

MENSTRUAL HYGIENE PRACTICE AND SCHOOL ABSENTEEISM AMONG RURAL ADOLESCENT GIRLS OF KALIKOT DISTRICT

Ranabhat D,¹ Nepal S,² Regmi B,¹

¹Youth for Peace, Pepsicola and ²Om Health Campus, Chabahil, Kathmandu, Nepal

ABSTRACT

Menstruation is a part of female reproductive cycle that starts when girls become sexually mature at the time of puberty. This study sought to assess the menstrual hygiene practice and school absenteeism among the rural school going adolescent girls. A descriptive cross-sectional study was done among 321 female high school students of 4 selected government schools of Kalikot a rural district of Nepal. It was found that majority of student's menstrual hygiene practice was poor i.e. 86.9%. Majority of respondents (96 %) used clean cloth during their menstruation cycle, whereas only 4% of respondents used sanitary pad. Almost every adolescent girl i.e. 98.8 % practiced any cultural restriction. Nearly 1 in 4 respondents (22.1%) did not attend school during their last menstruation and more than 1 in 10 adolescent girls felt that their academic performance was degraded after menarche. Adolescent girls of 10-14 age group were three time more likely to have poor practice than those who were between 15-19 years. Adolescent girls from nuclear families are 1.9 times more likely to be absent from school during the menstrual cycle in comparison to girls from joint families. The study revealed that among the adolescent girls of the study area, the overall menstrual hygiene practice was found to be poor and the various beliefs were found to be inappropriate and school absenteeism was also prevalent during menstrual cycle.

KEYWORDS

Menstrual hygiene, school absenteeism, adolescent girls

CORRESPONDING AUTHOR

Deepmala Rana Bhat
Youth for Peace, Pepsicola,
Kathmandu, Nepal
Email: deepmalaranabhat@gmail.com
ORCID ID: 0000-0002-9291-0196
DOI: <https://doi.org/10.3126/nmcj.v21i4.27614>

INTRODUCTION

The onset of menstruation represents a landmark event in pubertal development of the adolescent girl.¹ Menstruation is a significant part of women's reproductive cycle when a girl become sexually mature at the time of puberty and it lasts from 3-7 days whereas the onset of menstruation differs with race and family but mostly girls start from 10 to 14 years until 45 to 55 years and a women will have approximately 500 periods during her life time.² This experience by women adds a useful asset to the evaluation of normal development and the elimination of pathological conditions, and it is one of the determinants of a woman's reproductive health.^{3,4} Menarche present a peculiar challenge to schooling, particularly as more girls stay in school at ages beyond the onset of puberty.⁵ A study from UNICEF showed that among the total respondent 1 out of 3 girls in South Asia knew nothing about menstruation before getting it while 48% of girls in Iran and 10% of girls in India believed that menstruation is a disease.⁶ Menstruation is linked with various misconceptions and wrong practices although it is a natural process, which might result in negative health outcome. Poor menstruation hygiene has been associated with serious health conditions such as reproductive tract and urinary tract infections.⁷ Monthly cycle is regarded to be unclean in Nepalese community, as a result menstruation is a negative, frightening experience, a disturbance, or is something to fear or to be embarrassed of, Confinements of day by day activities, for example, not being permitted to clean up, change garments, brush hair and enter sacred spots and dietary limitations (taboo on consumption of food like rice, curd, milk, potato, onion, sugarcane and so forth) are additionally imposed during the menstrual period.⁸ There are numerous difficulties during this period such as understanding self, the difficulties of family relationship and counselling, the challenges of peer pressure, and the difficulties of physical and sexual development.^{9,10} This study is planned to assess adolescent girls' knowledge of monthly cycle and also their practices of menstrual hygiene.

MATERIALS AND METHODS

Descriptive cross-sectional study was done. Purposive sampling was done to select the research area which was Raskot Municipality of Kalikot and 4 secondary schools were selected randomly in the study. Census was done to collect data. Total 321 students from the age group 10 to 19 years and those who already had menarche were only included and interviewed in the study. Data were collected from those students who were present

during the time of data collection. A predesigned, pre-tested semi-structured questionnaire was used for data collection. Approval from Nepal Health Research Council for the research was obtained. Data were entered and analyzed using Statistical Package for Social Sciences (SPSS) 16.0 version. Statistical significance was considered at ($P < 0.05$), high significance was considered if less than 0.01, or insignificant if it is more than 0.05. Univariate analysis was done to assess menstrual hygiene practice. Menstrual hygiene practice was calculated adding 11 answers to questions where each correct practice was scored 1 and wrong practice 0, out of total 11 score, those who scored ≤ 6 were recorded to have poor practice whereas those who scored ≥ 7 were recorded to have good menstrual hygiene practice. Bivariate analysis was performed to show association between socio-demographic variable and dependent variable (menstrual hygiene practice and school absenteeism) which was expressed in the form of Crude Odds Ratio (OR). To judge the strength of association confidence interval (CI) at 95% was used.

RESULTS

Out of 321 participant, most participants were of age group 15-19 years. Higher number of students i.e. 60.1% belonged to joint family, followed by nuclear family with 39.9%. Chettri were higher in number, followed by Dalits, then by Bramhin and other ethnic group includes Shahi. All of the respondents were Hindus. Around 82% mothers and 40% fathers of respondents were illiterate. Most common occupation of respondent's mothers and fathers were agriculture which was 65.1% and 73.5% respectively (Table 1).

Most of the women faced their first menstruation at the age below 15 i.e. 66.7 % whereas 16-19 age group were less i.e. 33.3 %. The mean age at menarche was found to be 14.003 ± 1.085 (SD) years. From this study it was found that majority of students menstrual hygiene practice was poor i.e. 86.9% and only 13.1% of respondents hygiene practice was good. Only 4% of respondents used sanitary pad whereas 2.2 % of adolescent girls changed their pad every six hours. About 98% of girls used soap and water during washing cloth and more than half of the girls (54.7%) dried the reused cloth in sunlight. More than half of the respondent (69.8%) said that they dispose the cloth or pad in open area. Less than half of the respondents i.e. 22.7% used only water while cleaning genitalia. Almost every respondent i.e. 91% bathed during menstruation. About two third of the adolescent girls (76.6%) did not sleep in their house during their entire menstrual cycle. About 78.8 % of the total respondents slept outside their

houses during first menstruation. Almost every adolescent girl i.e. 92.5% eats outside kitchen during menstruation. Nearly one third (22.1%) of the total respondent said that they were absent in school during their last menstruation. About 11.5% of adolescent girls reported that menstrual problem interferes with their school performance. More than 1 in 10 adolescent girl felt that their academic performance was degraded after than before menarche (Table 2).

Table 1: Socio-Demographic characteristics of the respondent (n=321)

Characteristics	Frequency	(%)
Age (Years)		
10-14	74	23.1
15-19	247	76.9
Family Type		
Nuclear family	128	39.9
Joint family	193	60.0
Ethnicity		
Brahmin	71	22.1
Chhetri	109	34.0
Dalits	76	23.7
Janajati	3	0.9
Others	62	19.3
Education of Mother		
Literate	52	16.2
Illiterate	264	82.2
No Mother	5	1.6
Occupation of Mother		
House work	91	28.3
Business	6	1.9
Job	5	1.6
Agriculture	209	65.1
Daily wages work	5	1.6
No Mother	5	1.6
Education of Father		
Literate	181	56.4
Illiterate	131	40.0
No Father	9	2.8
Occupation of Father		
Business	41	12.8
Agriculture	236	73.5
Job	26	8.1
Daily wages work	9	2.8
No Father	9	2.8

Table 2: Menstrual hygiene practice and school absenteeism (n=321)

Characteristics	Frequency	%
Age at first menstruation (years)		
≤15	214	66.7
16-19	107	33.3
Mean	14.003±1.085 (SD)	
Median	14	
Good practice during Menstruation	42	13.1
Use of Sanitary pad	13	4.0
Changed absorbent every 6 hours	7	2.2
Re-use of cloth (n=308)	308	100.0
Washing cloth with soap and water (n=308)	305	98.0
Drying of cloth in open space (n=308)	168	54.7
Disposal of Pad/ Cloth in open area	224	69.8
Cleaning of Genitalia using only water	73	22.7
Bathing daily during Menstrual cycle	292	91.0
Cultural Restriction Practiced by respondents	317	98.8
Slept outside house during Menstruation (Chhau goth)	246	76.6
Slept outside house during first menstruation (Chhau goth)	253	78.8
Eating outside kitchen during menstruation	297	92.5
School absenteeism during last menstruation	71	22.1
Poor academic performance after menarche	37	11.5

Table 3: Bivariate analysis of menstrual hygiene practice with Socio-Demographic variables

Variables		Menstrual hygiene practice		P-value	OR (CI 95%)
		Poor practice n (%)	Good practice n (%)		
Age group (years)	10-14	152(92.7%)	12(7.3%)	0.002*	2.9 (1.4-6.0)
	15-19	127(80.9%)	30(19.1%)		
Type of family	Nuclear	107(83.6%)	21(16.4%)	0.151	0.6 (0.3-1.19)
	Joint	172(89.1%)	21(10.9%)		
Ethnicity	Upper caste group	157 (87.2%)	23 (12.8%)	0.854	1.0 (0.5-2.0)
	Disadvantaged group	122 (86.5%)	19 (13.5%)		
Mothers education	Illiterate	226(85.6%)	38 (14.4%)	0.264 (fisher's exact test)	0.4 (0.1-1.4)
	Literate	48(92.3%)	4 (7.7%)		
Mothers occupation	Agricultural work	258(86%)	42 (14%)	0.143 (fisher's exact test)	-
	Non-agricultural work	16(100%)	0 (0%)		
Fathers education	Illiterate	117(89.3%)	14 (10.7%)	0.410	1.3 (0.6-2.6)
	Literate	156(86.2%)	25 (13.8%)		
Fathers occupation	Agricultural work	66(86.8%)	10 (13.2%)	0.842	0.9 (0.4-1.9)
	Non-agricultural work	207(87.7%)	29(12.3%)		

Reference Category 1

The p-value at confidence level of 95% is 0.002 for age of respondent which is less than 0.05. Thus, the age of respondent is significantly associated with menstrual hygiene practice. Similarly, adolescent girls of 10-14 age group were three time more likely to have poor practice than those who were between 15-19 years (Table 3).

Reference Category 1

The p-value at confidence level of 95% is 0.017 for type of family of respondent which is less than 0.05. Thus, the factor is significantly associated with menstrual hygiene practice. Similarly, adolescent girls from nuclear families are 1.9 times more likely to be absent from school during the menstrual cycle in comparison to girls from joint families (Table 4).

DISCUSSION

In this study, the mean age at menarche of respondents was 14.003 ± 1.085 whereas in a

study conducted in Sunsari, the mean age at menarche was 13.1 years.⁸ In a similar type of study conducted in Chennai, India the mean age at menarche was found to be 12.7 years.¹¹ A study conducted in Egypt¹² showed that mean age of menarche of 17.2 years which was slightly higher compare to our study. Several other studies had similar result as the present study.^{8,13,14}

Our study showed that 13.1% were engaged in good hygiene practice whereas in a study conducted in Doti district¹⁵ 40% were engaged in good menstrual hygiene practices. In our study, 4% of the adolescent school girls were found using sanitary pad during their menstruation. This finding is in contrast to studies conducted in Northeast Ethiopia⁷ (35.38%), India¹⁶ (32.7%) and Guntur, Andhra Pradesh¹⁷ (53.70%). Less use of sanitary pad by our study participants may be because of hesitation and unavailability in the local market. In present study it is seen that most of the girls reused the cloth which is similar to the study done in Northeast Ethiopia⁷.

Table 4: Bivariate analysis of School absenteeism during last menstruation with Socio-Demographic variables

Variables	School absenteeism during last menstruation		P-value	OR (CI 95%)	
	Yes n (%)	No n (%)			
Age group (years)	10-14	33(20.1%)	131(79.9%)	0.378	0.7 (0.4-1.3)
	15-19	38(24.2%)	119(75.8%)		
Type of family	Nuclear	37(28.9%)	91(71.1%)	0.017*	1.9 (1.1-3.2)
	Joint	34(17.6%)	159(82.4%)		
Ethnicity	Upper caste group	38(21.1%)	142(78.9%)	0.623	0.8 (0.51-1.4)
	Disadvantaged group	33(23.4%)	108(76.6%)		
Mothers education	Illiterate	60(22.7%)	204(77.3%)	0.804	1.0 (0.5-2.2)
	Literate	11(21.2%)	41(78.8%)		
Mothers occupation	Agricultural work	68(22.7%)	232(77.3%)	1.00 (fisher's exact test)	1.2 (0.3-4.5)
	Non-agricultural work	3(18.8%)	13(81.2%)		
Fathers education	Illiterate	33(25.2%)	98(74.8%)	0.383	1.2 (0.7-2.1)
	Literate	38(21.0%)	143(79.0%)		
Fathers occupation	Agricultural work	14(18.4%)	62(81.6%)	0.30	0.7 (0.3-1.3)
	Non-agricultural work	57(24.2%)	179(75.8%)		

A study conducted in Guntur, Andhra Pradesh¹⁷ reported different forms of restrictions observed during menstruation similar to our findings. They found out that 78.99% girls were not allowed to attend religious occasions and 22.97% girls were restricted from doing routine household work. In our study among total responses, 97.2% were not allowed to enter in religious place, 94.7% girls were not allowed to touch water, 83.5% were not allowed to sleep in bed and 79.4% were not allowed to enter in house which shows restriction in doing household work during menstruation.

Regarding the menstrual hygiene, the findings of the present study revealed that more than half of the study sample changed their pad/cloth once a day, a few of them nearly one third (26.5%) changed it 2-3 times per day. In contrast, study done in Egypt¹² showed that more than two thirds (69.4%) of the study sample changed their sanitary pads for three or more times per day and nearly one third (30.6%) changed it 1 to 2 times per day. Another study conducted in Northeast Ethiopia⁷,

58.24% of girls reported that they changed their menstrual absorbent twice and more than twice respectively.

According to the study conducted in Northeast Ethiopia,⁷ about 37.04% respondent washed the reusable cloth with soap and water and 33.33% dried it inside the house in contrast to the present study where 98% used soap water to clean and 45% dried it inside the house. A study conducted in Bengaluru,¹⁸ showed that 29.4% girls washed the genitals using water only and 70.6% girls used soap and water to wash their genitals which is analogous to the finding in our study.

In our study, 22.1% girls did not attend school because of menstruation related problems. Several other studies had different result as compared to our study.^{13,19,20} Moreover, study conducted throughout Africa and Asia²¹ noted that menstrual hygiene practices are poor and many adolescent girls miss school because of period. The reason behind school absenteeism in this study was dysmenorrhea, bleeding and

backache which is similar to the study conducted in Bangladesh.²⁰

Almost every adolescent girl practiced restriction in their house. In this study majority of students (76.6%) slept outside house during menstruation in a room commonly known as Chhau Goth which is similar to the finding of study conducted in far-western Nepal.²² Study conducted in Far-west concluded that around 85% practiced Chaupadi (tradition in Nepali community where women are not allowed to do normal daily activities and are banished to sleep outside house during menstruation period) which is slightly higher than our study. It appears that education and awareness about the menstrual cleanliness practice was poor in that community.²³

In conclusion, this study revealed that among the adolescent girls of the study zone, the general menstrual cleanliness practice was poor. Almost every adolescent girls practiced restriction in their

houses. It appears that education and awareness about the menstrual cleanliness practice was poor in that community. School absenteeism and degradation in academic performance was seen after menarche. Similarly, late adolescent girls were more likely to have good menstrual hygiene practice than early adolescent.

ACKNOWLEDGEMENTS

We would like to express hearty thanks to all the respondents involved in the data collection and school teachers for their valued contribution in the research. Special thanks to NHRC for ethical approval for the research and Om Health Campus for providing this opportunity.

Conflict of Interest:

Poster Presentation at Fifth National Summit of Health and Population Scientists in Nepal, NHRC

REFERENCES

1. DE Adinma, JIB Adinma. Perceptions and Practices on Menstruation Amongst Nigerian Secondary School Girl. *Afr J Repro Health* 2008; 12: 74-83.
2. Adhikari P, Kadel B, Dhungel SI, Mandal A. Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal. *Kathmandu Univ Med J* 2007; 5: 382-6.
3. Amaza D. Menstrual Pattern among Female Medical Students in University of Maiduguri, Nigeria. *British J Med Med Res* 2012; 2: 327-37.
4. Maji. S. A study on menstrual knowledge and practices among rural adolescent girls in Burdwan district, Westbengal. *Int'l J Adv Res* 2016; 4: 896-902.
5. Grant MJ, Lloyd CB, Mensch BS. Menstruation and School Absenteeism: Evidence from Rural Malawi. *Comp Educ Rev* 2013; 57: 260-84.
6. Menstrual Hygiene Matters. [Internet]. 2013. Available from: <http://www.wash-united.org/our-work/issues/menstrual-hygiene-management/articles/our-work-issues-menstrual-hygiene-management>.
7. Tegegne TK, Sisay MM. Menstrual hygiene management and school absenteeism among female adolescent students in Northeast Ethiopia. *BMC Public Health* 2014; 14: 1118.
8. Sapkota D, Sharma D, Budathoki SS, Khanal VK, Pokharel HP. Knowledge and practices regarding menstruation among school going adolescents of rural Nepal. *J Kathmandu Med Coll* 2013; 2: 1-5.
9. Abera Y. Menarche, Menstruation Related Problems and Practices Among Adolescent High School Girls in Addis Ababa. MPH thesis: Addis Ababa University. Department of Community Health 2004.
10. Taffa N, Haimanot R, Desalegn S, Tesfaye A, Mohammed K. Do parents and young people communicate on sexual matters? The situation of Family Life Education (FLE) in a rural town in Ethiopia. *Ethiopian J Health Dev* 1999; 13: 205-10.
11. Parameaswari PJ, Udayshankar PM, Cynthia S, Vidhyashree MD, Abiselvi A, Sultan SI. A School Survey to Assess Menstrual Hygiene Practices Among Teenage Girls in Chennai, India. *Middle-East J Sci Res* 2014; 21: 1448-53.
12. Abd El-Hameed N, Mohamed MS, Ahmed Nh, Ahmed ER. Assessment of Dysmenorrhea and Menstrual Hygiene Practices among Adolescent Girls in Some Nursing Schools at EL-Minia Governorate, Egypt. *J Am Sci* 2011; 7: 216-23.
13. Zegeye DT, Megabiaw B, Mulu A. Age at menarche and the menstrual pattern of secondary school adolescents in northwest Ethiopia. *BMC Womens Health* 2009; 9: 29.
14. Khanna A, Goyal RS, Bhawsar R. Menstrual practices and reproductive problems: A study of adolescent girls in Rajasthan. *J Health Management* 2005; 7: 91-107.
15. Yadav RN, Joshi S, Poudel R, Pandeya P. Knowledge, Attitude, and Practice on Menstrual Hygiene Management among School Adolescents. *J Nepal Health Res Counc* 2018; 15: 212-6.
16. Bachloo T, Kumar R, Goyal A et al. A study on perception and practice of menstruation among school going adolescent girls in district Ambala Haryana, India. *Int'l J Comm Med Pub Health* 2016; 3: 931-7.
17. Jogdand K, Yerpude P. A community based study on menstrual hygiene among adolescent girls. *Indian J Mat Child Health* 2011; 13: 1-6.

18. Srinivasa S, Manasa G. Menstrual Hygiene among School going Adolescent girls. *Int'l J Gen Pediatr Med* 2017; 2: 11-6.
19. Sharma P, Malhotra C, Taneja DK, Saha R. Problems related to menstruation amongst adolescent girls. *Indian J Pediatr* 2008; 75: 125-9.
20. Alam MU, Luby SP, Halder AK *et al.* Menstrual hygiene management among Bangladeshi adolescent schoolgirls and risk factors affecting school absence: results from a cross-sectional survey. *BMJ Open* 2017; 7: e015508. doi: 10.1136/bmjopen-2016-015508
21. House S, Mahon T, Cavill S. Menstrual Hygiene Matters: A resource for improving menstrual hygiene around the world 2013.
22. Amatya P, Ghimire S, Callahan KE, Baral BK, Poudel KC. Practice and lived experience of menstrual exiles (Chhaupadi) among adolescent girls in far-western Nepal. *PloS one* 2018; 13: e0208260. <https://doi.org/10.1371/journal.pone.0208260>
23. Field Bulletin: Chaupadi in the Far-West: United Nations Resident and Humanitarian Coordinator's Office 2011.