



## Research Article

# Knowledge and Practices on Menstrual Hygiene Management Among Adolescent Girls of Kaski District, Nepal

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### Abstract

The study was conducted to understand the cultural and social practices and knowledge prevailing on menstrual hygiene management among adolescent girls in Nepal. A school-based cross-sectional study was conducted among 122 adolescent girls of class VII to X at three schools of Kaski district, Nepal. A pre-tested structured questionnaire was used for assessing socio-demographic profiles, knowledge, and experiences on menstruation, practices (social and cultural) regarding menstrual hygiene management. The data collected were analysed using SPSS version 23 for windows. The mean age at menarche was found to be 12.5±0.9. The majority (73%) girls were aware of menstruation prior to the attainment of it. Most of them got the information from mother (45.9%), the majority (69.7%) used sanitary pad as the absorbents, however, most of them (78.4%) throw the sanitary pad in the garbage. Many cultural and social taboos and restrictions were found associated with menstruation. The majority (91.8%) were not allowed to participate in religious activities, 45.1% were not allowed to touch things in the house, two-thirds (67.2%) were not allowed to cook, and 60.7% were not allowed to enter the kitchen. Most of the adolescent girls were isolated even from normal daily activities and they were not happy with these restrictions during the menstruation. Instead, they urged the need for more support, care, and hygienic practices for proper hygiene management to lead a healthy life. This paper reflects the actual knowledge and practices prevailed in the society during menstruation and emphasizes on providing the correct knowledge on health and helping to correctly practice hygiene during menstruation.

### Introduction

Adolescence stage is the special period of transition from childhood to adulthood which involves dramatic physical, sexual, psychological, and social developmental changes (WHO 2020). Adolescence in girls has been considered as

a transition phase from girlhood to womanhood with rapid physical, biological, and behavioural changes (UNFPA 2015, WHO 2020). This transitional period is marked with the onset of menarche which is one of the important

physiological changes that occurs in adolescent girls (UNFPA 2015). The age of menarche varies with geographical conditions, racial factors, nutritional diets, environmental factors, and involvement in physical activity (Adhikari *et al.*, 2006). Menstrual hygiene management is the prime requirement for adolescents for a healthy life (Paul *et al.*, 2014). Menstrual hygiene management starts with delivering awareness and information about menstruation and menstrual hygiene practices. Menstruation is a natural process; however, it has been associated with different taboos and practices around the globe (Poureslami and Osati-Ashtiani, 2002; Dasgupta and Sarkar, 2008; Thakre *et al.*, 2011; Patle and Kubde, 2014; Udayar *et al.*, 2016).

Menstruation is considered as unclean, a matter of shame, and bound to social taboos in the context of Nepal, and therefore practices and taboos vary between communities in Nepal (Adhikari *et al.*, 2006; Sapkota *et al.*, 2013). Some common practices during menstruation are excluding girls and women from regular social and cultural life such as restrictions on free mobility around houses, not being able to touch family members (especially male) and water points, exclusion from religious activities, a compulsion to sleep in the floor, etc. (Adhikari *et al.*, 2006; Sapkota *et al.*, 2013; Paul *et al.*, 2014; Parajuli *et al.*, 2016).

Adolescent girls who are transitioning from childhood to womanhood might find difficulty in coping with the practices that are prevalent in the community. Cultural and social restrictions derive girls to follow the wrong practices of hygiene management during menstruation. Also, in our society, most of the adolescent girls do not get enough information on menstruation and they are not aware of menstrual hygiene management (Sooki *et al.*, 2016). This, directly and indirectly, contributes to infections & problems related to sexual and reproductive health, school absenteeism, and emotional imbalance (Burbank, 2002; UNFPA, 2015). Access to enough water and soap, sanitation facilities, proper sanitary absorbents together with clear information on menstrual hygiene management, and social inclusion during menstruation will help adolescents and women for good physical health as well as psychosocial well-being (Mahon and Fernandes, 2010; Sida 2016).

The objectives of the study are to understand the cultural and social practices associated with menstruation, and knowledge prevailing on menstrual hygiene management among adolescent girls in Nepal. Hence, this study will contribute to better understand the real scenario of the society which will help to raise awareness, designs the programs, and advocate for the correct hygiene practice during menstruation.

## Methods

The school-based cross-sectional study was conducted on adolescent girl students of grade VII to X at three schools of Pokhara metropolitan city, Kaski district, Nepal. Out of three schools, one was a public school and two were private schools. Schools were chosen purposively and a universal sampling technique was used to include all the adolescent girl students studying in standard VII-X of selected schools which resulted in a total of 122 samples for the study. A pilot study was conducted among 10% of the total sample and their findings were not included for the analysis of this study. A Pre-tested structured questionnaire was used for assessing socio-demographic profile, knowledge, and experiences on menstruation, social and cultural practices regarding menstruation and practices on hygienic practices for menstrual hygiene management. Written informed consent from the principle of the school and assent from the students who were willing to participate were taken before the study was initiated. The quantitative data collected were processed and analysed using proportions with Statistical Package for Social Sciences (SPSS) version 23 for windows.

## Results

### *Socio-Demographic Findings*

The findings show that the age of the adolescent girls in the study ranges from 12 years to 18 years, maximum respondents (46.7%) belong to the age of 14-15 years. The mean age of the students was nearly 14.35 years. The majority of respondents (86.9%) belonged to the Hindu religion, less than half (45.1%) belonged to Brahmin/Chettri ethnicity, and 77% belonged to the nuclear family. The respondents' fathers were found to be more educated than their mothers. Out of the total, 47.5% of the respondents' fathers had an education of secondary level whereas 38.5% of the mothers' education level was up to the primary level, and 10.7% were illiterate.

### *Knowledge and Experiences on Menstruation*

The mean age at menarche was found to be  $12.5 \pm 0.9$  whereas the perceived normal age of menarche by adolescent girls was  $14.38 \pm 1.815$ . Among the respondents, a majority (83.7%) of adolescent girls had correct knowledge about menstruation, however only 73% of girls were aware of menstruation prior to attainment of it. Most of the respondents (45.9%) who were aware of menstruation prior to attainment of it received the information from mothers. Similarly, maximum respondents (81.1%) shared first with their mothers about menarche, over one-thirds were confused (37.7%) and frightened (38.5%) at their menarche (Table 1).

Tiredness and back pain were found to be the most common problems followed by 34.4% dysmenorrhoea. For the remedial measures for problems during menstruation, most

of them (75.4%) maintained personal hygiene (Table 1). Among the total respondents on knowledge of menstruation, 50.8% defined it as a monthly cycle where

blood flows from the uterus for 4-5 days in every adolescent female (Table 2).

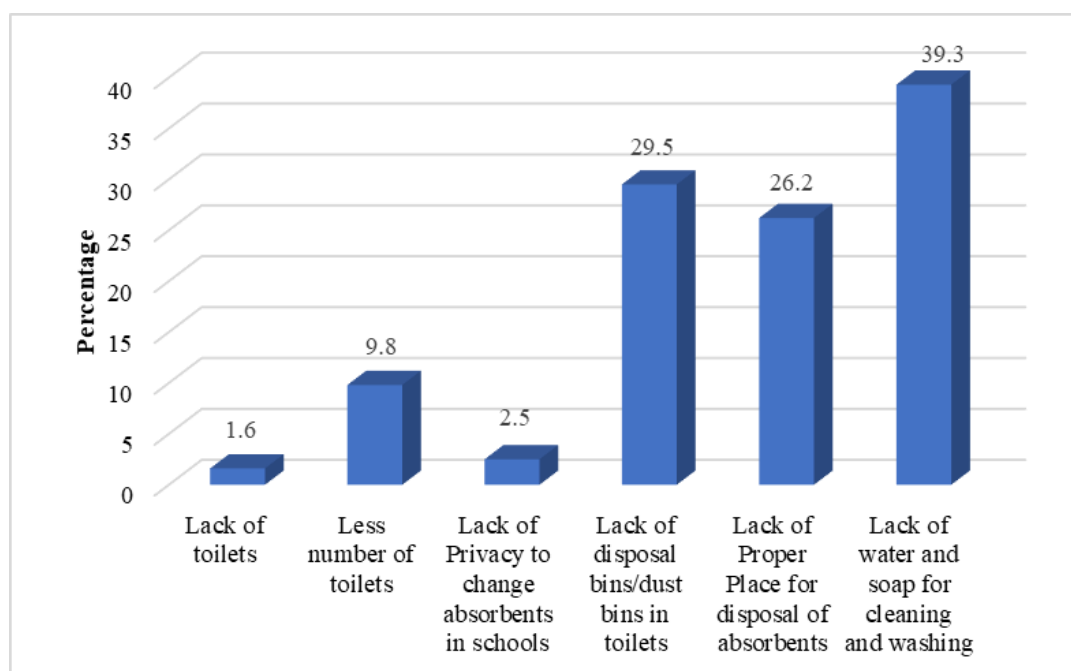
**Table 1** Knowledge and experiences on different aspects of menstruation

Characteristics	Categories	Number	Percent
Definition of menstruation	Correct answer	122	83.7
Aware about menstruation prior to attainment of menarche	Yes	89	73
First person with whom respondent share about their menarche	Mother	99	81.1
	Sisters	15	12.3
	Friends	6	4.9
	Other relatives	2	1.6
Experience at Menarche	Confusing	46	37.7
	Expectant	27	22.1
	Frightened	47	38.5
	Others(specify)	2	1.6
Attitude toward Menarche	Undesirable	27	22.1
	Unprepared	45	36.9
	Satisfactory	50	41
Days of usual flow of menstruation	2-3 days	20	16.4
	4-5 days	70	57.4
	More than 5 days	32	26.2
Source of information*	Mother	56	45.9
	Teachers/books	41	33.6
	Sisters	10	8.2
	Friends	9	7.4
	Radio/F.M/television	3	2.5
	Health workers	4	3.3
Problems faced during menstruation*	Dysmenorrhoea	42	34.4
	Loss of appetite	23	18.8
	Tired and Back pain	91	74.5
	Excessive blood loss	23	18.8
<b>Remedial measures for problems during menstruation*</b>	Maintain personal hygiene	92	75.4
	Take rest	43	35.2
	Drink lots of water / eat fruits	30	24.6
	Exercise	9	7.4
	Take medicines	8	6.6

\* Overall percentage exceeds as it was multiple choice question hence analysis is done taking each source, symptoms and problems to be 100%

**Table 2:** Knowledge about menstruation

Description	Number	Percent
Monthly cycle where blood flows from the uterus for 4-5 days in every adolescent female	62	50.8
Blood coming from vagina	4	3.3
Monthly flow of dirty blood from uterus or vagina	20	16.4
Natural process occurring in every adolescent female	34	27.9
A sign of maturity, flow of blood from urethra	2	1.6
<b>Total</b>	<b>122</b>	<b>100</b>



**Fig. 1:** Problem faced in school during menstruation

**Practices Regarding Menstrual Hygiene**

The findings on practice of menstrual hygiene among adolescent girls showed that 69.7% used sanitary pad, 4.9% used cloth, and 25.4% used both sanitary pad and cloth as the absorbents during menstruation. Among the total respondents using the cloth absorbents, more than a half (56.76%) used to wash cloth with soap and water and dry it in the sun while one-fifth (21.62%) used to wash cloths and dry where other people can't see. Most of the adolescent girls (59.8%) changed absorbents twice a day. On the practice related to the frequency of bathing during menstruation, it was found that a majority (68%) used to bath directly on the third day and only 23% bathed daily.

Moreover, it was found that most of the respondents (72.2%) cleaned their external genitals frequently (2-3 times a day) and some of the respondents (9.8%) cleaned their external genitals rarely (once in 2-3 days/while bathing) during their menstruation (Table 3). Almost all (98.4%) of adolescent girls in this study do not miss their schools during menstruation. It was reported that 1.6% of adolescent girls who missed their schools during menstruation were due to dysmenorrhoea. Adolescent girls mentioned some problems faced in school during menstruation (Fig. 1).

**Table 3** Hygiene practices during menstruation

Characteristics	Categories	Number	Percent
Type of absorbents used during menstruation (n=122)	Sanitary pad	85	69.7
	Cloth	6	4.9
	Both sanitary pad and cloth	31	25.4
Method of disposal of cloth absorbents (n=37)	Wash cloth with soap and water and dry it in sun	21	56.6
	Wash cloths and dry where other people can't see	8	21.62
	Throw the used cloth absorbents to garbage	5	13.51
	Burn the cloth	2	5.41
	Wash and dry in dark rooms	1	2.7
Method of disposal of sanitary pad absorbents (n=116)	Throw in garbage	91	78.40
	Burn pad	14	12.1
	Dispose pad in pit	11	9.5
Frequency of changing absorbents per day (n=122)	once a day	11	9.1
	twice a day	73	59.8
	≥3 times a day	38	32.1
Practice of bathing during menstruation (n=122)	Daily	28	23
	Once in third day	83	68
	Once directly on fourth day	11	9
Practice on cleaning external genital during menstruation (n=122)	Frequently (2-3 times a day)	88	72.2
	Occasionally (once a day)	22	18
	Rarely (once in 2-3 days/while bathing)	12	9.8

### Social and Cultural Practices During Menstruation

Many cultural and social restriction prevailing during menstruation was found. A majority (91.8%) were not allowed to go to a temple/ participate in religious activities, nearly half (45.1%) were not allowed to touch things in the house, two-thirds (67.2%) were not allowed to cook and 60.7% were not allowed to enter the kitchen. Similarly, 38.5% were not allowed to touch/sit/talk with a male member of the family, 34.4% were not allowed to stay/ go in other's house, 24.6% were using/wearing older clothes, 22.1% were using older cuisines/mattress/blankets to sit and sleep during menstruation. Also, it was found that nearly half (45.9%) were allowed to enter the kitchen after taking bath on 4<sup>th</sup> day during menstruation. About, 17.2% were practicing staying away in a separate place away from home or in corner of the house, 14.8% were restricted to go to field or play, and 24.6% were not allowed to sleep on their own bed. Those who were not allowed to sleep on their own bed were sleeping either on the floor or in a separate bed. A few (7.4%) faced different restrictions on diet during

menstruation. Different diet restrictions during menstruation such as not allowed to eat meat (4.1%), not allowed to drink enough water (0.8%), and not allowed to eat spicy and sour food (2.4%) were reported. Besides these, other restrictions mentioned by respondents were "not allowed to see the sun during first menstruation", "hide during first menstruation", and "not allowed to touch water" during menstruation.

### Discussion

In this study, the mean age at menarche was 12.5±0.9 and perceived age of menarche was 14.38±1.815 which was similar to the findings from other studies which had reported the mean age at menarche to be 12.69±0.95 (Sunuwar *et al.*, 2010) and 13.1±0.9 (Sapkota *et al.*, 2013). Likewise, the perceived normal age of menarche was 12.5±2.5 (Sapkota *et al.*, 2013) and 12 years (Parajuli *et al.*, 2016). Regarding knowledge and experiences related to menstruation, the finding of the present study showed that

majority (50.8%) of the respondents considered menstruation as a monthly cycle where blood flows from the uterus for 4-5 days in every adolescent female which is slightly different from the findings of the study (36%) (Sapkota *et al.*, 2013). The finding contrasts with a previous study (Adhikari *et al.* 2006) where only 6% of girls reported that menstruation is a normal physiological process. The findings of this study that 73% girls were aware about menstruation prior to menarche, mother as the main source of information (45.9%), and the majority shared their first menarche experience with their mothers are concurrent with the findings from similar studies (Sapkota *et al.*, 2013; Parajuli *et al.*, 2016). All other findings of this study regarding problems faced during menstruation and remedial measures applied were similar except the finding that dysmenorrhea was the most common problem among school-going adolescents of rural Nepal (Sapkota *et al.*, 2013).

This study showed that the majority (69.7%) of the girls used sanitary pads as absorbent during menstruation. Only 4.9% of girls used cloth absorbents during menstruation while 25.4% used both sanitary pad and cloth as absorbents. The study conducted in Gujarat reported 60% of girls used sanitary pads (Ninama and Dund, 2015). Findings of other studies (Sapkota *et al.*, 2013; Parajuli *et al.*, 2016) conducted in rural Nepal showed less percentage (33.3% and 54.1% of girls using the sanitary pad as absorbents) which is different from the findings of this study. The reason is due to the urban and rural context of the study, the present study was conducted in the urban areas. In addition to the above hygiene practices, most of the girls (59.8%) in this study changed their absorbents twice a day which was slightly higher than the findings from a similar study (Sapkota *et al.*, 2013). The practice in terms of cleaning the external genital daily seems good in comparison to the frequency of changing absorbents and the practice of bathing.

In this study, a majority of the respondents (91.8%) were not allowed to enter the temple or participate in religious activities. This finding is similar with the previous study conducted at Morang, Nepal where 94.1% girls were not allowed to perform religious activities (Parajuli *et al.*, 2016), however, another study conducted at Sunsari, Nepal showed much less (41%) (Sapkota *et al.*, 2013). Other findings and restrictions on the social and cultural practices in the present study were similar to different studies (Parajuli *et al.*, 2016; Udayar *et al.*, 2016) while it is slightly higher than the study conducted in Sunsari, Nepal (Sapkota *et al.*, 2013). In the present study, almost all (98.4%) adolescent girls do not miss their schools during menstruation which is slightly higher than the finding (91.2%) of the other study (Parajuli *et al.*, 2016).

Various interesting findings such as only 73% of adolescent girls knowing about menarche, only 41% girls prepared for it while most of them were frightened during menarche indicated that there is lack of proper information to girls before menarche. Unsafe practices and many restrictions regarding menstruation was found to be common problems. Most of the adolescent girls were not happy with the social and cultural restrictions such as entering the kitchen, performing religious activities, touching a male family member, etc. during the menstruation. They mentioned that these practices on the ground of social and cultural practices should be changed and our culture should accept menstruation as a natural physiological process. Furthermore, they added that women and girls should be provided facilities and opportunities for a clean and hygienic environment, access to normal activities with proper care rather than abstaining during menstruation.

## Conclusion

Menstruation has been dealt with secrecy and negative responses such as shame, fear, anxiety, and depression. The present study concludes that there is a huge gap in the knowledge to prepare adolescent girls for menarche. The clear information on menstruation and the correct hygienic practices are found to be lacking which is a great risk towards the reproductive health of adolescent girls. Adolescent girls, their mothers, and other family members can play an important role in improving menstrual hygiene management in the community. Hence, they need to be given awareness with correct and proper information on menstruation, its occurrence, and hygienic practices during menstruation. The cumulative efforts on breaking the silence and taboos associated with menstruation from all sectors are of utmost importance for improving the health conditions and hygienic practices during menstruation in Nepal.

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