guardians.

Table 1: Demographic Characteristics of Participants (n = 172)

Variable	Category	Frequency (n)	Percentage (%)
Age	12–14 years	81	47.1
	15–18 years	91	52.9
Education	Grade 9	89	51.7
	Grade 10	83	48.3
Toilet facility at home	Yes	172	100
Source of information	Mother/Father	125	72.7
	Teacher	32	18.6
	Friend	5	2.9
	Social media	4	2.3
	Other	6	3.5
Number of sisters	0	33	19.2
	1	54	31.4
	2	51	29.7
	3	34	19.8
Living parents	Both parents	123	71.5
	Only mother	32	18.6
	Only father	14	8.1
	Other	3	1.7

Table 2 shows the knowledge of adolescent girls regarding menstrual hygiene. Almost all respondents (98.8%) correctly identified menstruation as a normal physiological process, and all participants (100%) recognized sanitary pads as the best menstrual absorbent. A total of 75% believed bathing maintains hygiene during menstruation, while 80.8% reported that pads should be changed at least three times daily. About 69.8% stated that hand washing before and after changing pads is important. Misconceptions were also observed, as 24.4% believed tissue paper is a good absorbent and 48.3% considered cloth as suitable material. Overall, 45.3% had low knowledge, 33.7% moderate knowledge, and 20.9% high knowledge regarding menstrual hygiene.

Table 2: Knowledge Regarding Menstrual Hygiene (n = 172)

Variable	Category	Frequency (n)	Percentage (%)
Menstruation is a normal process	Yes	170	98.8
	No	2	1.2
Sanitary pad is best material	Yes	172	100
Bathing maintains hygiene	Yes	129	75.0
	No	43	25.0
Pad change ≥ 3 times/day	Yes	139	80.8
	No	33	19.2
Hand washing before/after	Yes	120	69.8
	No	52	30.2
Tissue as absorbent	Yes	42	24.4
	No	130	75.6
Cloth as absorbent	Yes	83	48.3
	No	89	51.7

Reuse of materials	Yes	34	19.8
	No	138	80.2
Safe disposal	Yes	154	89.5
	No	18	10.5
Poor hygiene causes infection	Yes	167	97.1
	No	5	2.9
Knowledge before menarche	Yes	96	55.8
	No	76	44.2
Overall Knowledge Level	Low	78	45.3
	Moderate	58	33.7
	High	36	20.9

Table 3 illustrates the attitudes of respondents toward menstrual hygiene. A small proportion strongly agreed (11.6%) and agreed (5.2%) that poor hygiene causes disease, while the majority strongly disagreed (56.4%). Regarding the importance of clean water and soap, responses were mixed, with 36.1% in agreement and 59.3% showing negative attitudes overall. More than half (55.8%) disagreed or strongly disagreed that hand washing before cleaning the genital area prevents infection. Overall, 59.3% of participants demonstrated a negative attitude toward menstrual hygiene, while 40.7% showed a positive attitude.

Table 3: Attitude Toward Menstrual Hygiene (n = 172)

Variable	Category	Frequency (n)	Percentage (%)
Hygiene neglect causes disease	Strongly agree	20	11.6
	Agree	9	5.2

	Neutral	5	2.9
	Disagree	41	23.8
	Strongly disagree	97	56.4
Clean water & soap important	Strongly agree	12	7.0
	Agree	50	29.1
	Neutral	8	4.7
	Disagree	54	31.4
	Strongly disagree	48	27.9
Drying genital area important	Strongly agree	20	11.6
	Agree	76	44.2
	Neutral	11	6.4
	Disagree	30	17.4
	Strongly disagree	35	20.3
Hand washing prevents infection	Strongly agree	7	4.1
	Agree	14	8.1
	Neutral	8	4.7
	Disagree	40	23.3
	Strongly disagree	103	59.9
Overall Attitude	Negative	102	59.3
	Positive	70	40.7

Table 4 presents menstrual hygiene practices among respondents. Most participants (76.2%) used disposable sanitary pads, while 18% used cloth and a smaller proportion used cotton (4.7%) or panty liners (1.2%). A significant number (60.5%) reported being

unable to purchase sanitary pads, mainly due to stigma (27.3%) and lack of money or access. During menstruation, 51.2% bathed once daily and 25.6% did not bathe. About 57% changed pads three or more times daily, while 13.4% changed only once. Most participants (89%) washed the genital area daily, and 87.2% used soap and water. Overall, 65.1% had poor menstrual hygiene practices, while 34.9% demonstrated good practices.

Table 4: Practices of Menstrual Hygiene (n = 172)

Variable	Category	Frequency (n)	Percentage (%)
Material used	Sanitary pad	131	76.2
	Cloth	31	18.0
	Cotton	8	4.7
	Panty liner	2	1.2
Unable to buy pads	Yes	104	60.5
	No	68	39.5
Reason for inability	No money	29	16.9
	Shop far/unavailable	31	18.0
	Stigma	47	27.3
	Other	65	37.8
Source of money	Guardians	144	83.7
	Friends	4	2.3
	Teacher	6	3.5
	Self	18	10.5

Bath during menstruation	Once	88	51.2
	Twice	11	6.4
	≥3 times	29	16.9
	None	44	25.6
Pad change frequency	Once	23	13.4
	Twice	43	25.0
	≥3 times	98	57.0
	None	8	4.7
Wash genital daily	Yes	153	89.0
	No	19	11.0
Wash material	Water only	22	12.8
	Soap & water	150	87.2
Hand washing	Before & after	76	44.2
	Before	12	7.0
	After	80	46.5
	None	4	2.3
Change pad at school	Yes	119	69.2
	No	53	30.8
Overall Practice	Bad	112	65.1
	Good	60	34.9

Discussion

This study examined the knowledge, attitude and practice of menstrual hygiene among adolescent girls. The results showed that the majority of the participants had adequate knowledge but a significant number had low knowledge. This is consistent with another study in Southern Ethiopia, which reported low knowledge of menstrual hygiene among adolescent schoolgirls (Belayneh & Mekuriaw, 2019). The findings imply that while knowledge is present there are gaps in holistic knowledge about correct menstrual hygiene and safe menstrual practices.

In the current study, almost all schoolgirls considered menstruation a natural phenomenon and sanitary pads as an ideal absorbent. Similar results were found in studies conducted in India and Bangladesh where knowledge of sanitary pads as a safe material for menstruation was high among adolescents (Kaur et al., 2018; Bhusal, 2020). However, there were some misconceptions about other absorbent materials like cloth and tissue paper, which is consistent with studies in low-income countries where traditional practices are still prevalent (Upashe et al., 2015).

In terms of attitude, most respondents had a negative attitude towards menstrual hygiene practices, especially in maintaining hygiene and preventing infections. Similar findings have been documented in studies in Pakistan and Ethiopia where cultural influences and misinformation also led to a negative attitude towards menstruation (Shah et al., 2023; Belayneh & Mekuriaw, 2019). On the other hand, research in urban and more developed areas has revealed more positive perceptions due to improved literacy and health knowledge (Johnston-Robledo & Chrisler, 2020).

The study also highlighted misconceptions around hygiene practices (handwashing and genital hygiene) where many participants incorrectly disagreed with scientifically proven practices. Similar findings in studies from Nepal and India demonstrate that there is a

lack of knowledge about hygiene, leading to unsafe practices among adolescents (Yadav et al., 2017; Lahme et al., 2018). These contradictions reflect the impact of cultural taboos and lack of sexual and reproductive health education that shape attitudes and practices.

This study showed that a majority of the participants used disposable sanitary pads; however, many reported affordability and stigma as a challenge in obtaining menstrual products. This has been documented worldwide where the lack of access to menstrual hygiene products is due to poverty and cultural restrictions (Elledge et al., 2018; Yongsu, 2021). Research in sub-Saharan Africa also shows affordability and accessibility of menstrual hygiene materials remain a challenge (Sahiledengle et al., 2022).

Menstrual hygiene practices in this study were generally poor, despite having basic knowledge. While good practices like changing the pad frequently and washing with soap and water were identified, some inconsistencies were noted. Such a finding was also reported in the studies conducted in Ethiopia and India where adolescents had partial practice of correct menstrual hygiene practice despite having knowledge (Torondel et al., 2018; Bhusal, 2020). These results suggest that good knowledge does not translate into good practice.

The study also identified the family, especially mothers, as the primary source of information about menstruation. This is in agreement with studies showing mothers' influence on menstrual knowledge and opinions among adolescents (Al Omari et al., 2016). But there were gaps in school-based education and lack of formal reproductive health education programs, consistent with other studies that stress the importance of menstrual health education in schools (Garg et al., 2012; Coudray & Madhivanan, 2020).

Conclusion

The present study assessed knowledge, attitude, and practice regarding menstrual hygiene among female adolescents. The findings revealed that most participants had moderate to low knowledge about menstrual hygiene, although awareness of menstruation as a normal physiological process and the use of sanitary pads was high. A considerable proportion of respondents demonstrated negative attitudes toward menstrual hygiene, particularly regarding hygiene practices and infection prevention. Menstrual hygiene practices were also found to be inadequate in a significant number of participants, despite the use of sanitary pads being common. Financial constraints, stigma, and limited access to menstrual products were identified as major barriers. Overall, gaps in knowledge, negative attitudes, and suboptimal practices were evident among adolescent girls, indicating a need for improved menstrual health education and support systems.

Recommendation

School-based reproductive health education programs should be strengthened to improve accurate knowledge regarding menstrual hygiene. Structured awareness sessions should be integrated into the curriculum to address misconceptions and promote healthy practices. Parents, especially mothers, should be encouraged to communicate openly with adolescent girls about menstruation before menarche. Health professionals and teachers should actively participate in providing accurate information and guidance. Access to affordable and safe menstrual hygiene products should be improved through government and community-based interventions. Schools should ensure availability of clean water, private toilets, and disposal facilities to support proper menstrual hygiene management. Community awareness campaigns should be

implemented to reduce stigma and cultural taboos surrounding menstruation, promoting a more supportive environment for adolescent girls.

References

- Al Omari, O., et al. (2016). Experience of menarche among Jordanian adolescent girls: An interpretive phenomenological analysis. *Journal of Pediatric and Adolescent Gynecology*, 29(3), 246–251.
- Belayneh, Z., & Mekuriaw, B. (2019). Knowledge and menstrual hygiene practice among adolescent school girls in southern Ethiopia: A cross-sectional study. *BMC Public Health*, 19, 1595.
- Bhusal, C. K. (2020). Practice of menstrual hygiene and associated factors among adolescent school girls in Dang district, Nepal. *Advances in Preventive Medicine*, 2020.
- Coudray, M. S., & Madhivanan, P. (2020). Bacterial vaginosis—A brief synopsis of the literature. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 245, 143–148.
- Elledge, M. F., et al. (2018). Menstrual hygiene management and waste disposal in low and middle income countries—a review of the literature. *International Journal of Environmental Research and Public Health*, 15(11), 256.
- Garg, R., Goyal, S., & Gupta, S. (2012). India moves towards menstrual hygiene: Subsidized sanitary napkins for rural adolescent girls—Issues and challenges. *Maternal and Child Health Journal*, 16, 767–774.
- Gottlieb, A. (2020). Menstrual taboos: Moving beyond the curse. In *The Palgrave Handbook of Critical Menstruation Studies* (pp. 143–162).

- Johnston-Robledo, I., & Chrisler, J. C. (2020). The menstrual mark: Menstruation as social stigma. In *The Palgrave Handbook of Critical Menstruation Studies* (pp. 181–199).
- Kamal, M., Zalikha, S., Wahdi, S., & Ikbal, M. (2019). Blood women in perspective of fiqh Syafi'iyah and medical science. *Britain International of Humanities and Social Sciences Journal*, 1(2), 159–166.
- 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.
- Lahme, A. M., Stern, R., & Cooper, D. (2018). Factors impacting on menstrual hygiene and their implications for health promotion. *Global Health Promotion*, 25(1), 54–62.
- Parent, C., et al. (2022). Menstrual hygiene products: A practice evaluation. *Journal of Gynecology Obstetrics and Human Reproduction*, 51(1), 102261.
- Sahiledengle, B., et al. (2022). Menstrual hygiene practice among adolescent girls in Ethiopia: A systematic review and meta-analysis. *PLOS ONE*, 17(1), e0262295.
- Shah, S. F., et al. (2023). Knowledge, attitude, and practices regarding menstrual hygiene among girls in Ghizer, Gilgit, Pakistan.
- Seyed Hosseini, A. S. (2018). Unpreparedness, impurity and paradoxical feeling: Menstruation narratives of Iranian women. *International Journal of Adolescent Medicine and Health*, 32(6), 20180008.
- Shumie, Z. S., & Mengie, Z. A. (2022). Menstrual hygiene management knowledge, practice and associated factors among school girls, Northeast Ethiopia. *PLOS ONE*, 17(7), e0271275.
- Torondel, B., et al. (2018). Association between unhygienic menstrual management practices and prevalence of lower reproductive tract infections. *BMC Infectious Diseases*, 18, 1–12.

- Upashe, S. P., et al. (2015). Assessment of knowledge and practice of menstrual hygiene among high school girls in Western Ethiopia. *BMC Women's Health*, 15, 1–8.
- Yadav, R. N., Joshi, S., Poudel, R., & Pandeya, P. (2017). Knowledge, attitude, and practice on menstrual hygiene management among school adolescents.
- Yongsi, H. B. N. (2021). How lack or insufficient provision of water and sanitation impacts women's health working in the informal sector. In *Urban Health and Wellbeing Programme: Policy Briefs* (Vol. 2, pp. 45–50).
- Z. Belayneh, & Mekuriaw, B. (2019). Knowledge and menstrual hygiene practice among adolescent school girls in southern Ethiopia: A cross-sectional study. *BMC Public Health*, 19, 1595.