

Menstrual Characteristics among the Nepali Adolescent Girls

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Abstract

Background: Menarche is a milestone in a woman's life as it denotes the start of reproductive capacity. The experience of first menstruation is often horrifying and traumatic to an adolescent girl. Menstrual health has a close link with women's fecundity and other reproductive health risks. Women having appropriate knowledge regarding menstrual hygiene and safe practices are less vulnerable to RTI and its consequences. **Objectives:** The present study aims to find out menstrual characteristics and its association with socio-economic factor among a group of rural Nepali adolescent girls. **Materials and Method:** Data was collected from Nepali adolescent girls aged 10-16 years residing in the rural area of Sombaria village of West Sikkim. Data on age at menarche, menstrual characteristics and menstrual health were collected from 106 participants using structured schedule. **Results:** The mean age at menarche of the participants was 12.6±1.17 years. 76.6 percent of the participants have irregular periods. In present study, 85.8 percent of participants have premenstrual syndrome (PMS) like breast sore, legs cramps, mood swing and back pain. The heavy discharge and menstrual problems shows 30.1 percent and 69.8 percent respectively. **Conclusions:** The average age at menarche shows gradually increase with increasing the age of adolescent girls. Maximum numbers of participants show higher percentage of irregular period and premenstrual syndrome. The socioeconomic conditions especially the mother's education and family income did play an important role in determining the menstrual characteristics of the participants.

Keywords: Absorbents, menstruation, premenstrual, socioeconomic

Introduction

Menarche is a milestone in a woman's life as it denotes the start of reproductive capacity.¹ In general, menarche occurs between 11 and 15 years with a mean age of 13 years.² Onset of menstruation is an important aspect of reproductive health, which bothers many women on a regular basis due to their lack of knowledge of health aspect and cognitive immaturity.³ The experience of first menstruation is often horrifying and traumatic to an adolescent girl.⁴ Generally, menstrual characteristics include age at menarche, menstrual disorder, and irregularity in the menstrual cycle, premenstrual discomfort, menstrual discharge

etc.^{5,6,7,8} Age at menarche is affected by several factors such as general health and lifestyle, nutrition, physical activity, socioeconomic conditions, stress and genetic parameters.^{9,10,11} In India, poor menstrual hygienic practices lead to different kind of reproductive health issues.^{12,13} Women having appropriate knowledge regarding menstrual hygiene and safe practices are less vulnerable to RTI and its consequences.¹⁴ Proper hygienic practices such as the use of sanitary napkins and washing of genital area are essential during menstruation. Females of all age groups need to take care of their reproductive health by using soft and clean absorbents during their menstruation.¹⁵

Under this backdrop, the present study focuses on menstrual characteristics, socio-economic status of the family and issues related with menstrual health among the Nepali adolescent girls.

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Materials and Method

The present study was conducted among the Nepali adolescent girls aged 10-16 years residing in the rural area of Sombaria village of West Sikkim. Among the different Nepali communities, the majority of populations are Limbus followed by others sub caste of Nepali like Chettri, Sharam Rai, Manger, Bhujel. Majority of people in the area depend upon agriculture to sustain their life.

Data were collected from 106 adolescent girls during the month of November and December, 2018. Data on the age at menarche, health and hygiene, use of sanitary pad, pre menstrual syndrome, menstrual health problems and other menstrual hygienic practices associated with menstruation were collected from each participant. Data on menstruation such as irregular period (menstrual cycle length beyond 30 days or below 28 days interval), excessive bleeding (bleeding for more than 7 days) were collected through recall method. Data on menstrual health problems like urinary tract infection, allergy rashes, excessive bleeding during and after menstruation period was collected through interview method. Data on various socio-economic conditions such as age, education, parent's education, parent's occupation, family income, family type, type of house, sanitary etc. were collected from each subject. The data on income was divided into three groups-high income group (above 75th percentile), middle income group (between 50th-75th percentile) and low income group (below 50th percentile). The educational qualification of the mother was divided as illiterate (those who did not go to school), primary (those who attained class I to class V), and secondary (those who studied up to class VI and above). Since the higher secondary and graduate educations are very negligible in number, it was clubbed together with secondary education. The data collected were analyzed using MS-Excel software.

Results

The average age at menarche in all the age group was 12.6±1.17 (Table 1). Table shows that 76.6 percent of adolescent girls have irregular periods, whereas, 27.3 percent have reported regular periods. Majority of participants (85.8%) had the problems of premenstrual syndromes. The frequency of breast soreness, leg cramp, mood swing, stomach pain and back pain was 28.3 percent, 23.5 percent, 15 percent, 9.4 percent and 9.4

percent respectively. Maximum numbers of girls were nervous (66.0%) on first period. This was followed by reaction of emotional (13.2%) and painful (11.3%). The heavy discharge and menstrual problems shows 30.1 percent and 69.8 percent respectively.

Table 2 shows that 79.2 percent of adolescent girls took regular bath during their menstruation. Using of sanitary pad (69.8%) as mode of absorbent reported higher among girls followed by using cloths (20.7%) and both (9.4%). The frequency of 23.5 percent of participants reported restriction during their periods. Mother shows the higher frequency (56.6%) who informs their daughter about the first menstruation followed by sisters (33.0%) and friends (10.3%).

Table 3 shows that the average bleeding days was found same in the age group 14-15 years and 16 years and above. The higher frequency of girls who missed school during menstruation was found in age group 16 year and above (41.1%). This was followed by adolescent girls who missed school from age group of 14-15 years (25.7%) and 12-13 years (17.1%). The frequency of adolescent girls who did not missed school was found 83.7 percent, 74.2 percent and 58.8 percent in the age group 12-13 years, 14-15 years and 16 years and above respectively. Furthermore, total of 72.6 percent of girls from the different age regularly go to the school during their menstruation. Whereas, (27.3%) of girls missed their school during menstruation.

Table 4 shows the higher frequency of urinary tract infection (6.3%) and excessive bleeding (36.1%) was found among adolescent girls belonging to lower income family. However, the higher frequency of allergy rashes (42.5%) was found among girls belongs to middle income family. This was followed by adolescent girls belong to low income family (29.7%) and high income family (16.6%). The frequency of urinary tract infection was found 2.1 percent among girls belong to middle income family. The frequency of excessive bleeding was found more or less the same between adolescent girls belong to high income family (25.0%) and middle income family (25.5%). The absence of any kind of menstrual problems was reported higher among adolescent girls belonging to higher income family (58.3%), followed by middle income family (29.7%) and low income family (27.6%).

Table 5 illustrated that the higher frequency of urinary tract infection (6.6%) found among adolescent girls whose mothers are illiterate. However, higher frequency of allergy rashes (44.4%) and excessive bleeding (37.5%) was found among girls whose mothers attained primary and secondary respectively. The urinary tract infection in adolescent girls was more or less the same among those whose mothers attained primary

education (2.7%) and secondary education (2.5%). The frequency of allergy rashes among girls whose mothers are illiterate and secondary education was (33.3%) and (25.0%) respectively. The absence of any kind of menstrual problems was reported higher among adolescent girls whose mother attained secondary levels of education (35.0%), followed by illiterate mothers (33.3%) and primary educated mothers (27.7%).

Table 1: Distribution of menstrual characteristics of the participants of Sombaria village

Variables	N (%)
Average age at menarche	12.6±1.17
Irregular periods	
Yes	77(76.6)
No	29(27.3)
Premenstrual syndrome (PMS)	
Yes	91(85.8)
No	15(14.1)
Types of PMS	
Breast sore	30(28.3)
Leg cramp	25(23.5)
Mood swing	16(15.0)
Stomach pain	10(9.4)
Back pain	10(9.4)
Reaction on first periods	
Nervous	70(66.0)
Painful	12(11.3)
Emotional	14(13.2)
Heavy discharge	
Yes	32(30.1)
No	74(69.8)

Table 2: Hygienic practices at the time of menstruation of the participants of Sombaria village

Variables	N (%)
Regular bath	
Yes	84(79.2)
No	22(20.7)
Mode of absorbents	
Sanitary pad	74(69.8)
Cloths	22(20.7)
Both	10(9.4)
Restriction on periods	
Yes	25(23.5)
No	81(76.4)
Knowledge of menstruation	
Mothers	60(56.5)
Sisters	35(33.0)
Friends	11(10.3)

Table 3: Information related to days of menstruation of the participants of Sombaria village

Age groups of girls (Years)	Number of girls	Number of absorbents discharged per days	Number of bleeding days	Missed school during menstruation	
				Yes N (%)	No N (%)
12-13	37	3	3	6(17.1)	31(83.7)
14-15	35	3	4	9(25.7)	26(74.2)
16+	34	3	4	14(41.1)	20(58.8)
Total	106	3	4	29(27.3)	77(72.6)

$$\chi^2=5.62;df=2;p>0.05$$

UTI*= urinary tract infection, AR*= allergy rashes, EB*= excessive bleeding, AB* =absence of any kind of menstrual problem

Table 4: Association of family income with menstrual health problems of participants of Sombaria village

Total family income	No. of girls	Problems associated with menstruation			
		UTI* N (%)	AR* N (%)	EB* N (%)	AB* N (%)
High income	12	0(0.0)	2(16.6)	3(25.0)	7(58.3)
Middle income	47	1(2.1)	20(42.5)	12(25.5)	14(29.7)
Low income	47	3(6.3)	14(29.7)	17(36.1)	13(27.6)
Total	106	4(3.7)	36(33.9)	32(30.1)	34(32.7)

$$\chi^2=7.90;df=6,p>0.05$$

Table 5: Association of mothers' education with menstrual health problems of the participants of Sombaria village

Mothers Education	No of girls	Problems associated with menstruation			
		UTI* N (%)	AR* N (%)	EB* N (%)	AB* N (%)
Illiterate	30	2(6.6)	10(33.3)	8(26.6)	10(33.3)
Primary	36	1(2.7)	16(44.4)	9(25.0)	10(27.7)
Secondary	40	1(2.5)	10(25.0)	15(37.5)	14(35.0)
Total	106	4(3.7)	36(33.9)	32(30.1)	34 (32.0)

$$\chi^2=4.52; df= 6; p>0.05$$

Discussion

Menstruation is the hall mark of every girl. There are various factors which influence age at menarche which includes mother's age at menarche. The mother's menarcheal age is considered a good interpreter of the daughter's menarcheal age in non obese girls.¹⁶ In the present study, the average age at menarche was found to be 12.6 years which is lower than the study conducted among girls in Kalamboli (13.3 years), West Bengal (12.8 years) and Gandhinagar (16.1 years).^{12,17,18} Several factors such as lifestyle, food they intake, physical activities and socio economic conditions could

be explained for lower age at menarche in the study population. Age at menarche also influences menstrual hygienic practices because at the very early age at menstrual onset a girl could not be mentally ready to accept all the menstrual characteristics.

Present study shows that 79.2 percent of adolescent girls took regular bath and discharge their absorbents quite often. Similarly, 76.6 percent of girls has irregular period which is higher than the study conducted among girls 27.3 percent in Hyderabad.¹⁹ Girls do mostly have irregular menstrual cycles during early adolescence.^{20,21} A proper absorbent seems to be healthy hygienic

practices. The present study also reported that 69.8 percent of adolescent girls used sanitary pad as type of absorbent. Whereas, 20.7 percent of girls used cloths and 9.4 percent of girls used both the sanitary pads. A cloth is considered as pocket free and eco-friendly menstrual napkin. A study shows that used of cloths as type of absorbent does not always mean financial restriction; it has some traditional beliefs system such as problems related with disposal of menstrual wasted.²² Mothers are the key informants of their daughter regarding the matter of menstrual characteristics as found in other study at Gandhinagar.¹⁸

Adolescent girls either at school or home do discharge their absorbents quite often. The lesser percentage of adolescent girls do constrain from attending school during menstruation. A study conducted by Guerry found the lack of product is in fact the biggest contributor to absenteeism during menstruation.²³ Another study in Nepal shows that there were no separate toilets for girl in schools. Girls felt embarrassed to go in the same toilet for girls and boys.²⁴ The present study shows that the majority of girls have an average bleeding period of four days. In the study conducted in South India, the menstrual flow lasting more than seven days.⁸ Premenstrual syndrome like breast soreness, leg cramp, mood swing, and back pain are observed in present study. Maximum numbers of participants were nervous on their first menstruation. Restrictions are imposed by their family members of the participants during menstruation.

A socioeconomic condition and mother education plays an important role in problem associate with menstruation of the adolescent girls. Education of mother, awareness and knowledge regarding can contribute the adolescent girls to handle the bodily changes during period in adaptive and participative manner.²⁵ Poor literacy and socio-economic status of mothers have fuelled the inhibitions a mother has to talk her daughter regarding menarche and the significance of menstrual practices.¹ A study in Nigeria found that the majority of girls were using toilet rolls as mode of absorbent to catch menstrual blood.²⁶ The socio-economic variables seemed to influences the chance of having gynaecological problems.³ Higher frequency of menstrual problems such as uterus tract infection and allergy rashes are found in low income group in the

present study.

In conclusion, the present study was conducted to understand the menstrual characteristics among the Nepali adolescent girls of Sikkim. Irregular period and premenstrual syndrome are observed in higher percentage in the study population. Problems associated with menstruation such as urinary tract infection, allergy rashes, excessive bleeding etc. are also reported in the present study. These menstrual health problems are more common among girls from low income family and whose mothers are illiterate. Present study further indicates that mothers are pioneer sources of information to their daughter when it comes to educating their girl on reproductive health issues. Sister and colleagues are the secondary sources of information for the adolescent girls in Sikkim. The adolescent Nepali girls in the present study are more concerned about menstrual health and its consequences.

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