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Original Article

Knowledge, Attitude and Practice Regarding Menstrual Hygiene Among Girls of Government School

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Abstract

Introduction: Menstruation is a natural phenomenon unique to women and menstrual hygiene is fundamental to the wellbeing of women and girls. Menstruation is the process of periodic discharge from the female genital tract due to hormonal influence and takes place within the interval of 28 days. The objective of the study was to find out knowledge, attitude and practice regarding menstrual hygiene among adolescent girls of the Government school.

Methods: A descriptive study was carried out among 100 adolescent girls attending selected schools of Birgunj, Nepal using pretested self-administered questionnaires. Proportional Stratified Sampling was used. During data collection privacy and confidentiality was ensured. The data were analyzed using SPSS version 16 through descriptive statistical methods and inferential statistical methods.

Results: This study revealed that majority of the girls (32%) have good knowledge, 93% have good attitude and 23% girls have good practice. There was significant association ($p < 0.05$) between the level of practice and age of menarche but there was no any significant association ($p < 0.05$) between level of knowledge and attitude with selected variables regarding menstrual hygiene.

Conclusions: This study concludes that though the majority of the girls have, good attitude, many have poor knowledge and practice about menstrual hygiene.

Introduction

Menarche is the first onset of menstruation, which occurs between the ages of 12 – 15 years. More than just a physiological process, menstruation may be looked on as a restriction on women's religious and social traditions or as a taboo.[1] Menstrual hygiene management has been defined as women and adolescent girls using a clean menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period using soap and water for washing the body as required and having access to facilities to dispose of used menstrual management materials.[2,3]

Menstrual hygiene and management is an issue that is insufficiently acknowledged and has not received adequate attention which has a more

profound effect on quality of education than other aspects of puberty.[4] The girls should be educated about significance of menstruation and development of secondary sexual characteristics, selection of sanitary menstrual absorbent and its proper disposal.[5] Initiated by WASH (Water Sanitation and Hygiene) United 2014, the first Global Menstrual Hygiene Day is celebrated on May 28 each year around the world with exhibitions, film screenings, workshops and gatherings, all aimed at breaking the silence around menstruation.[2]

Discriminatory practices during menstruation period in Nepal include staying in chhaupadi (2.9%), avoiding social gatherings (57.6%), bathing in separate place (8.8%), staying in different room of the house (25%) and absenteeism from school or work (2.3%) as per the NDHS data.[6] The main objective of this study was to assess knowledge, attitude and practice regarding menstrual hygiene among girls of government school.

Methods

Present study was a descriptive cross-sectional study conducted in government schools of Birgunj Metropolitan city, Birgunj, Parsa, Nepal. The study population were school girls studying in class VIII, IX and X. Purposive sampling technique was used to choose the Birgunj City. There were 14 Government schools in Birgunj. Out of these, two schools were selected by simple random (lottery) method. Class VIII, IX and X in both the schools were taken as strata and proportionate stratified sample was applied for the selection of the students from the classes of the selected schools. Fifty students (16 from class VIII, 19 from class IX, and 15 from class X) were selected from the first school and 50 students (14 from class VIII, 19 from class IX, and 17 from class X) from the other one. After getting approval from the concerned school authorities and Institutional Review Committee of IOM, study was started and data collection was initiated. A research instrument was developed according to the objectives of the study which consisted of socio-demographic information, knowledge regarding menstruation and menstrual hygiene, attitude and practice towards menstrual hygiene. Knowledge was categorized as good (76 - 100%), moderate (56 - 75%) and poor (< 56%).[7] Attitude was categorized as good (25 – 36 marks), moderate (13 - 24 marks) and poor (≤ 12 marks).[7] Similarly, practice was categorized as good (2.682 - 9), moderate (1.318 - 2.682) and poor (0 -1.318).[7] The content validity of the instrument was established by consulting with experts and reliability was maintained by pre-testing the instrument on 10% (n = 10) of the total sample in a similar setting in different schools. The data were analyzed according to the objectives of the study by using descriptive statistics like (frequency, percentage, mean and standard deviation) and inferential statistics like (chi-square test) to identify the association between demographic characteristics and level of knowledge. In order to facilitate the interpretation, the analyzed data were organized and presented in various tables and graph.

Results

Table 1: Respondents' Knowledge on Menstruation

N = 100

Knowledge	Percentage
Definition of menstruation	
Physiological process*	97
Disease	3
Source of menstrual blood	
Uterus*	77
Vagina	19
Bladder	3
Abdomen	1
Normal cycle of menstruation	
28-35*	72
35-45	28
Type of blood seen during menstruation	
Dirty blood*	92
Fresh blood	8
Normal age for menarche	
*13	82
14	16
15	2
Cause of menstruation	
Hormone*	98
Disease	2
Permission to go school during menses	
Yes*	95
No	5

*correct answer

Table 3a shows that almost all (97%) of the respondents said that menstruation is a physiological process. Concerning the source of menstrual blood, about three-fourth (77%) of the respondents said uterus. Regarding normal cycle of menstruation, majority (72%) said 28-35 days. Likewise, all most all (92%) of the respondents said dirty blood as the type of blood seen during menstruation. Concerning normal age for menarche, most (82%) of the respondents said 13 years. As regards to the cause of menstruation, almost all (98%) of the respondents said hormone. The results show that most (95%) of the respondents said they get permission to go school during menses.

Table 2 - Respondent's Attitude toward Menstruation and Menstrual Hygiene N = 100

Attitude	SA	A	D	SD
Menstruation occurs because of* disease	3	5	17	75
Taking care of menstrual hy-* .giene can cause disease	3	7	30	60
Access to clean water and used of soap for cleaning genital area are important to keep genital in clean condition	68	5	21	6
Panties which are made of cotton are the best absorbent materials for sweat	66	4	27	3
Going to school during menstru-* ation can be embarrassing and .fear of leakage	54	13	9	24
Washing hands before cleaning genital area can prevent repro- .ductive tract infection	4	5	34	57
Washing hands after cleaning genital area can prevent repro- .ductive tract infection	6	6	13	75
Cleaning panties using only* water is enough as the blood .disappears	12	3	32	53
Drying the panties outside in sun- .light helps to kill microorganisms	78	-	13	9

*Negative statement, SA = Strongly agree; A = Agree; D = Disagree; SD = Strongly disagree

Table 2 shows that among 100 respondents, the majority strongly disagreed on all the statements asked except the fifth statement. The highest percent (54%) of the respondents strongly agreed that going to school during menstruation can be embarrassing and fear of leakage and strongly disagreed that menstruation occurs because of disease (75%). Taking care of menstrual hygiene can cause disease (60%), access to clean water and used of soap for cleaning genital area are important to keep genital in clean condition (68%), panties which is made of cotton is the best absorbent materials for sweat (66%) were strongly agreed. Washing hands before cleaning genital area can prevent reproductive tract infection (57%) washing hands after cleaning genital area can prevent reproductive tract infection (75%) cleaning panties using only water is enough as the blood disappear (53%) were strongly disagreed and drying the panties outside in sunlight helps to kill microorganism (78%) were strongly agreed.

Table 3: Respondent's Practices on Menstrual Hygiene N = 100

Practice	Percentage
Type of absorbent materials used	
*Sanitary pad	28
Frequency of bath during menses	
*Each day	88
Alternate day	10
Frequency of changing absorbent materials	
Once a day	12
Twice a day	43
*Three or more	45
Right to work in the kitchen during menses	
*Yes	54
Visiting temples or do religious activities during menses	
*Yes	3

*correct answer,

Table 3 represents that highest percent (56%) of the respondents used both clothes and sanitary pad as the absorbent materials during menstruation. Likewise, regarding frequency of bath during menses, most (88%) of the respondents said they bath every day. Concerning frequency of changing absorbent materials, the highest percent (45%) of the respondents said three or more a day. While asking about the right to work in the kitchen during menses, 54% of the respondents said they need to work in the kitchen. As regards to visiting temples or doing religious activities during menses, almost all (97%) of the respondents said they were not allowed during their menstruation days only 3% were allowed to do religious activities.

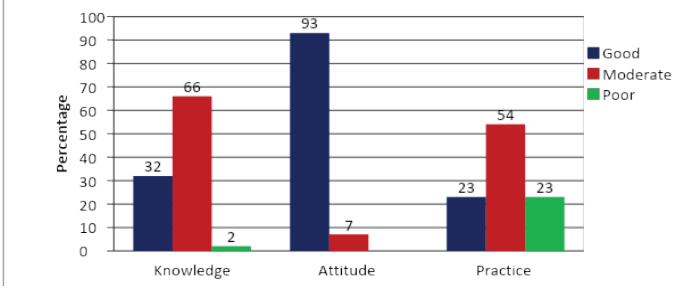

Figure 1 : Distribution of level of knowledge, attitude and practice regarding menstrual hygiene

Figure 1 reveals that about two-third (66%) had moderate level of knowledge, almost of all (93%) had good level of

attitude and half of (54%) of the respondents had moderate level of practice regarding menstrual hygiene.

Table 4: Knowledge, attitude and practice of menstrual hygiene and socio-demographic variables N = 100

Variables	Knowledge		Attitude		Practice	
	Poor/ Moderate	Good	Moderate	Good	Poor/Moderate	Good
Education Level						
Class 8	23	7	3	27	24	6
Class 9	22	16	4	34	29	9
Class 10	23	9	1	31	24	8
Chi-square (p-value)	3.04 (0.22)		1.53 (0.46)		0.23 (0.88)	
Age						
15 - 11	46	21	7	60	56	11
20 - 16	22	11	1	32	21	12
Chi-square (p-value)	0.04 (0.841)		1.65 (0.19)		4.96 (0.02)*	
Age of menarche						
12	21	11	4	28	30	2
13	33	12	2	43	31	14
14	14	9	2	21	16	7
Chi-square (p-value)	1.21 (0.55)		1.67 (0.43)		7.46 (0.02)*	
Religion						
Hindu	56	28	7	77	63	21
Others	12	4	1	15	14	2
Chi-square (p-value)	0.43 (0.51)		0.07 (0.78)		1.18 (0.27)	
Place of Residence						
Municipality	63	29	7	85	71	21
Rural municipality	5	3	1	7	6	2
Chi-square (p-value)	(0.71) 0.12		(0.62) 0.24		(0.88) 0.02	
Types of Family						
Joint family	31	10	5	36	31	10
Small family	37	22	3	56	46	13
Chi-square (p-value)	1.85 (0.17)		1.66 (0.19)		0.07 (0.78)	
Mother's Education						
Illiterate	39	17	3	53	40	16
Literate	29	15	5	39	37	7
Chi-square (p-value)	0.16 (0.69)		1.21 (0.27)		1.18 (0.27)	
Mother's Occupation						
House maker	57	27	6	78	63	21
Working women	11	5	2	14	14	2
Chi-square (p-value)	0.01 (0.99)		0.52 (0.46)		1.18 (0.27)	
Source of information						
#Other	17	11	2	26	23	5
Mother	51	21	6	66	54	18
Chi-square (p-value)	8.95 (0.03)*		3.08 (0.38)		3.04 (0.38)	

Table 4 depicts the cross tabulation between the socio-demographic variables and level of knowledge, attitude and practice of menstrual hygiene. Where, nearly two fifth were from the class IX, two third were of the age between 11 to 15 years and more than 50% menarche at 13 years. Also, more than 50% of their mothers were illiterate and most of them were home maker. It is found that the level of practice is associated with the age of the respondents and their age of menarche and level of knowledge is found to be associated with the source of the information of the respondents whereas, the level of attitude was not found to be associated with the any socio-demographic variables.

Discussion

The findings of this study disclosed that the mean age of respondent was 14.84 years. The mean age of menarche in this study was 13.68 years. In this study most of the respondents belonged to Hindu i.e. 84% which is similar to the findings done on the study in the past from Nepal.[4] In this study the majority of cases belong to the Madhesi caste as the study was done in Madhes area. Most (59%) of the respondents belonged to the nuclear family which is also supported by the findings of another study.[8] Furthermore, it was shown in this study that 97% of the responded believed that menstruation is a physiological process where as in the study conducted by other authors.[7,9] Almost all study subjects believed that menstruation is a part of physiological process and whereas the findings by Sapkota et al had shown that only 67.2% were aware about this fact.[4] The present study showed that only 77% of the girls answered correctly that the uterus was the source of blood flow. This study finding was almost similar another study by Balqis et al where 60% knew the source of menstrual blood.[7] In this present study, it was revealed that a large number of respondents (98%) knew that the cause of menstruation was hormone and 2% answered it was a disease. Meanwhile, a nearly similar finding was reported in another study carried out by Balqis et al.[7]

In this study the common sources of information were mother (72%), followed by sister (17%) and friends (6%). Similar findings were reported by others where mother was the first informant.[7,10,11] In contrast to these findings, another study quoted that in the majority, the first informant was their teacher.[12] In this study most of the respondent's mother (84%) were housewife similar findings was noted in Kailasraj et al, in India.[11] This may be explained by the different regions of the study area.

In this study majority of respondents 68% consider that sanitary pads are good absorbent during menses, only 28 % were actually using sanitary pads. Likewise, in other study from Nepal conducted by Hamal et al revealed that 4.5 girls out of 5used reusable clothes as menstrual absorbents.[8] Another study by Fehintola et al found that majority of respondent used clothes / ragged and toilet rolls during menses.[11] This was in contrast to the findings of study conducted in Nepal by Sapkota et al which noted that 54.1% of responders used sanitary pad.[4] Another study by Ramchandra et al noted that 69% of adolescent girls were using sanitary napkins as menstrual absorbent.[14] Likewise in another study by Kamath et al, it showed that 75.9% responders in urban area used sanitary clothes.[15]

In this study 54% of respondents were worried during the first menstruation whereas only 20% of them considered it as normal. Kamath et al observed that 88.5% urban participants expressed negative reactions to menstruation.[15] Similarly in the study by Fehintola et al and Sapkota et al, they revealed that majority of respondent were either scared or emotionally disturbed at their menses.[4,11] These negative feelings related with menstruation might be due to lack of previous knowledge and not being psychologically prepared prior to their menarche.

Likewise, this study found most of the respondents 60% strongly disagreed that taking care of menstrual hygiene can cause disease. Meanwhile, a similar finding was noted in the other study carried out in Jatinangor which revealed that 55.46% strongly agreed that not take care of hygiene during menstruation can cause disease.[7] Interestingly, most of the respondents (68%) in this present study strongly agreed, 5% agreed and only 6% strongly disagreed to the statement that access to clean water and used of soap for cleaning genital area are important to keep genital in clean condition. In the contrast of this finding, 56.72% of the respondent agree to the same statement in study done by Balqis et al.[7]

Approximately 88% of the respondents in the present study take bath daily during menstruation. Similar findings were noted by Balqis et al (99.6%).[7] This study also revealed that most of the respondents (45%) changed pads three times a day, 43% changed two times and 12% changed once a day. This variation of regularly changing of pads may depend upon the respondents' type of pad used, amount of blood flows and attitude of respondent to remain clean and hygienic.

In regards to the level of knowledge regarding menstrual hygiene among school girls, this study found that 32% had good knowledge, 66% had moderate knowledge and 2% had poor knowledge. Similar findings were reported in another study by Mahajan et al where 29% had adequate knowledge and71% had inadequate knowledge.[5] Another study by Ghimire et al from Nepal found that 70% had average knowledge, 25% had poor knowledge and only 5% had good knowledge regarding menstrual hygiene.[16]

In this study the attitude level of majority of the girls (93%) were good which was also seen the study by Balqis et al.[7] Overall the menstrual hygiene practices during menstruation

was poor 23%, moderate 54% and only 23% had good practices which is similar to the finding conducted in public school of Ogbomoso North et al.[11] In contrast to this, menstrual practices were better in urban as compared to rural girls in the study of Kumar et al.[1] There is significance between level of practice and age ($p < 0.026$) and age of menarche ($p < 0.024$). Similar findings were reported by Patil et al.[12]

There were no significant association of knowledge and attitude of school girls with socio - demographic variables. This is in contrast to findings by Ghimire et al where it was reported that there was significant association between knowledge of adolescence girls and demographic variables like age at first menstruation. Similarly, in another study by PC et al there was an association between the level of knowledge and religion ($p < 0.05$) and mother's occupation ($p < 0.005$).[16,17]

This study does have some limitations. It was conducted in a small area so cannot be generalized to others, and only two schools were included. The economic status of their family was not included which also directly affects the practices regarding menstrual hygiene. Though menstrual related problems were included in the study as the knowledge part, there was no focus on remedies and treatment regarding the menstrual problem. However, this study can be replicated in a larger sample and in different areas to increase the knowledge and good practices on maintaining healthy menstrual hygiene.

Conclusions

This study revealed that the attitude of the majority of school girls was good but still there is a lack of good knowledge and practices. Considering that mothers were the primary sources of information, it may be because of their education level that health promotion workshops on menstrual hygiene are needed. In addition to the curriculum, schoolgirls need to be prepared for menarche and given the information they need to adopt healthy behaviors that will help them lead healthy reproductive lives and reduce their chance of RTI through age-appropriate health education.

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