

Original Article**Knowledge, Attitude and Practice Regarding Menstrual Hygiene among Women of Reproductive Age in Duhabi, Sunsari****Aachal Dhital*, Amrit Rijal, Arpan Niroula, Nishan Adhikari, Bigyan Adhikari, Sneha Adhikari**3rd Year Student, Bachelor of Medicine, Bachelor of Surgery, Nobel Medical College Teaching Hospital, Biratnagar, NepalArticle Received: 14th September, 2025; Accepted: 17th November, 2025; Published: 31st December, 2025DOI: <https://doi.org/10.3126/jonmc.v14i2.87981>**Abstract****Background**

Menstrual hygiene remains a public health concern in Nepal, particularly in rural areas where cultural restrictions, limited awareness, and inadequate access to menstrual products influence women's practices. Existing studies predominantly focus on adolescents, leaving gaps in understanding menstrual hygiene among the wider reproductive-age population. This study assessed the knowledge, attitudes, and practices regarding menstrual hygiene among women of reproductive age in Duhabi, Sunsari.

Materials and Methods

A descriptive cross-sectional study was conducted from April to August 2024 among 102 women aged 15–49 years in Ward No. 11 of Duhabi Municipality. Participants were selected through convenience sampling. Data were collected using a structured, interviewer-based questionnaire covering socio-demographic characteristics and menstrual hygiene related knowledge, attitudes, and practices. Ethical approval and written informed consent were obtained. Descriptive statistics were analyzed using SPSS version 29.


Results

A total of 102 women of reproductive age (15 to 49 yrs) were analyzed. Knowledge assessment showed that 58.8% of participants recognized disposable sanitary pads as the best absorbent, while 41.2% believed in cloth. Most women (89.2%) believed that poor menstrual hygiene could lead to health issues, identifying problems like infections (4.9%) and diseases related to the uterus (35.3%). Cultural restrictions were prevalent, with 79.4% avoiding religious activities during menstruation. Daily bathing (93.1%) and genital cleaning (100%) were widely practiced. The majority (62.7%) had frequent changing habits of absorbents, while the infrequency of changing habits, reported by 37.3% of respondents, indicates a significant knowledge gap.

Conclusion

The findings show a combination of appropriate and suboptimal menstrual hygiene practices among women in Duhabi. Despite basic awareness of hygiene, significant gaps persist in absorbent choice, frequency of changing, and culturally influenced restrictions. These patterns reflect how economic limitations and cultural beliefs shape menstrual hygiene behaviors in this rural community.

Keywords: Attitude, Health Knowledge, Hygiene, Menstruation, Reproductive Health

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Introduction

The menstrual cycle is a normal physiological process experienced by women of reproductive age, defined by the World Health Organization as 15–49 years [1, 2]. In Nepal, 28.3% of the total population comprises women of reproductive age [3]. Menstruation generally occurs monthly and lasts between two to seven days, requiring appropriate hygiene practices to maintain health and comfort [1, 4].

Poor menstrual hygiene is a major public health concern and can lead to adverse outcomes such as reproductive and urinary tract infections [5, 6]. In Nepal, menstrual health remains deeply influenced by stigma, limited awareness, restrictive cultural norms, inadequate WASH facilities, and poor access to appropriate menstrual products [7–9]. Most existing studies in Nepal focus primarily on adolescent girls, resulting in a limited understanding of menstrual hygiene among the broader reproductive-age population [7,8,10,11].

This study aims to assess the knowledge, attitudes, and practices regarding menstrual hygiene among women of reproductive age in Duhabi, Sunsari, Nepal. Understanding these factors is essential for designing targeted interventions to promote safe and informed menstrual hygiene management.

Materials and Methods

A descriptive cross-sectional study was conducted to assess the knowledge, attitude, and practice regarding menstrual hygiene among women of reproductive age. The study was carried out in Ward No. 11 of Duhabi Municipality, Sunsari District, Nepal, from April 2024 to August 2024. This ward was selected due to its diverse socio-economic composition and accessibility. Ethical approval was obtained from the Institutional Review Committee of Nobel Medical College Teaching Hospital, Biratnagar, Nepal. Prior to data collection, informed written consent was obtained from all participants. Confidentiality and anonymity were maintained throughout the study. Women aged 15–49 years who had menstruated regularly for the past six months were included. Women with surgical menopause, pregnancy, and those with secondary amenorrhoea lasting more than six months were excluded. The sample size of 96 respondents

was calculated using the prevalence-based formula (Cochran formula ($n = \frac{Z^2pq}{d^2}$) for cross-sectional studies with an expected prevalence of 50% based on previous literature [12]. The sample size included in the study was 102 from Ward No. 11 (76.7 sq. km) Duhabi Municipality which was selected purposively. Within the ward, participants were approached through convenience sampling due to feasibility and population distribution. A structured questionnaire was developed based on existing literature and consultation with subject experts. It consisted of socio-demographic variables and items assessing knowledge, attitude, and practice related to menstrual hygiene. Trained data collectors conducted face-to-face interviews, each lasting approximately 15–20 minutes. Collected data were entered, cleaned, and analyzed using the Statistical Package for Social Sciences (SPSS) version 29. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to describe the findings.

Results

The study included 102 women of reproductive age in Ward No. 11, Duhabi Municipality, with a diverse range of socio-demographic characteristics. The mean age was 30.4 ± 8.9 . Ethnically, Tharu and Urao were in the majority. One-third were illiterate and half of them were housewives. 90% of them had their first menstruation before 15 years of age and 90% had heard of menstruation between 11 and 16 years of age. All the participants had regular menstruation for the last 6 months. [Table 1]. Three-fourths of them recognized disposable sanitary pads as the best absorbent and reported changing their absorbent every 3–6 hours. 86% said that unhygienic menstrual practices would cause some health problems as shown in Table 2.

Two-thirds of them considered menstruation as a natural process and the majority liked to avoid religious activities during menstruation as shown in Table 3. Practices reported by participants highlighted that 52% used disposable pads, while 48% preferred reusable cloths. Disposal practices included washing (50%), burying (32.4%), and open dumping (17.6%). Encouragingly, 93.1% maintained daily bathing routines during menstruation, and 100% cleaned the genital area regularly as shown in Table 4.



Table 1: Demographic characteristics of the study participants n = 102

Variable		Frequency	Percentage
Ethnicity	Tharu	34	33.3
	Uraw	28	27.5
	Madhesi	20	19.6
	Dalit	19	18.6
	Muslim	1	1
Education	Illiterate	36	35.3
	Primary level	22	21.6
	Secondary Level	32	31.4
	Higher Secondary	12	11.7
	Level and above		
Occupation	Housewife	53	52
	Farmer	24	23.5
	Student	9	8.8
	Employee	5	4.9
	Business	5	4.9
	Labor	4	3.9
	Unemployed	2	2.0
Type of family	Nuclear	53	52
	Joint	42	41.2
	Extended	7	6.9
Education of head of family	Illiterate	35	34.3
	Primary level	35	34.3
	Secondary Level	22	21.6
	Higher Secondary	7	6.9
	Bachelor	3	2.9
Age of menarche	10 - 12	33	32.4
	13-15	58	56.8

Table 2: Knowledge of reproductive-age women regarding menstrual hygiene n = 102

Variable		Frequency	Percentage
Best absorbent during menstruation	Cloth	42	41.2
	Disposable Pad (Available in market)	60	58.8
Frequency of changing the absorbent in a day during menstruation	Every 3-6 hours	64	62.7
	After 6 hours	20	19.6
	After completely soaked	18	17.6
Not maintaining menstrual hygiene during menstruation can lead to health problems	yes	91	89.2
	no	11	10.8
What kind of health problems?	Diseases relating to the uterus	36	35.3
	No idea	31	27.5
	itching	14	13.7
	pain	10	9.8
	infection	5	4.9
	infertility	3	2.9
	Bad smell	2	2
	cancer	1	1

Table 3: Attitudes of reproductive-age women regarding menstrual hygiene n = 102

Variable		Frequency	Percentage
Menstruation is	Natural Process	66	64.7
	Blessing	24	23.5
	Sin	8	7.8
	Disease	4	3.9
Certain practices and habits should be avoided during menstruation.	Religious activities	81	79.4
	Exercise/ carrying load	57	55.9
	Cooking/ Housekeeping	28	27.5
	Working outside home	27	26.57
	Bathing	15	14.7

Table 4: Practices of reproductive-age females regarding menstrual hygiene n = 102

Variable		Frequency	Percentage
Absorbent usually used during menstruation	Reusable Cloth	49	48
	Disposable Pad (Available in the market)	53	52
What do you do with the used absorbent?	wash	51	50
	bury	33	32.4
	Open dump	18	17.6
How often do you bath/wash your body during your period?	When the period is finished	7	6.9
	Every second day	0	0
	Daily	95	93.1
Do you clean the genitals and area around the genitals during your period?	Yes	102	100

Discussion

This study provides an overview of the knowledge, attitudes, and practices (KAP) related to menstrual hygiene among reproductive-age women in the rural community of Duhabi, Nepal. The findings reveal significant gaps in menstrual hygiene management (MHM), highlighting challenges related to knowledge, practices, and sociocultural influences. The study highlights the disparity between knowledge and practice regarding menstrual absorbents. While 58.8% recognized disposable pads as the best absorbent, 42% still favored cloth. The majority of participants (52%) preferred using disposable sanitary pads as suitable absorbents, 48% still relied on reusable cloth. This 6% gap (of choosing to use cloth despite addressing disposable pads as best absorbent) underscores barriers in



access to sanitary pads, reflecting findings from previous studies in rural Nepal, where economic constraints and limited accessibility often emerge as barriers to adopting better hygiene practices [7,13,14]. Despite widespread awareness of basic hygiene practices such as daily bathing and genital cleaning, suboptimal practices such as open dumping of used absorbents by 17.6% of respondents indicate environmental concerns that need to be addressed. Reusable menstrual pads have been identified in the literature as cost-effective, safe, sustainable, and environment-friendly alternatives to cloth, tampons, and even single-use sanitary pads in resource-poor countries, like Nepal [13,14].

While the majority (62.7%) had frequent changing habits of absorbent, the infrequency of changing menstrual products, reported by 37.3% of respondents, indicates a significant knowledge gap regarding menstrual hygiene. The practice of washing and reusing clothes, while potentially sustainable, requires proper hygiene education to ensure safety. Addressing the gap requires educational intervention emphasizing the importance of timely replacement of menstrual absorbents to prevent reproductive health issues alongside outreach programs to prioritize hygiene practices [15,16]. Sociodemographic factors, particularly age and education, were significant determinants of menstrual hygiene. Younger women (<25 years old) and those with higher education levels mostly used disposable pads, indicating greater awareness and access to modern menstrual products. In contrast, older women and those with lower educational attainment used reusable clothes more often, which might indicate barriers such as, lack of awareness, affordability, or strong cultural norms. This indicates the role of education for adolescent girls in shaping good menstrual hygiene practices. Consistent with other studies, initiatives in Nepal and other regions have successfully used peer education and school-based programs to improve menstrual hygiene [15]. Interventions targeting older women or those with limited education should focus on creating awareness about modern MHM products and providing subsidized access to these products. Community-based programs and partnerships with local organizations could facilitate the distribution of affordable menstrual products while promoting sustainable practices.

Attitudinal findings revealed a complex interplay of cultural and religious norms with menstruation. While two-thirds of respondents recognized menstruation as a natural phenomenon, the

same proportion also adhered to behavior restrictions, such as abstaining from religious activities, cooking, or touching certain household items. These behavioral proscriptions hail from deep-rooted beliefs/taboo that menstruation is a period of impurity, reflecting broader South Asian cultural norms [17]. Such beliefs may perpetuate stigmas and hinder progress toward open discussions on menstrual health. These results align with the findings of Sharma et al. (2022), indicating that cultural norms continue to shape menstrual attitudes across Nepal [8]. Interventions could attempt to normalize positive views of women's monthly bleeding, either through mass media campaigns showing women functioning unhindered by their menses or through community events celebrating women's cycles [17].

Conclusion

This study revealed that although most women recognized the importance of menstrual hygiene, significant gaps remained in knowledge, attitudes, and practices. Nearly half of the participants continued using reusable cloths, and more than one-third changed absorbents infrequently, indicating limited awareness of safe menstrual hygiene practices. Cultural restrictions were also prominent, as many women avoided religious activities and household tasks during menstruation.

These findings suggest that menstrual hygiene management in Duhabi is influenced by economic constraints, limited access to sanitary products, and persistent cultural beliefs. Targeted educational initiatives, improved availability of affordable menstrual products, and community-based awareness programs are necessary to enhance knowledge and support safer practices. Strengthening these areas may contribute to better menstrual health outcomes among reproductive-age women in this rural setting.

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