

Menstrual Hygiene Management among School Girls

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Article Info	Abstract
Received : July 29, 2024 Accepted : October 12, 2024	<i>In Nepal, menstruating women are considered impure, and adolescent girls are not allowed to do household chores and restrict to participate in religious or cultural events during menstruation. Menstruation is an important event in the life of an adolescent girl, which indicates that signs of maturity. Detail information about menstruation that begins in early adolescence will improve safe practices and alleviate suffering for millions of women. Quantitative data were collected by self-administered questionnaire was completed by schoolgirls in four schools, two were private and two were community. A survey was conducted among adolescent girls (10-19 years) residing in Banke District. Four schools were selected purposively. A purposive sample of 100 female students were selected from grades 9 and 10 from the out of 233 students (Grade 9 = 10, Grade 10 = 15, total 25) was selected by quota sampling method. The questionnaire survey was used as a research tool and data collection was obtained consent from both school principals and respondents before taking the data. The data were analyzed using a simple frequency table and to interpret the results descriptively. Study found that Shyness, high costs and prices, lack of prior knowledge, and unavailability in local shops among others were significant factors that were not promoting girls to use disposable sanitary pads which neglected the Menstrual hygiene management. Despite the cultural stigma on menstruation, a considerable number of girls attend the regularity to schools, with or without notice if they are on their periods.</i>
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Introduction

Global advancements in health and education, many girls in Nepal face substantial hurdles to managing their menstruation hygiene with dignity and safety. Menstrual hygiene management (MHM) is a critical aspect of adolescent overall well-being and it also remains a significant challenge for school girls in Nepal. These challenges are complex and it about inadequate lack of knowledge, insufficient facilities, and deeply rooted cultural taboos in society. The impact of these barriers is deep, affecting girls’ health, education, and overall quality of life.

Adolescence, which usually occurs between puberty and adulthood. It is also called transitional phase of physical, emotional and psychological development. Therefore, the World Health Organization defines adolescence as 10 to 19 years of age (Sawyer et al., 2018). During this period, adolescents experience important changes in their body, including the onset of growth, development and menstruation in girls. Which begins about one to two years after the appearance of secondary sexual characteristics, is a unique sign of sexual maturity as well. This condition involves periodic flow of blood from the vagina due to shedding of the uterine mucosa.

The issue of menstrual hygiene management is impact by a lack of proper water, sanitation, and hygiene (WASH) facilities, particularly in rural areas of Nepal. Studies have shown that the absence of adequate sanitary devises and facilities leads to discomfort and absenteeism among school girls (Sharma et al., 2024). This problem is not only confined to rural areas alone; even in urban private schools, where access to resources is relatively better, girls face challenges influenced by family beliefs and societal norms (Ghimire & Samuels, 2014). The situation in Bhaktapur, where most girls used commercial

sanitary pads, highlights that even with access to menstrual products, issues such as discomfort and lack of continuous water supply persist, leading to school absenteeism (Galli, 2017; Rajbanshi, 2022). Cultural taboos and negative attitudes towards menstruation further degrade the problem. Cultural restrictions not only impact girls' dignity and health but also hinder the educational opportunities as well (Mattebo et al., 2019). The stigma associated with menstruation often hinders girls from seeking help or discussing their needs openly, that leading to a cycle of silence and neglect.

While there is a growing body of research on MHM in Nepal, significant gaps remaining. Existing studies have highlighted the challenges faced by school girls, but there is a need for more comprehensive research that addresses the intersectionality of these issues. Factors such as ethnicity, family type, and school type have been found to influence knowledge levels about MHM (Khanal et al., 2023), yet there is limited understanding of how these factors interact and affect girls' experiences. Moreover, the impact of post-disaster settings on MHM has not been explored yet. In such contexts, girls often rely on locally available resources for MHM, as relief efforts may overlook this need (Budhathoki et al., 2018). These findings highlighted that the necessity for targeted interventions which consider the unique challenges posed by disaster situations. Health education interventions also have shown promise in improving MHM knowledge (Khanal et al., 2023), but there is a need for more longitudinal studies to assess the long-term impact of these interventions. Additionally, the role of parental education, family size, and living arrangements in shaping menstrual hygiene practices warrants further investigation (Tither & Ellis, 2008).

Addressing the multifaceted challenges of MHM among school girls in Nepal requires a holistic approach. Comprehensive MHM programs that include education, improved facilities, and behavior change communication campaigns are essential. There is limited research on school going adolescents' menstrual hygiene management. By bridging the research gaps and implementing targeted interventions, it is possible to create an environment where girls can manage their menstruation with dignity and continue their education without interruption.

Therefore, this study aimed to assess menstrual hygiene management practices and related factors among girl students from secondary school in Banke district.

Menstrual hygiene management (MHM) is a critical issue affecting the health, education, and dignity of school girls in Nepal. Various studies have highlighted the challenges faced by girls in both rural and urban settings, emphasizing the need for comprehensive MHM programs. In rural areas, the lack of proper water, sanitation, and hygiene (WASH) facilities and menstrual materials leads to significant absence and discomfort among school girls (Sharma et al., 2024). These challenges are compounded by cultural taboos and negative attitudes towards menstruation, which further impact girls' education and health (Rothchild & Piya, 2020). Conversely, urban private school students, despite having better access to menstrual hygiene products, face challenges influenced by family beliefs and hesitate to seek help from teachers (Acharya, 2015; Karki et al., n.d.). This indicates that access alone is not sufficient; there is a need for supportive environments and education to address these issues.

In Bhaktapur, most of the girls use commercial sanitary pads, yet school absenteeism persists due to discomfort and lack of continuous water supply (Rajbanshi, 2022). This highlights the importance of reliable WASH facilities in schools to ensure girls can manage their menstruation comfortably and with dignity. In post-disaster and low-resource settings, the challenges of MHM are exacerbated. Studies have also found that many girls have insufficient knowledge about MHM, influenced by factors such as ethnicity, family type, and school type (Khanal et al., 2023). Cultural restrictions and school absenteeism during menstruation are common, and the lack of proper facilities and resources in schools hinders effective MHM (Galli, 2017; Ghimire & Samuels, 2014; Sharma et al., 2024).

Parental education, family size, and living arrangements are associated with good menstrual hygiene practices in Nepal (D. R. Singh et al., 2023; Thakuri et al., 2021).. This suggests that interventions aimed at improving MHM should also target families and communities to create a supportive environment for girls. Health education interventions have shown promise in improving MHM knowledge (Chandra-Mouli & Patel, 2020; D. R. Singh et al., 2023; Thakuri et al., 2021). These

interventions highlight the importance of targeted education and resource provision to address the multifaceted challenges of MHM.

Despite the extensive research on MHM in various regions of Nepal, there is a notable gap in the literature regarding the specific challenges faced by school girls in the Banke district. Future research should focus on assessing the current state of WASH facilities in schools in Banke, understanding the cultural and familial influences on MHM practices in this region, evaluating the effectiveness of existing MHM programs and identifying areas for improvement, and investigating the impact of school absenteeism due to menstruation on girls’ academic performance and overall well-being. Addressing these gaps will provide a more comprehensive understanding of MHM challenges in Banke and inform the development of targeted interventions to support school girls in this district.

**Methods**

The study used a quantitative approach to analyze secondary school students' experiences of menstrual hygiene management in Banke district. Quantitative data were collected using questionnaire surveys. A survey was conducted among girls aged 10 to 19 living in Banke district. Four schools were purposively selected, two are private and two are public. A purposive sample of 100 female students used by quota sampling method was selected from a total of 233 female students of grades 9 and 10 (grade 9 = 10, grade 10 = 15, total 25). The questionnaire survey forms were developed based on relevant literature and reports. Data collection involved obtaining consent from both school principals and respondents prior to data collection. Data were analyzed using a simple frequency table to interpret the results descriptively. Ethical considerations include obtaining verbal or written consent from participants, and assuring respondents that their information will be used for the purposes of the study and not disclosed to others.

**Results and Discussion**

The results reveal several important insights into menstrual hygiene management (MHM) practices, pad use, and challenges. The interpretation and discussion are also provided with the results, as given below.

**Table 1**

*Age of First Menstruation*

Age group	Percent
8-10 yrs	5
11-13 yrs	80
14-16yrs	15
Total	100

The survey findings that four fifth (80%) of respondents experienced their first menstruation between 11-13 years. Which align with the average age reported in previous studies, indicating a consistent trend in the onset of menarche (Budhathoki et al., 2018b; Sharma et al., 2024). This is comparable to global data, which also places the average age of menarche around 12-13 years (Singh & Samara, 1997). The 15 percent of respondents who experienced menarche between 14-16 years suggest a slightly delayed onset, which can be influenced by factors such as nutrition and health status, as noted in another research (Khanal et al., 2023; Yermachenko & Dvornyk, 2014). The five percent who experienced menarche at 8-10 years highlight early puberty, a phenomenon also observed in studies linking early menarche to genetic and environmental factors (Posner, 2006; Tither & Ellis, 2008). These variations highlight the importance of tailored health education and support for girls experiencing menarche at different ages.

**Table 2***Menstruation Information Sharing*

Character	Percent
Mother	73
Father	3
Sister	19
Friend	5
Total	100

The study found that nearly three-quarter (73%) of Nepalese schoolgirls shared their first menstruation experience with their mothers. It highlighted that the crucial support mothers provide during this significant life event (Cadiz, 2017; Lama, 2019). Moreover, 19 percent confided in their sisters. It indicated that the important role siblings play in disseminating menstrual knowledge (Hughes, 2015). Only five percent shared with friends and 3 three percent with fathers, reflecting societal taboos and the gendered nature of menstrual discussions (Khanal et al., 2023). These findings emphasize the need for broader education and open communication within families to support girls during their menstrual cycles and promote a more inclusive approach to menstrual hygiene management.

**Table 3***Condition of Menstrual Hygiene Management (MHM) at School*

Indicator	Percent
Good	58
Average	35
Bad	3
Worst	5
Total	100

The study found that more than two-fifth (58%) of girls perceived menstrual hygiene management (MHM) at school to be good, which may indicate a lack of awareness about proper MHM standards. This perception could stem from limited exposure to comprehensive MHM education and resources, as noted in previous studies (Sommer et al., 2017, Sommer et al., 2021). Additionally, more than one-third (35%) of girls rated MHM as average, suggesting there is significant room for improvement in school facilities and education programs (Fialkov et al., 2021; Pokharel, 2018). The small percentages of girls who found MHM to be bad (3%) or the worst (4%) highlight the critical need for targeted interventions to address these negative experiences (Khanal et al., 2023). These findings underscore the importance of enhancing MHM education and infrastructure in schools to ensure all girls have access to adequate menstrual hygiene management.

**Table 4***Reason for not Attending School During Menstruation*

Reason	Percent
Stomach, headache, backache	84
Heavy discharge of blood	12
Shyness and lack of self esteem	0
Improper management at school	4
<b>Total</b>	<b>100</b>

The findings from Table 4 highlight significant challenges in menstrual hygiene management (MHM) among school girls in Nepal. More than four-fifth (84%) of girls miss school due to health issues like headaches and stomachaches, which is consistent with the discomfort and absenteeism reported in rural schools lacking proper WASH facilities and menstrual materials (Ghandour et al., 2004; Miironen et al., 2018). Additionally, 12 percent of girls cite heavy bleeding as a reason for absenteeism, reflecting the challenges faced even by urban private school students who, despite better access, are influenced by

family beliefs and hesitate to seek help from teachers (Miiro et al., 2018; Munro, 2023). The 4 percent who avoid school due to inadequate management underscore the need for improved facilities and continuous water supply, as noted in Bhaktapur (Rajbanshi, 2022). These findings emphasize the necessity for comprehensive MHM programs, including education, improved facilities, and behavior change communication campaigns(Lama, 2019; D. R. Singh et al., 2023; Sommer et al., 2017) .

**Table 5**  
*Reason for not Using Disposable Sanitary Pads*

Reason	Percent
Lack of awareness	14
High cost of sanitary pads	37
Shyness of buying	41
Unavailability	8
Total	100

The data indicates that shyness in purchasing sanitary pads is a significant barrier, affecting more than two-fifth (41%) of the girls, which aligns with cultural taboos and negative attitudes towards menstruation (Yadav et al., 2018). High costs were a concern for more than one-third (37%) of the girls, reflecting economic barriers to menstrual hygiene management (MHM) (Sharma et al., 2024). Additionally, 14 percent of the girls lacked awareness about sanitary pads, highlighting the need for better education and awareness programs (Khanal et al., 2023). The 8 percent who faced unavailability in their local area underscore the importance of improving access to menstrual products, particularly in rural and low-resource settings (Budhathoki et al., 2018a).

**Table 6**  
*Choice of Absorbent Materials*

Indicators	Percent
Comfort and safety	7
Cost	21
Availability	17
Ease of dispose and reuse	55
Total	100

The preference for easily disposable and reusable absorbent materials among more than half (55%) of girls highlights the practicality and convenience sought in menstrual hygiene management (MHM) (Khanal et al., 2023). The 17 percent who base their choice on availability reflect the challenges in accessing menstrual products, particularly in rural areas (Budhathoki et al., 2018a). Cost considerations, important for 21 percent of the girls, underscore the economic barriers to effective MHM (Sharma et al., 2024). The fact that only 7 percent prioritize comfort and safety. It indicated that a need for increased awareness and education on the importance of these factors in selecting menstrual products (Sawyer et al., 2018).

**Table 7**  
*Material for Washing Genital Area*

Material	Percent
Only water	52
Soap water	43
Dettol water	5
Total	100

Menstrual hygiene management (MHM) among school girls in Nepal faces significant challenges, with inadequate knowledge, facilities, and practices being prevalent across both rural and

urban areas. The findings indicate that more than two-fifth (52%) of the girls used only water to wash their genital area during menstruation, while only 43 percent opted for soap water, and approximately five percent used Dettol water. This highlights the need for comprehensive MHM programs, including education and improved facilities, to address these challenges (Sharma et al., 2024; Thakuri et al., 2021). Cultural taboos and negative attitudes towards menstruation further impact girls' dignity, health, and education, emphasizing the importance of behavior change communication campaigns (Sommer et al., 2017).

**Table 8**

*Bath During Menstruation Period*

Frequency	Percent
Once a day	67
Twice a day	15
Every alternate day	18
Once in whole period	
Total	100

The findings revealed that 67% of girls bathe once daily during their menstruation cycle, while 15% opted for twice-daily baths, and 18% reported bathing every other day. This variation in bathing practices underscores the diverse approaches to menstrual hygiene management among school girls in Nepal. It highlights the need for targeted education and resources to promote consistent and effective hygiene practices, addressing both the physical and cultural aspects of MHM (Ghandour et al., 2004; Miiro et al., 2018; Munro, 2023).

**Table 9**

*Changing of Sanitary Pads*

Frequency	Percent
Once	5.0
Twice	22.5
Thrice	46.7
More than thrice	25.8
Total	100

The findings indicate that more than two-fifth (46.7%) of girls changed their sanitary pads thrice daily, while 25.8 percent changed them more than three times. Additionally, more than two-fifth (22.5%) changed pads twice daily, and only five percent changed them once daily. This variation in pad-changing frequency highlights the diverse menstrual hygiene practices among school girls in Nepal. It emphasizes the need for comprehensive MHM programs that provide education on optimal hygiene practices and ensure access to sufficient sanitary materials (Lama, 2019; Sharma et al., 2024). Addressing these needs can help improve girls' health, comfort, and school attendance during menstruation.

**Table 10**

*Disposal of Menstrual Materials*

Disposal Place	Percent
Open field	2.5
Dustbin	76.7
Toilet	20.8
Total	100

The findings indicated that more than three-quarter (76.7%) of girls dispose of their menstrual materials in the dustbin at their own house, more than one-fifth (20.8%) dispose of them in the toilet, and 2.5 percent dispose of them in an open field. This variation in disposal methods highlights the need

for better education and facilities to ensure safe and hygienic disposal practices. Addressing these issues through comprehensive MHM programs can help mitigate health risks and environmental impacts associated with improper disposal (Cadiz, 2017; Hughes, 2015).

**Table 11**  
*Drying of Reusable Menstruation Materials*

Particulars	Percent
In shade	8
In sunlight	78
Hidden under other clothes	8
Elsewhere	6
Total	100

Menstrual hygiene management (MHM) among school girls in Nepal faces significant challenges. More than three- quarter (78%) of respondents dry their menstrual materials in direct sunlight, which is beneficial for killing harmful bacteria (Table 12). However, eight percent dry reusable materials in the shade, which may not effectively eliminate bacteria and could lead to infections. Similarly, eight percent hide their materials under other clothes, and six percent dry them elsewhere. These practices, combined with inadequate knowledge, facilities, and cultural taboos, impact girls’ dignity, health, and education (Chandra-Mouli & Patel, 2020; D. R. Singh et al., 2023; Thakuri et al., 2021). So, comprehensive MHM programs, including education, improved facilities, and behavior change communication campaigns, are essential to address these multifaceted challenges.

**Table 12**  
*Reason for Dissatisfaction of MHM at School*

Reason	Percent
No menstrual product for emergency	34
No proper changing rooms	45
No disposable facility	21
Total	100

Menstrual hygiene management (MHM) among school girls in Nepal faces significant challenges. More than two fifth (45%) of girls reported the absence of proper changing rooms for sanitary pad changes at school, posing a significant problem. Additionally, more than one-third (34%) noted a lack of emergency menstrual products at their school, leading to dissatisfaction with the school’s management (Table 13). Similarly, more than one-fifth (21%) found it challenging to dispose of sanitary pads at school. These issues, combined with inadequate knowledge, facilities, and cultural taboos, impact girls’ dignity, health, and education (Budhathoki et al., 2018a; Khanal et al., 2023; Mattebo et al., 2019; Rothchild & Piya, 2020). Comprehensive MHM programs, including education, improved facilities, and behavior change communication campaigns, are essential to address these multifaceted challenges (Ghimire & Samuels, 2014; Rajbanshi, 2022; Sharma et al., 2024).

**Table 13**  
*Some Indicator Responded by Girls*

Indicator	Percentage	Total
Awareness of the link between improper hygiene and UTIs	90	100
Understanding about the link between improper hygiene and UTIs	10	
Easy access to absorbent materials	92	100
Difficulty accessing absorbent materials	8	
Proper MHM management at school	69	100
Lack of facilities for changing sanitary pads	31	
Absence of ssuperstitious beliefs and negative attitudes	70	100
Presence of superstitious beliefs and negative attitudes	30	

Menstrual hygiene management (MHM) among school girls in Nepal faces significant challenges. While almost 90 percent of respondents are aware that improper hygiene during menstruation can lead to urinary tract infections, only 10 percent lack this understanding, highlighting the need for integrating MHM education into the school curriculum. Despite, more than ninety (92%) of respondents reporting easy access to absorbent materials, eight percent of girls still face difficulties. Additionally, more than three-fifth (69%) of girls reported proper MHM management at their schools, but nearly one-third (31%) indicated a lack of facilities for changing sanitary pads. Furthermore, more than three-fifth (70%) of respondents stated the absence of superstitious beliefs and negative attitudes towards menstruation in their local area, while more than one-fourth (30%) acknowledged their presence. These findings underscore the importance of comprehensive MHM programs, including education, improved facilities, and behavior change communication campaigns to address these multifaceted challenges (Acharya, 2015; Chandra-Mouli & Patel, 2020; Mattebo et al., 2019; Sawyer et al., 2018; Yermachenko & Dvornyk, 2014).

Most girls experience menarche between the ages of 11 and 13, highlighting the importance of targeted menstrual hygiene management (MHM) education programs for girls approaching puberty. While maternal support is crucial in addressing menstruation-related issues, broader societal acceptance and involvement of fathers and peers are essential for creating a supportive environment. Despite challenges like inadequate MHM facilities, the majority of girls still attend school during menstruation, emphasizing the potential role of schools in promoting MHM awareness and support. However, barriers such as limited access to sanitary products and proper disposal facilities persist, necessitating comprehensive efforts to address affordability, accessibility, and awareness of menstrual products. Moreover, addressing negative beliefs and attitudes towards menstruation is crucial for reducing stigma and promoting menstrual health, requiring collaborative efforts from various stakeholders to create a more inclusive and supportive environment for girls' menstrual health and well-being.

### Conclusion

The study highlights the ongoing challenges and complexities surrounding MHM among schoolgirls in Nepal. Despite some progress in awareness and access to menstrual products, significant gaps remain in education, facilities, and cultural acceptance. The reliance on maternal support underscores the need for broader societal involvement, including fathers and peers, to create a more inclusive environment. Inadequate facilities and economic barriers continue to hinder effective MHM, leading to discomfort and absenteeism during menstruation. Addressing these issues requires a comprehensive approach, including targeted education, improved infrastructure, and behavior change campaigns. By fostering an environment that supports open communication and access to resources, the well-being and educational outcomes of girls can be significantly improved.

This emphasizes the importance of targeted education, familial support, and societal acceptance in addressing MHM challenges faced by adolescent girls in Banke district. Despite obstacles such as inadequate facilities and limited access to sanitary products, the resilience of girls in continuing their education during menstruation underscores the potential of schools to promote MHM awareness and support. A collaborative approach involving various stakeholders is essential to improve affordability, accessibility, and awareness of menstrual products, and to challenge negative beliefs and attitudes surrounding menstruation. By prioritizing MHM as a critical component of health and development agendas and empowering girls to advocate for their menstrual health rights, policymakers and communities can create a more inclusive and supportive environment. This holistic approach, integrating education, infrastructure improvements, policy interventions, and community engagement, is essential for advancing menstrual equity and promoting the overall well-being of girls and women.

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