

Menstrual hygiene knowledge, attitudes, and practices among college students in Mohanpur, West Tripura, India: A cross-sectional study

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ABSTRACT

It is important to follow safe hygienic practices during menstruation, such as washing the genital area and using hygienic sanitary napkins. **Aims and objectives:** The purpose of this study is to assess the awareness level, practices, and attitudes of college students in West Tripura regarding menstrual hygiene. **Materials and Method:** In Mohanpur, West Tripura, 100 college girls participated in a cross-sectional study. Simple proportions and Chi-square tests were used to analyze the data collected by a pretested questionnaire. **Result :** Menstruation was untaught to 32 percent of girls before menarche. The mean age of menarche is 13 years, ranging from 10 to 16 years. 66% of students reported their mothers taught them menstrual habits, 53% used sanitary napkins or a similar absorbent material during their menstrual cycle, and 47% washed their genital areas regularly. Premenstrual symptoms were reported by 83% of girls, 70% of whom had regular periods. The myths surrounding menstruation have affected 77% of girls. Menstrual restrictions were enforced on 82% of girls. **Conclusion :** Developing countries like India need to strengthen their menstrual management programs. A combination of educational television programs, health personnel awareness programs, and government and non-governmental organizations intervention is required.

Keywords : Knowledge, Attitude, Practice, Menstrual Hygiene

INTRODUCTION:

Menstruation is a physiological process among females who experiences shedding of blood for 1-7 days every month during puberty until menopause.[1]

Regular ovulation isn't commonly established until the age of 15 to 17 years, but the first ovum shed at about the same time as the first menstruation. Menstruation is regarded as a unsuitable or embarrassing topic to discuss on though it is a normal physiological occurrence. In Indian society and culture menstruation is considered to be a defiled phenomenon.

Menstruation and menstrual management practices in a low or middle income countries is really a great concern which otherwise may sometimes result in unwanted health outcomes among late adolescent and post adolescent periods in girls.

The attitude towards menstruation depends upon level of knowledge and degree of awareness about it. The mode by which a girl comes to know about menstruation and changes associated with it may influence her reaction towards the event of onset of menstruation. Physiological, pathological, and psychological aspects of menstruation

affect women's health and wellbeing, and it is considered a major cause of morbidity and mortality in women.

Meanwhile, unhygienic practices during period can lead to infections of the reproductive tract, which is why healthy practices during period are imperative for better reproductive health.[2] It is very important to maintain good hygiene practice during menstruation that can be achieved by repeated washing of genitalia and use of clean sanitary pads. Poor individual hygiene leads to gynecological problems.[3]

Vaginal infections result from harboring microorganisms due to the recurrent use of the wet cloths and unhygienic napkins and sanitary pads. Infertility and pelvic inflammatory diseases may result from unhealthful practices during menstruation.[4]

Therefore, proper knowledge about menstruation may results in safe practices that help in reducing the suffering of women around the globe. Age and socioeconomic conditions influenced menstrual health, most common among Indian women [5], the country needs to find the different ways to increase awareness about menstruation in rural areas of India by imparting useful knowledge.[6-10] Socio-anthropological restrictions and superstitions mask menstruation and menstrual practices.[2] Infertility, pelvic inflammatory disease and poly cystic ovaries may results by adopting unhealthy practices during the onset of adolescent period when menstruation begins.

Menstrual hygiene during monthly cycle of menstruation are very essential for the sustainable development of the human resource.

OBJECTIVES: With the above background, this study was carried out the following objectives:

1. To obtain the information regarding the knowledge and outlook about menstruation among the study population.
2. To determine the menstrual hygiene status of college students.

MATERIALS AND METHODS:

A cross-sectional study was carried out among the female students of Swami Vivekananda Mahavidyalaya, Mohanpur, West Tripura. Duration of study was three months from 17.08.2022 to 17.11.2022. Study population involved one hundred female college students.

Simple random sampling design was adhered in drawing the sample from the college students. Pre-designed and pre-tested questionnaire was used in this study. Permission was taken from the college authority, the objectives of the study were explained and rapport was built up with college going girl students. Verbal consent was obtained from the subjects.

The structured questionnaire included queries regarding awareness about menstruation; information at the time of onset of menstruation, hygiene practiced at the time of

menstruation and restricted activities adopted during menstruation. Protocol and procedure were in compliance with the Helsinki Declaration's human ethical guidelines.

The questionnaires were collected from the students and data were analysed statistically by using IBM SPSS Statistics for Macintosh, Version 26.0. Various study variables were analyzed using the Chi-square test.

RESULTS :

A total of 117 students of 1st, 3rd and 5th semester took part in the study. Incomplete and unfilled questionnaire were rejected but 100 complete responses were obtained and selected for the study.

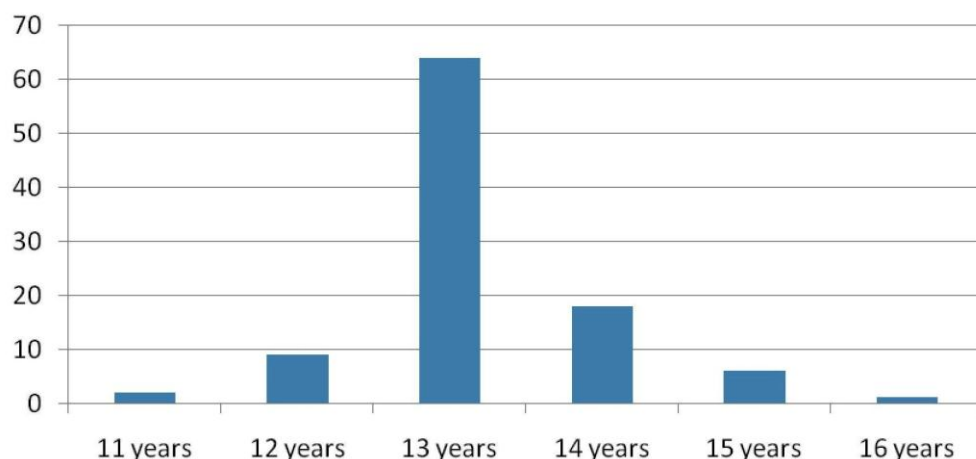
Most of the girls (n=74, 74.0%) belongs to 18 -21 years age group followed by 26 girls (26.0%) in 22- 24 years age group as shown in table-1. Age wise categorization of onset of menstruation was shown in figure 1, mean age was found to be 13 years which ranges from 11-15 years.

Table 1 : Distribution of Students in different age-groups

Age group	Semester	No. of Students
18-19 years	1 st Semester	53 (53.0%)
20-21 years	3 rd Semester	21 (21.0%)
22-24 years	5 th Semester	26 (26.0%)

Our study revealed that only one mother of the college girl was illiterate. Among the literate mothers, 43 (43.0%) were learnt up to the elementary level, 46 (46.0%) up to high school, 8 (8.0%) were completed their graduations and 2 (2.0%) had completed post graduation. The participants were categorized in to different socioeconomic classes based on the modified Kuppaswamy's Socio-economic scale,[11] maximum 50 (50.0%) of study participants were belonged from families of socioeconomic class IV and 35 (35.0%) were from socioeconomic class III, 16 (16.0%) from socioeconomic class II respectively.

Fig 1 : Age wise categorization of onset of Menarche



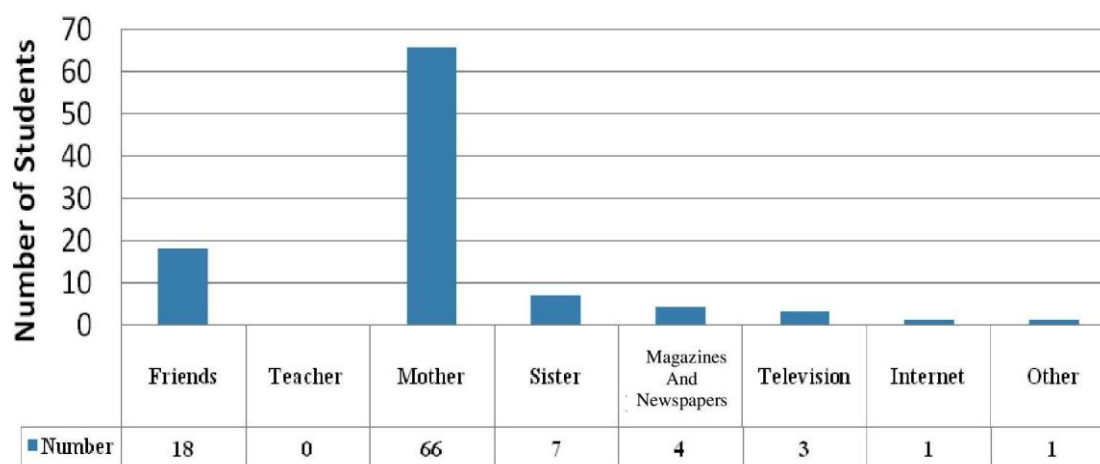
Though most of the student belonged from educated family, yet only 42.0% (n=42) girls were found to be unaware about the menstruation facts before its onset as shown in table -2.

Table-2 : Shows the Menstruation knowledge before menarche (Semester-wise)

Knowledge of menstruation before menarche	1 st Semester Students	3 rd Semester Students	5 th Semester Students	Total (%)
Knew	39	05	14	58 (58%)
Didn't Know	14	16	12	42 (42.0%)
Total	53	21	26	100 (100 %)

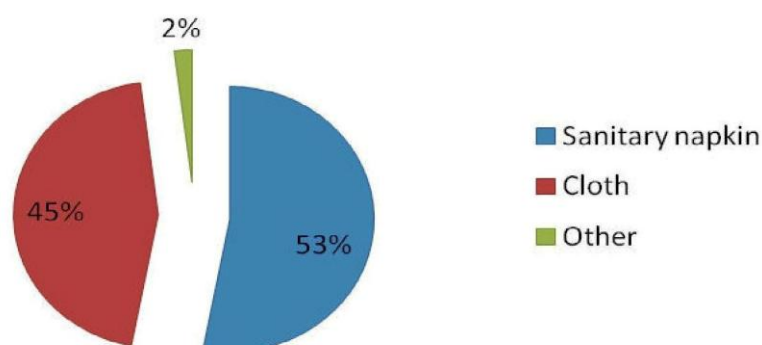
In our study, it was found that 66.0% (n=66) of students obtain the knowledge regarding menstrual habits from their mothers whereas in 18.0% of students (n=18) friends were the information provider on menstruation as shown in figure-2.

Fig 2 : First informer of menarche



53 girls (53.0%) were found to use sanitary pads as absorbent material during menstruation, while 45.0 % (n=45) girls were using clean cloth and only 2% (n=2) girls uses other things during menstruation. The pie chart in figure-3 illustrates this.

Fig 3 : Absorbent material used during menstruation by college girls



It is evident that despite being a college student there is still a gap in knowledge about menstrual hygiene, as 92% of girls wash their hands after changing pads but only 47% (47 girls) wash their vaginal area every day. It was found that only 13 percent (n=13) of girls students regularly cleaned pubic hairs, while 59% (n=59) did it monthly. A total of 70% of female students (n=70) experienced periodic menstruation with moderate to heavy flow. 30% of students (n=30) reported irregular menstruation.

Table 3 : the use of sanitary pads and its association with socioeconomic status and mothers' literacy status

Variable	Use sanitary pad		P value
	Yes	No	
Socio-economic status			
Upper Middle	12	04	$\chi^2 = 21.26, df = 2,$
Lower Middle	23	12	

Upper Lower	12	37	P<0.001
Mother's literacy status			
Illiterate	0	01	$\chi^2 = 34.54, df = 5,$ P<0.001
Primary school	06	36	
High school	28	13	
PUC/Diploma	05	02	
Graduation	06	01	
Post graduation	02	0	

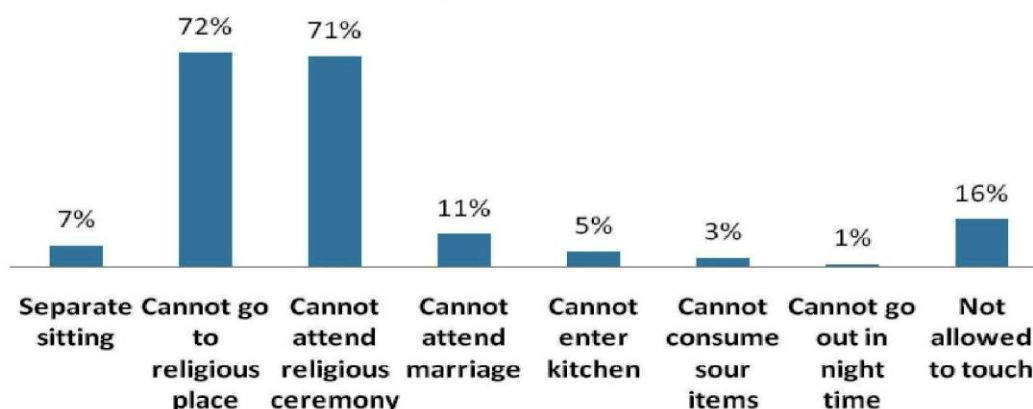
Using sanitary pads was associated with higher socioeconomic status and education level of mothers ($p=0.001$) as shown in table-3.

During the first two days of their period, 73% ($n=73$) of girls changed their sanitary pads after 5-6 hours a day.

Premenstrual symptoms were reported in 83% ($n=83$) of girls, which included headaches, breast tenderness, lower abdominal pain, fatigue, mood swings, feeling upset, anxious or irritable, and therefore 61% ($n=61$) had disturbed daily routine.

Menstrual myths were known by 77% of girls. Eighty-two percent ($n=82$) of girls practice restrictions during their menstruation. The majority of female students had to follow more than two restrictions. Figure-4 illustrates the various restrictions mentioned above.

Fig 4: Restrictions followed by the students during menstruation



DISCUSSION :

Urban and rural schoolgirls have been studied most extensively in India regarding menstrual hygiene practices. Very limited study was conducted on college students thus attempts have been made to fill this gap in this study. According to our study, 68.0 % of girls knew about menstruation and menstrual practices before they reached menarche, which was in agreement with other studies with non medical students and 67.61 % of medical students.[2,12,13,16] In rural areas, girls are likely to be unaware of menstruation because of a lack of education.

It was reported that menarche was reported to occur at a mean age of 13 years, which is almost identical to studies done in various populations around India (urban, rural, and tribal).[2,14] According to our study, 66.0 percent of students learned about menstrual habits from their mothers, which is consistent with Katiyar et al. (2013)[15], who found that the mother of 66.9% of Meerut urban adolescent females taught them about menstruation.

Mothers' educational status influences their daughters' menstrual habits. During our study, 53.0 percent of students used sanitary napkins as absorbent material, while 45.0 percent used cloth as an absorbent material. This is the same as Juyal et al., (2012) [16] but our study has a higher percentage of cloth users.

However, in previous studies, reusable cloth pads were predominantly used as menstrual absorbents.[2,17,18] Due to more cases of toxic shock syndrome associated with tampons, the use of cloth pads has declined dramatically.[15] A significant correlation exists between the selection of absorbent material during menses and a family's socioeconomic status.

This present study revealed that 47% of girls were washing their genital area daily, which is consistent with the study by Sharma et al., (2013)[12] on medical students in north India. They also reported that the percentage of girls were having irregular menses is more or less identical to our study where 30% of the students reported irregular menses. Compared to our study, 72.7% of menstruating girls in Meerut reported experiencing at least one menstrual disorder which is very higher compared to our study.[15]

We found that 82% of girls had to practice restrictions during menstruation, including having to sit separately, being forbidden to take part in religious ceremonies, being forbidden to enter the kitchen, and even not being allowed to go out at night. Others are prohibited from eating certain sour foods, such as tamarind, pickles, etc., which are believed to disrupt ovarian function.

Other studies have also reported similar restrictions.[2,17]

Reproductive tract infection is closely associated with poor menstrual hygiene, an epidemic that has plagued women's lives. It is therefore possible to protect them from suffering by maintaining proper menstrual hygiene and adopting correct habits and consciousness.

CONCLUSION :

In order to practice proper menstrual hygiene, girls should learn about the facts and physiology of menstruation, how menstruation contributes to secondary sexual characteristics, and how to choose feminine hygiene products to maintain proper menstrual hygiene. In order to prevent the occurrence of urinary tract infections, fungal and bacterial vaginal infections in the future which may cause infertility and complications during pregnancy, knowledge of the consequences of bad hygienic practices during menstruation is essential.

By utilizing educational television programs, health personnel's awareness programs, various NGOs' intervention, school education on menstrual hygiene and an open discussion or sharing of views by educated parents, this problem can be addressed. Their education would indirectly rectify age-old false notions about menstruation and give her confidence to speak about menstruation-related topics, including hygienic practices, with no inhibitions.

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Conflicts of interest : There are no conflicts of interest.

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