

Knowledge and Practice Regarding Menstrual Hygiene among Adolescent Girls in a Government School of Nepal

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ABSTRACT

Introduction: Menstruation is the natural process in reproductive-age women. Menstrual hygiene is the most important for the health and well-being of women and girls worldwide. Lack of knowledge and practice related to menstrual hygiene is challenging for all adolescent girls. The major objective of this study is to assess the level of knowledge and practice regarding menstrual hygiene among adolescent girls.

Methods: A descriptive cross-sectional study was conducted in Shree Mahendranagar Secondary School of Bhimdatt municipality, Kanchanpur. A structured self-administered questionnaire was used for data collection. A total of 96 respondents were selected by non-probability convenience sampling. Data was analyzed by using SPSS version 16 and presented in tabular form.

Results: The study findings showed that 57.3% of the respondents had an adequate level of knowledge of menstrual hygiene. In the practice of menstrual hygiene, 66.4% of the respondents had good practice of the use of disposable absorbent. The study shows the majority (78.1%) of respondents got information regarding menstruation from their mothers. This study illustrates that 82.3% of respondents had restrictions to touch the person, things and 34.4% had dietary restrictions during the menstrual days.

Conclusion: It is concluded that more than half of respondents have adequate knowledge and good practice regarding menstruation and menstrual hygiene. The majority of respondents face various cultural restrictions during menstrual days. So, the girls should be educated about the process of menstruation, the use of proper pads for absorbents, and their proper disposal. This can be achieved by giving them proper training and health education by teachers, family members, health educators, and the media.

Keywords: Adolescent, Knowledge, Menstrual Hygiene, Practice

INTRODUCTION

Adolescence is a transition phase of growth and development between childhood and adulthood during which pubertal and sexual development take place. During puberty, various hormonal, psychological, cognitive, and physical changes occur simultaneously. Adolescent girls often lack knowledge regarding reproductive health including menstruation which can be due to socio-cultural barriers in which they grow up. The most important event in the life of an adolescent girl is Menarche, during menses, adolescent girls have to face many emotional, social, and Behavioral challenges as look at socio-cultural restrictions or taboos.¹ Menstruation is part of the female reproductive cycle that starts when girls become sexually mature at the time of puberty. It

is a periodic discharge of blood and mucosal lining from the uterus through the vagina for 4-5 days on average and occurs in regular intervals of every 28-30 days of the cycle normally if pregnancy does not occur.² Normally menarche occurs between the ages of 8 to 16 with a median age of 13, this varies by geographical region, race, ethnicity, and other characteristics. The median age of menopause is estimated at around 50 years.³

Globally, 1.8 billion individuals experience the biological process of menstruation caused by changes in bodily hormones. During menstruation, the majority of ladies don't have access to menstrual hygiene education, sanitary products, toilet, and hand washing facilities, and pad management. The lack of affordability of sanitary pads the women and girls to use unsafe and unsanitary

products. Inadequate menstrual hygiene may increase the risk of infection, such as reproductive and urinary tract infections.⁴

In a study conducted in 2021, approximately 26% of women were of minority age, however, many of these people from low and middle-income countries had poor knowledge of menstruation and menstrual hygiene management practices.⁵

A study conducted in a low socio-economic community in India implies that 30-40% of young girls (15-24 years) didn't receive any information related to menstruation before menarche, the majority of them become scared, and embarrassed when menarche happens. Insufficient information results in poor menstrual hygiene. Among them, 64% have various restrictions which are more religious (97.6%) rather than physical or social restrictions.⁶

In a study conducted in the Kalikot district among 321 participants, only 13.1% had good menstrual hygiene practices. Only 4% use sanitary pads about two-thirds of adolescent girls (76.6%) do not sleep in their house during their whole menstruating period. And 22.1% of girls were absent from school during their last menstrual period.⁷

Despite menstruation being a normal biological process, it is perceived as a stigma and taboo in many parts of Nepal. Seclusion or chhaupadi is continuing in the western part of Nepal. Many policies have been formulated and implemented in Nepal to eliminate Chhaupadi.⁸

In a study conducted on African girls, only 51.36% of adolescent school girls had good knowledge of menstruation and its management. Some girls have never heard about it before menarche as a result they face psychological and emotional problems. The lack of separate toilet facilities for girls was also in high rate (65%) of girls dropping out of in school regional Ethiopia.⁹

In a study conducted in Doti among 276 adolescent girls from 11 schools, only 26.4% had good knowledge, and 67% had fair knowledge regarding menstrual hygiene management. On practice related to menstrual hygiene, 40% had well, 51% had fair and 9% had poor menstrual hygiene practice (where good means more than 80%,

fair means 69% - 79% and poor means below 69%). Only seven schools had Gender friendly toilet. And 30% uses sanitary pad where about 49% of participants had positive attitude toward menstrual hygiene management.¹⁰

In the far western part of Nepal, where menstruation is still taken as a topic of taboos due to traditional belief. There were limited studies carried out currently, so to know the current status of knowledge and practice regarding menstrual hygiene among adolescent girls. Therefore, this study aimed to find out knowledge and practice regarding menstrual hygiene among adolescent girls in a Government School.

METHODS

The descriptive cross-sectional design was used to assess knowledge and practice related to menstrual hygiene among adolescents in Shree Mahendranagar Model Secondary School, Mahendranagar, Kanchanpur, Sudurpaschim province, Nepal. The data were collected during the month of February 2023. Adolescent girls in grades 9th and 10th, who had experienced menstruation were included in the study. After calculating the sample size, the required ninety-six samples were selected using the non-probability convenience sampling through a structured questionnaire.

Ethical approval was obtained from the Institutional Review Committee of the Institute of Medicine, Tribhuvan University, the IRC no: 399(6-11) E2. Data were collected after taking permission from the Shree Mahendranagar Model Secondary School of Kanchanpur, by using a pre-tested questionnaire after obtaining written assent from the participant. Self-reported technique was used for data collection. Before providing the questionnaire, the researcher greeted, introduced herself, explained the purpose of the study, and gave clear instructions about the questionnaire. The anonymity of the respondents was maintained by not mentioning names on the questionnaire. Coded data was entered in the datasheet and analyzed using Statistical Package for Social Sciences (SPSS) Version 16. Descriptive and inferential statistical (mean, median, percentage) were used to analyze of data. The findings are presented in tables.

RESULTS

Table 1: Socio demographic characteristics of respondents **n=96**

Characteristics	Number	Percentage
Age in completed years		
≤ 15	55	57.3
> 15	41	42.7
Mean age±SD = 15.16 years ±0. 921		
Grade		
9	46	47.9
10	50	52.1
Types of family		
Nuclear	59	61.5
Joint	33	34.4
Extended	4	4.2
Age at menarche in completed years		
≤ 13	63	65.7
≥14	33	34.3
Mean ±SD = 12.99 years ±1.081 (Range :11-14 years)		

Table 1 reveals that the majority (71.9%) of respondents age group more than or equal to 15 years and more than half (52.1%) of respondents from grade 10. The majority (61.7) of respondents belong to the nuclear family. Most (65.7%) of the respondent's age of menarche was ≤ 13 years.

Table 2: Respondents' knowledge regarding menstrual hygiene **n=96**

Variables *	Number	Percentage
Menstruation is a normal monthly flow of uterine blood through vagina	93	96.9
Hormones are the causes of menstruation	89	92.7
Average age of menarche is 11 – 14	82	85.4
The normal interval of menstrual cycle is 28- 30 days	84	87.5
The normal flow of blood during menstruation is 4-5 days	62	64.6
Perineal hygiene is necessary during menstruation	90	93.8
Perineal hygiene is necessary to prevent from genitourinary infection	81	84.4
Appropriate interval to change blood absorbent is 4-6 hourly	45	46.9
Appropriate way to clean genitalia is anterior to posterior direction	67	69.8
The best way to disposing used sanitary pad is by wrapping with paper and discarding in the dustbin	65	67.7
Washed absorbent should be dried in direct sunlight	61	63.5
Bathing is necessary during menstruation	93	96.9
Daily bathing is important during menstruation	85	88.5

*Multiple Responses

Table 2 shows that almost all (96.9%) of the respondents knew menstruation as the normal monthly flow of uterine blood through the vagina and 92.7 % know the cause of menstruation is effect by the hormones. Most (85.4%) of respondents knew the average age of menarche 1-14 years. Almost all (93.8%) of respondents knew perineal hygiene was necessary during menstruation. The majority (69.8%) of respondents knew that the appropriate way to clean genitalia was the anterior to posterior direction.

Table 3: Respondents’ practice regarding menstrual hygiene n=96

Variables	Number	Percentage
Bath during menstruation		
Daily	75	78.1
On the fourth day	15	15.6
On the third day	6	6.3
Genitalia Cleaning		
Plain water	71	73.9
Soap and water	25	26.0
Type of absorbent used		
Only disposable sanitary pad	65	67.7
Both cloth and sanitary pad	22	22.9
Only cloth pad	5	5.2
Reusable sanitary pad	4	4.2
Disposal of used sanitary pad at school (n= 87)		
Wrapped with paper and disposed in dust bin	82	94.2
Throw wherever accessible	3	3.4
Bring it back to home	2	2.2
Disposal of used sanitary pad at home (n=87)		
Discard in dust bin	46	52.8
Burning	24	27.6
Burring in land	14	16.0
Throwing in open space	3	3.4
Washing absorbent clothes (n=31)		
Soap, detergent and water	27	87.1
Plain water	4	12.9
Drying of washed absorbent clothes (n=31)		
Direct sunlight	19	61.3
Covering with another cloths	7	22.6
Shadowed region	3	9.7
Inside the house	2	6.4
Interval to change pad		
Every 4-6 hourly	46	47.9
Every 2 hourly	38	39.6
Pad full with blood	8	8.3
Twice a day	4	4.2
Hand washing after changing pad	96	100.0
Hand washing with soap and water after changing pad	94	97.9
Using school toilet during menstruation	91	94.8

Table 3 shows the practice regarding menstrual hygiene, all of the respondents clean their genitalia during menstruation and the majority (73.9%) of the respondents use plain water to clean their genitalia. The majority (67.7%) of the respondents used a disposable sanitary pad and 52% discard the sanitary pads in the dustbin. All of the respondents washed their hands after changing the pad and 97.9% of the respondents used soap and water to wash their hands. Nearly cent percent (94.8%) of respondents use school toilets during menstruation.

Table 4: Respondents’ practice regarding socio-cultural restriction n=96

Characteristics	Number	Percent
Restriction to touch anywhere during menstruation	79	82.3
Restriction in diet during menstruation	33	34.4
(33)	20	20.8
Dairy product	11	11.5
Vegetables and fruits	2	2.2
Meat product		
Place of sleep during menstrual days		
In separate bedding at same room	36	37.5
In separate room	31	32.3
Same bed as usual	29	30.2

Table 4 shows respondents practice regarding socio-cultural restriction. Most (82.3%) of the respondents has restriction to touch anywhere during menstruation. More than one third (34.4%) of respondents has restriction in diet during menstruation and among them majority (20.8%) has restriction in consuming dairy product. Nearly seventy percent (69.8%) used separate bedding during menstrual days.

Table 5: Source of information regarding menstrual hygiene received by respondents n=96

Variables *	Number	Percentage
Mother	75	78.1
Course books	37	38.5
Teachers	34	35.4
Sisters	33	34.4
Friends	27	28.1
Mass media	19	19.8

*Multiple responses

Table 5 illustrates that most of the respondent (78.1%) got information regarding menstrual hygiene from their mother.

Table 6: Respondents’ level of knowledge regarding menstrual hygiene

Characteristics	Number	Percentage
Good (> 80%)	55	57.3
Fair (> 69 and < 79%)	30	31.3
Poor (< 69%)	11	11.5

Mean ± SD: 10.43±1.57, Total score = 13, Score range: 4-13

Table 6 shows the level of knowledge regarding menstrual hygiene of respondents. More than half (57.3%) of the respondents had a good/ adequate level of knowledge.

Table 7: Respondent's level of practice regarding menstrual hygiene

Characteristics	Number	Percentage
Good (> 80%)	60	66.4
Fair (> 69 and < 79%)	25	26.0
Poor (< 69%)	7	7.3
Total	152	100

Mean \pm SD: 8.031 \pm 1.173, Total score: 10, Score range = 5 - 10

Table 7 shows that more than half (66.4%) of the respondents had good practice regarding menstrual hygiene.

DISCUSSION

The main aim of this study is to assess knowledge and practice regarding menstrual hygiene among adolescent girls. The socio-demographic finding of the study revealed that most (57.3%) of the respondents were more than or equal to 15 years. Above sixty percent (61.5%) of respondents belong to the nuclear family. Mean age of menarche is 12.99 years. Most (78.1%) of the respondents got information regarding menstruation from their mothers. This finding supports the study conducted in the Tanahun district of Nepal ¹¹ which revealed mean age of the respondents at menarche was 12.37 and the main source of information regarding menstruation was mothers 61.0%.

The Present study shows that knowledge of menstruation and menstrual hygiene, almost all (96.9%) of the respondents knew the menstruation as a normal physiological process and 92.7% of the respondents knew that hormones are the causes of menstruation. Most (85.4%) of the respondents knew the average age of menarche is 11 – 14 years. Similarly, most (87.5%) of the respondents knew that the normal interval of the menstrual cycle is 28 – 30 days. The majority (64.6%) of the respondents knew the normal flow days during menstruation are 4 – 5 days. This finding is similar to the study conducted in the Chitwan district of Nepal ¹² which revealed that most (81.3%) of the respondents knew the correct meaning of menstruation and 92% of the respondents knew about hormones are the causes of menstruation. Almost all (90%) of the respondents knew the normal cycle of menstruation and most (82.7) of the respondents knew normal blood flow is 3-5 days during menstruation cycle.

This present study shows almost all (93.8%) of the respondents knew that perineal hygiene is necessary during menstruation and most (84.4%) of the respondents had knowledge that perineal hygiene is important to prevent genitourinary infection. The finding of the study shows that the majority knew lack of hygiene during menstruation increases the risk of infection. ^{5, 11}

This present study shows that nearly fifty percent (46.9%) of the respondents knew that the appropriate interval to change blood absorbent is 4 - 6 hours. This finding opposes to the study conducted in Kalikot District ⁷ where only 2.2% of the respondents changed blood absorbent every 6 hours. This might be due to advancement if time, differences in geographical location, and study setting.

Regarding knowledge about appropriate ways of disposing of used absorbents, the majority (67.7) of respondents knew that the best way to dispose of used sanitary pads is by wrapping them with paper and discarding them in the dustbin. This finding contradicts the study conducted ¹³ among 120 adolescent girls in Morang Nepal where only 9.8% of respondents knew that used absorbents should be discarded in the dustbin.

In present study shows, that most (78.1%) of the respondents took daily baths during menstruation. This finding supports of the study done ⁷ in Kalikot district which revealed almost all (91%) of the respondents took daily baths during the menstrual period. The majority (73.9%) of the respondents in this study use plain water to used clean their genitalia, which is in accordance with the study done in Dang District¹⁴ which more than half (55.4%) of the respondents cleaned genitalia using plain water.

This study shows that the majority (67.7%) of the respondents used only disposable sanitary pads. This finding supports to the finding of the study conducted¹⁵ in Ethiopia among 403 adolescent girl 66.3% of the respondents use disposable sanitary pads. Regarding interval to change pad 47.9% of the respondents changed pad every 4 hours.

This present study shows that almost all (99%) of the respondents clean there genitalia during menstruation and 87.1% of the respondents who uses reusable pad/ cloths wash them with soap/detergent and water, where 61.3% of the respondents drying them in direct sunlight. These finding are similar to the study done ¹⁶ in Gorkha ,among 398 adolescent girls in where 73% of the respondents clean genital organ during menstruation, 82% of the respondent uses soap, detergent and water to

wash reusable pad/cloths and 44% dried them in direct sunlight.

This present study shows that more than half (57.3%) of the respondents had good knowledge and 31.3% had fair knowledge regarding menstruation and menstrual hygiene. In regards to the level of practice, this study shows more than half (52.1%) of the respondents had a good level of practice and 21.9% of the respondents had a fair level of practice regarding menstrual hygiene. Although there is still considerable scope for the improvement of hygiene-related knowledge and practice related to menstruation. This finding is similar to the study done ¹⁰ in the Doti district of Nepal among 276 adolescent girls, where 26.4% had good knowledge and the majority (67.4%) had a fair level of knowledge regarding menstruation and menstrual hygiene. Only 40% of the respondents had a good level of practice and 51% had a fair level of practice regarding menstruation and menstrual hygiene. There is a slight difference between knowledge and practice levels which might be due to different study settings and geographical areas.

Respondents practice regarding socio-cultural restriction. Most (82.3%) of the respondents has restriction to touch anywhere during menstruation. More than one third (34.4%) of respondents has restriction in diet during menstruation and among them majority (20.8%) has restriction in consuming dairy product. Nearly seventy percent (69.8%) used separate bedding during menstrual days. These findings are supported by the study done in ¹⁷ Chitwan which shows 16% of the respondents avoid certain food during menstrual days, 26.4% of the respondents not allow to touch other during menstrual days and 20.2% of the respondents not sleep in as usual bed during their menstrual days. These difference of restriction practice might be due to difference in the research setting and socio-cultural background.

CONCLUSIONS

The study concludes that more than half of respondents have an adequate knowledge level and good practice regarding menstruation and menstrual hygiene. There was a knowledge and practice gap in specific areas; for example, less than half of the respondents had knowledge that appropriate interval to change blood absorbent and washed absorbent should be dried in direct sunlight. Socio-cultural restrictions regarding menstruation still persist. So, the girls should be educated about the process of menstruation, use of proper pads for absorbents and its proper disposal. This can be achieved by giving them proper training and health education by teachers, family members, health educators, and media so that there won't

be any misconception to the adolescent girls regarding menstrual hygiene.

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