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Knowledge, Attitude, and Practice on Menstrual Hygiene among School going Adolescents of Tokha Municipality, Kathmandu, Nepal

Nujan Tiwari,[1*] Sanju Maharjan,[2] Prema Basnet[3]

[1]Central Department of Public Health, Institute of Medicine, Kathmandu, Nepal.

[2]Central Department of Public Health, Institute of Medicine, Kathmandu, Nepal.

[3]Nobel College Sinamangal, Kathmandu, Nepal.

ABSTRACT

Introduction: Menstruation is a natural physiological process that starts in females usually between the ages of 11 and 15 (menarche) and ends at menopause. Menstrual hygiene, one of the crucial components for the well-being of women, has significant implications for girls' education, empowerment, and overall social development. But yet the topic remains shrouded in taboo and misconceptions. This study focuses on the knowledge, attitudes, and practices of school-going adolescents regarding menstrual hygiene in Tokha Municipality, Kathmandu.

Methods: A descriptive cross-sectional study involved 335 students in grades 8, 9, and 10 from public schools in Tokha Municipality, Kathmandu. Students were selected through random sampling, with prior ethical approval. Adolescent girls who hadn't experienced menarche were excluded. The research utilized UNICEF's Menstrual Hygiene Management (MHM) assessment tool and conducted data analysis using SPSS version 20.

Results: Out of total adolescents, more than eight out of ten males (86%) were aware that menstruation is a normal physiological process whereas the majority of females (94.5%) were aware of the same fact. The percentage of female adolescents facing restriction during menstruation was 34.7% and the percentage of adolescents having an average level of attitude towards menstruation was 60.3%. The majority of female adolescents participating in the study had above-average levels of practice on menstruation.

Conclusions: The study findings indicate a prevalent awareness of menstruation as a natural process among adolescents in Tokha Municipality, Kathmandu. However, challenges such as restrictions during menstruation and average attitudes suggest the need for targeted interventions to foster a more supportive environment for adolescent well-being.

Keywords: *Adolescent; Menarche; Menopause; Menstruation; Physiological.*

INTRODUCTION

Menstruation, a normal physiological process typically begins between ages 11 and 15 in females known as menarche signifying a significant milestone in their transition to womanhood.[1]

Menstrual taboos and myths harm women's health due to societal silence, especially among adolescents. Acknowledging boys' role in menstrual hygiene is vital for shaping future policies. Schools are key for helping adolescents cope with puberty but challenges arise for girls, especially if schools lack proper water, sanitation, and hygiene facilities, making it harder for them to attend and participate during menstruation.[2]

Inadequate menstrual hygiene facilities in public schools, such as water supply, absorbents, and privacy

***Correspondence:** nujantiwari09@gmail.com
Central Department of Public Health, Institute of Medicine, Kathmandu, Nepal.

lead to absenteeism and girls dropping out. So, this study aimed to assess the knowledge, attitude, and practice of these adolescents and assess the school environment for dignified menstruation.

METHODS

A descriptive cross-sectional study was conducted within the public schools of Tokha Municipality, Kathmandu, comprising a total of eight public schools in that locality. Data collection occurred between March 15th and April 5th, 2022, focusing on randomly chosen adolescents from classes 8, 9, and 10 as the study population. Notably, adolescent girls who had not undergone menarche were excluded from the assessment of menstrual hygiene practices. The study specifically targeted students in grades 8, 9, and 10 within the public schools of Tokha Municipality.

Sample Size Calculation,

n= sample size

p = (50%) 0.5

q= 1-p

Z= 1.96 for Confidence Interval of 95%

e = margin of error, 5%

$(n)= Z^2pq/d^2$

$= (1.96)2 *0.5*0.5/(0.05)2$

$= 384$

For a finite population, We have a total population i.e, the finite population is N=1490.

$n_o= n/(1+n/N)$

$n_o=384/(1+384/1490)$

$n_0=305$

Assuming a non-response rate of 10%, the final sample size, adjusted accordingly, was determined to be n_o+10% of n_o=335. Therefore, a minimum of 335 students were sampled for this study. To obtain the sample, a list of all schools in Tokha Municipality was acquired from the Education Section, including the total number of students in grades 8, 9, and 10 from each school. Proportionate simple random sampling was then applied, with the sample size constituting 22.48% of the total population, ensuring an equivalent percentage of students were randomly selected from each school.

Data collection tools and techniques

The study employed a structured questionnaire based on UNICEF's tools for assessing Menstrual Hygiene Management (MHM)[3] in schools for data collection. To ensure reliability, the questionnaire underwent pretesting on 10% of the representative study population, and necessary edits were made based on feedback from the pre-test. The self-administered questionnaires were distributed to students in the classroom for data collection. The analysis of the collected data was conducted using SPSS version 20.0. Ethical approval was obtained from the Institutional Review Committee (IRC) of the Institute of Medicine, Reference number 374(6-11)E2078/079 and additional approvals were secured from the Education section of the municipality and each school. Informed consent was obtained from parents, and written assent was obtained from participants under 18 years of age.

RESULTS

A total of 335 participants were randomly selected as the study sample. The socio-demographic characteristics of these participants, including age, sex, ethnicity, and religion, were assessed. Among the total respondents, more than eight out of ten (86.0%) male adolescents were aware that menstruation is a normal physiological process. In the case of girls, the majority of them (94.5%) were aware of this fact, as indicated in Table 1.

Table 1. Knowledge of menstruation and its cause (n=335)

Characteristics	n(%)
Menstruation definition by males(n=136)	
Physiological	117 (86.0)
Pathological	2 (1.5)
Don't know	17(12.5)
Menstruation definition by females (n=199)	
Physiological	188(94.5)
Pathological	1(0.5)
Don't know	9(4.5)
Other	1(0.5)

While assessing knowledge regarding the appropriate duration to change a pad, a significant majority of female adolescents (86.9%) indicated that it should be changed within 3-4 hours. In contrast, 45.6% of male respondents expressed uncertainty about the recommended interval for pad changes. Regarding the restrictions faced by females during menstruation, 34.7% of female adolescents reported encountering some form of restriction. Notably, restrictions on activities such as cooking and worship were the most commonly experienced limitations during menstruation. The overall understanding of menstruation was gauged using a composite score of knowledge levels, revealing that more than six out of ten (65.1%) respondents possessed an above-average level of knowledge on menstrual hygiene, as illustrated in Table 2.

Table 2. Knowledge of menstrual hygiene (n=335)

Characteristics	n(%)
Knowledge of menstrual hygiene	
Above average	218(65.1)
Below average	117(34.9)

The attitude of the respondents was assessed through a rating scale consisting of different statements towards menstruation. While assessing this, it was found that the majority (60.3%) of the respondents had below-average levels of attitude towards menstruation (Table 3).

Table 3. Attitude of respondents towards menstruation (n=335)

Characteristics	n(%)
Attitude towards menstruation	
Above average	133(39.7)
Below average	202(60.3)

Likewise, on the practice aspect of menstrual hygiene, most (91.6%) of female respondents were found using commercial sanitary pads as absorbent during menstruation. About 98.4% of the participants responded that pads were available at their schools whereas only 86.0% of the respondents reported the availability of the water in schools' toilets. While assessing the practice of female respondents on menstrual hygiene with these questionnaires, more than seven out of ten (76.7%) of them had a practice level above average. Table 4 represents the overall practice of adolescent girls on menstrual hygiene assessed through a few practice-related questions.

Table 4. Practice on menstrual hygiene (n=193)

Characteristics	n(%)
Practice on menstrual hygiene	
Above average	148(76.7)
Below average	45(23.3)

A comparative bivariate analysis of the existing knowledge level and various factors like sex, ethnicity, religion, and grade of the participants is depicted in Table 5. A significant association was found between the sex and the knowledge level of participants on menstrual hygiene with a P value less than 0.05. The significant association may reflect disparities in the education and awareness efforts related to menstrual hygiene.

Table 5. Association of sex of participants with their knowledge of menstrual hygiene (n=335)

Characteristic	Category	Existing level of knowledge		χ^2	P-value
		Below average n(%)	Above average n(%)		
Sex	Male	74(63.3)	62(28.2)	38.25	0.001*
	Female	43(36.8)	156(71.8)		

The respondents were categorized into 11 to 14 and 15 to 19 years of age. Half of the respondents (52.8%) were between the age group of 15 to 19 years of age. More than half of the respondents (59.4%) were female and 40.6% were male. Chhetri was a major ethnic group with 42.1% of the total population followed by Janajati represented by Table 6.

Table 6. Socio-demographic characteristics of participants (n=335)

Characteristics	Frequency(%)
Age (Mean: 15.59; SD±1.31)	
10-14	158(47.2)
15-19	177(52.8)
Sex	
Female	199(59.4)
Male	136(40.6)
Ethnicity	
Chhetri	141(42.1)
Janajati	123(36.7)
Brahmin	41(12.6)
Dalit	19(5.7)
Madhesi	11(3.3)

DISCUSSION

The primary purpose of this research was to assess the level of knowledge, attitude, and practice on menstrual hygiene among school going adolescents of Tokha Municipality, Kathmandu. The study revealed that still 54.4% of the male respondents had below average level of knowledge of menstrual hygiene whereas this percentage is just 21.6%, less than half in the case of female respondents. This indicates that menstruation is treated as only a matter of girls till now. This topic is excluded from the concern of boys in our context which coincides with findings of other research as well.[4]

This research unveils a noteworthy 97% awareness among both male and female urban adolescents regarding sanitary pads as the preferred menstruation absorbent. This high awareness is likely attributed to the myriad of information sources available to this demographic. However, a significant concern arises from the finding that 45.5% of male respondents lack knowledge about the appropriate duration for changing pads. This knowledge gap underscores the need for a more intricate approach in menstrual hygiene education programs, ensuring inclusivity and comprehensive understanding. Addressing these gaps is imperative to foster a supportive environment, dispel myths, and promote optimal menstrual health among adolescents in urban areas.

In the context of attitudes toward menstruation, it was found that 16.0% of the participants strongly agreed with the statement that performing religious rituals is not considered sacred during menstruation. This finding aligns with the findings of the study which stated that traditional religions consider menstruation ritually unclean.[5]

This study, conducted in an urban area with readily available information sources, offers valuable

insights into the prevailing societal attitudes towards menstruation. The revelation that 34.7% of female respondents encounter restrictions during menstruation underscores the persistent influence of cultural beliefs shaping perceptions around menstrual impurity. Particularly notable is the commonality of restrictions on kitchen and temple access, mirroring findings observed in various studies carried out in Nepal. These restrictions not only reflect deeply ingrained cultural norms but also shed light on the need for a more detailed examination of the socio-cultural factors influencing attitudes towards menstruation. Understanding and addressing these ingrained beliefs are crucial steps toward fostering a more inclusive and informed perspective on menstruation within urban communities.

Likewise, while assessing the practice of female respondents on menstrual hygiene, 76.7% of them had a practice level above average. This indicates that an enabling environment is being created inside school premises which is reflected by the data that almost all of the respondents confirmed the availability of sanitary pads at their schools.

The different factors like age, sex, ethnicity, religion, father's education level, mother's education level, and their association with the knowledge and practice of menstrual hygiene were analyzed. A significant association was found between the sex of the respondents and the existing level of knowledge on menstrual hygiene. It means that there is a need for more comprehensive and inclusive education on this topic to bridge the knowledge gap between gender groups. Whereas other factors did not show a significant association either with knowledge or with practice on menstrual hygiene.

In addressing the limitations of the study, it's important to note that students who were absent on the day of data collection were excluded from participation. This exclusion may introduce a potential limitation, as the absence of these students could impact the representativeness of the sample. Additionally, there is a possibility of recall bias within the sample, particularly concerning some questions in the tools used for data collection.

CONCLUSIONS

The study underscores that menstruation is widely recognized as a natural physiological process by the majority of participants. A positive aspect emerges in the form of above-average levels of knowledge and practice on menstrual hygiene among most participants. However, a significant portion of respondents demonstrated below-average attitudes towards menstruation, signaling the persistence of cultural or societal stigma and taboos, even in urban settings. The unfortunate reality persists that females continue to face restrictions during menstruation. It is imperative to shift the narrative towards promoting healthy practices during this period rather than imposing unnecessary constraints. Although public schools are equipped with infrastructures to support healthy menstrual hygiene practices, there is a critical need to extend this awareness and support to families and communities, ensuring that females experience dignified menstruation beyond the school environment.

CONFLICT OF INTEREST

None

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