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Knowledge, attitude and practice regarding menstrual hygiene among adolescent girls in a rural private school

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ABSTRACT

Background: Being a developing country, India is faced with many health problems which can be averted by education and implementation of basic guidelines. Menstrual hygiene is one such topics which is rarely brought to attention but forms an integral part of a women's life. This topic has been neglected not only in rural areas but in the poor socioeconomic corners of metropolitan cities. This ignorance has taken a great toll on the quality of life of women. Poor hygiene predisposes them to reproductive tract infections which may lead to increased incidence of infertility and mortality. Misconceptions regarding this have also prevented women to seek out professional help. Keeping this in mind the study was undertaken to spread awareness and eliminate the taboo this topic is regarded with.

Methods: A cross sectional study was conducted amongst adolescent girls in a private school located in Angaon village, Bhiwandi Taluka, Mumbai. A self-administered questionnaire was given to the adolescent girls to assess their knowledge, attitude and practices regarding menstrual cycle. Percentages were used for statistical analysis.

Results: 83 girls (96.51%) were aware of menstrual cycle. 49 (56.98%) girls perceived that menstrual blood is dirty. 72 (83.72%) knew that it is a physiological process. 85 (98.84%) were also aware about menstrual hygiene. 85 (98.4%) felt that girls should be addressed regarding menstrual cycle, hygiene before achieving menarche. 50 (58.14%) girls followed restrictions during menstruation.

Conclusions: The findings of the present study emphasize the need to address physiology about menstrual cycle as well as the myths and misconceptions associated with it.

Keywords: Menstrual hygiene, Knowledge, Attitude, Practices

INTRODUCTION

Menstruation is a normal physiological process indicating beginning of reproductive life but sometimes it is considered as unclean phenomenon in society. India is a country of contrasts, with extreme wealth and poverty and gender related disparities, resulting in significant variation in health and social indicators among girls and women.

Menstrual hygiene depends upon socioeconomic, educational and cultural status of families. Unhygienic sanitary practice has a great impact on women's health, increasing their susceptibility to reproductive tract infections (RTI), urinary tract infections (UTI) and may also leave women vulnerable to infertility. Disposal of absorbents in urban settings is mainly through routine waste while in rural places throwing away in public places and burying, burning is also common.

Poor water, sanitation, hygiene facilities in school, lack of menstrual hygiene management items and inadequate puberty education cause girls to experience menstruation as shameful and uncomfortable. Cultural taboos prevent them from seeking help.

Therefore, this study was carried out to assess the knowledge, attitude and practices regarding menstrual hygiene among adolescent girls in rural setting.

The primary objectives of the study were to study awareness of knowledge regarding menstrual hygiene, to study attitude regarding menstrual hygiene and to study the prevailing practices regarding menstrual hygiene.

The secondary objective of the study was to spread awareness regarding menstrual hygiene among rural adolescent girls. The adolescent girls were motivated to spread the knowledge gained regarding menstrual hygiene to their peers.

METHODS

The study was a cross-sectional study conducted in Lahoti School which is a private school located in Angaon village belonging to Bhiwandi Taluka of Thane district during January 2019 to July 2019.

Target population

Adolescent girls from 8th, 9th and 10th standard of Lahti School, Angaon, Bhiwandi Taluka, Thane District.

This cross-sectional study was conducted in the rural field practice area of the Community Medicine Department of K.J. Somaiya Medical College and Research Centre. The Department has Rural Health Training Centre (RHTC) in the Primary Health Care Centre of Angaon. Hence as a matter of convenience and gathering a group of adolescent girls in a given area to impart health education, Lahoti School was chosen.

The nature and procedure of the research was explained to the principal and the permission for conducting the study was obtained. After being granted permission, roll call was obtained from the Principal for the purpose of sampling.

Sample size calculation

Sample size of 119 was calculated using the formula $4pq/L^2$ where p=48, q=52 and allowable error L=20% of p. n=108.33.¹ A systematic review and meta-analysis conducted by Anna Maria van Eijk in the year 2016 regarding menstrual hygiene management among adolescent girls in India found that 48% of adolescent girls were aware regarding menstrual hygiene.² To account for non-response, additional 10% was taken into consideration. Thus, the required minimum sample size was 118.8=119.

Inclusion criteria

Adolescent girls who had achieved menarche, given assent and whose parents had given consent.

Exclusion criteria

Adolescent girls who had not achieved menarche, those who were mentally challenged and those who were unwilling to participate.

Sampling technique

Stratified sampling was used to ensure uniform representation of the girls belonging to different standards. The roll call of the 8th, 9th, 10th standard girls was obtained from the principal for preparing the sampling frame. Using random sampling in excel, random roll numbers were picked from each stratum. The purpose of the study was also explained to the class teachers. The class teachers were given the assent and consent forms in local language to be given to the girls. Written informed assent from the adolescent girls and consent from the parents in the local language was obtained.

A day was fixed with the school principal for data collection. The girls were given a self-administered semi structured pretested questionnaire in local language to obtain details regarding their age, mothers education, and their own knowledge, attitude, practices followed by them regarding menstrual hygiene. The adolescent girls were assured about the confidentiality of their responses. At the end of collection of the questionnaires, the girls were shown a video clipping in local language Marathi titled "Mythri" prepared by Sinu Joseph and Vyjayanthi. K. Mythri. After this health education session, doubts of the study subjects were addressed. The girls were requested to pass on the information they acquired from the health education session to two other females they were acquainted with.

The girls who were absent on the particular day of data collection were approached later and administered the questionnaire. The data collected was entered in an excel sheet. The statistical tests were frequencies and percentages.

RESULTS

Total 86 adolescent girls filled the questionnaire. The response rate was 72.27 %. The baseline characteristics of the participants are given in Table 1. 83 girls (96.51%) were aware of menstrual cycle. Majority of them had received information from their mothers (Table 2). Table 3 shows the distribution of study participants according to their knowledge regarding menstrual hygiene.

59 (68.60%) felt that restrictions have to be followed during menstruation. 49 (56.98%) girls perceived that menstrual blood is dirty (Table 4).

Table 1: Characteristics of the study participants.

Variable	N	0/0
Standard		
8 th	20	23.25
9th	35	40.69
10th	31	30.04
Mean age in years	14.67	-
Mean age at menarche in years	12.94	-
Education regarding reproductive system received in school		
Yes	69	80.23
No	16	18.60
Missing	1	1.16

Table 2: Distribution of study participants according to awareness of menstrual cycle and sources of information.

Variable	N	%
Awareness of menstrual cycle		
Yes	83	96.51
No	3	3.49
Total	86	100
Source of information		
Mother	63	75.90
Relative	3	1.20
Teacher	21	25.30
Friend	6	7.22
Television	0	0
Magazines	1	1.20
Total	83	100

Table 3: Distribution of study participants according to knowledge of menstrual cycle.

Variable	N	%
Cause of menstruation		
Physiological cause	72	83.72
Do not know	11	12.79
Disease	2	2.33
*Missing data	1	1.16
Total	86	100
Source of menstrual blood		
Uterus	80	93.02
Injury	0	0
Other organ	2	2.33
Do not know	1	1.16
Missing data	3	3.49
Total	86	100
Awareness of menstrual hygiene		
Yes	85	98.84
No	1	1.16
Total	86	100
Informant of menstrual hygiene		
Mother	71	82.56
Relative	3	3.53
Teacher	13	15.29
Friend	3	3.53
Television	0	0

Continued.

Variable	N	%
Magazines	1	1.18
Learnt by self	1	1.18
Total	85	100

Table 4: Distribution of study participants according to their attitude towards menstrual cycle.

Variable	N	%	
Menstruating girls should be treated differently			
Yes	14	16.28	
No	67	77.91	
Do not know	4	4.65	
Missing	1	1.16	
Total	86	100	
Restrictions should be practiced during menstruation			
Yes	27	31.40	
No	59	68.60	
Total	86	100	
Reaction to your first menstrual cycle			
Normal	20	23.26	
Scared	26	30.23	
Discomfort	36	41.86	
Embarrassed	4	4.65	
Total	86	100	
Menstrual blood is dirty			
Yes	49	56.98	
No	36	41.86	
Missing	1	1.16	
Total	86	100	
Girls should be addressed about menstrual cycle and hygiene before achieving menarche			
Yes	85	98.84	
No	0	0	
Missing	1	1.16	
Total	86	100	

Table 5: Distribution of study participants according to the practices followed by them during menstrual cycle.

Variable	N	%
Material used during menstruation		
Sanitary pad	79	91.86
Cloth	7	8.14
Total	86	100
Disposal of sanitary napkin/cloth		
Throw it as routine waste	30	34.88
Flush	1	1.16
Burn	51	59.30
Others	3	3.49
Missing	1	1.16
Change sanitary napkin/cloth times/day		
Once	3	3.49
Twice	40	46.51
Thrice	33	38.37
More than thrice	10	11.63
Clean your external genitalia		
Yes	85	98.84
No	1	1.16

Continued.

Variable	N	%		
Cleaning external genitalia with soap and water/ only water/ piece	Cleaning external genitalia with soap and water/ only water/ piece of cloth			
Soap and water	46	53.49		
Only water	38	44.19		
Piece of cloth	0	0		
Missing	2	2.33		
Total	86	100		
Cleaning external genitalia when not menstruating				
Not at all	1	1.16		
Less than 2 times	12	13.95		
More than 2 times	58	67.44		
As per convenience and privacy	15	17.44		
Total	86	100		
Cleaning external genitalia when menstruating				
Not at all	1	1.16		
Less than 2 times	10	11.63		
More than 2 times	59	68.60		
As per convenience and privacy	15	17.44		
Missing	1	1.16		
Total	86	100		
Restrictions followed during menstruation				
Yes	50	58.14		
No	36	41.86		
Total	86	100		

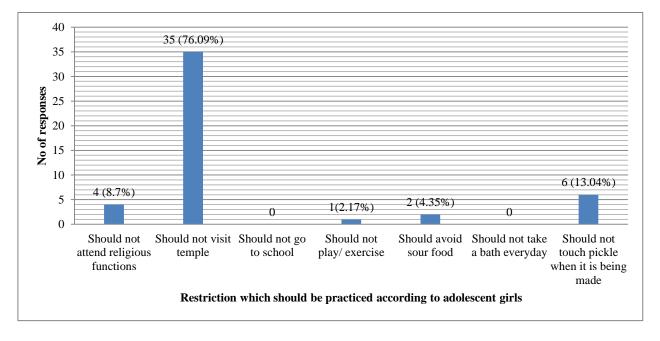


Figure 1: Distribution of study participants according to their attitude regarding restrictions to be followed during menstrual cycle.

7 (8.14%) used cloth during menstruation as absorbent material (Table 5). Out of these, 2 girls reported that they reuse the cloth. All these 7 adolescent girls reported that they clean the cloth by washing it with water only. They do not use soap. Out of these 7 girls only 2 said that they keep the cloth for drying on the clothesline in the sun whereas 3 kept it for drying in the bathroom and the rest 2 girls reported that they keep the cloth for drying in a part of the house where no one can see it. None of these girls

shared the cloth used during menstruation among the other female family members.

8 (9.30%) reported that they were treated differently at home/ school during menstruation. When asked to the respondents what do they do in case they experience any complaints during menstrual cycle, 64 (74.42%) reported that they confided in their mother or relative regarding complaints during menstruation. 14 (16.28%) said that they go to a doctor. When asked "What would you do if you had your period in school and you were not prepared or didn't have supplies?" 6 (6.98%) said they would go home, 24 (27.91%) they would borrow a cloth/ sanitary

napkin from a friend, 55 (63.95%) borrow a cloth/sanitary napkin from a teacher. Figure 2 shows the restrictions actually followed by the girls during menstruation.

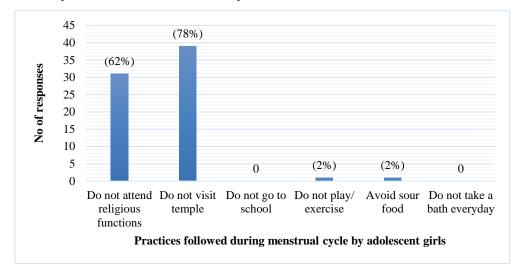


Figure 2: Distribution of study participants according to their practices actually followed during menstrual cycle.

DISCUSSION

The sample size was 119. Only 86 (72.27%) girls filled the self-administered questionnaire. 34 girls (27.73%) refused to participate in the study. The parents did not give consent. These girls were approached in subsequent visit to know why they did not want to participate in the study. The reason for not filling the self-administered form was non-approval from their parents. To increase the response rate, the need of meeting the parents was expressed to these girls. But the girls objected to this too. This reflects the conservative attitude of the parents towards the normal physiological process of menstrual cycle as well as hesitancy amongst the girls to discuss about study regarding menstrual hygiene with their parents. In this study aimed to find out knowledge, attitude and practices adopted, the response rate of 72.27% is acceptable since the topic is a sensitive one.⁴

83 (96.51%) were aware about menstrual cycle (Table 2). 72 (83.72%) knew that it is a physiological process. 98.84% were also aware about menstrual hygiene (Table 3).

26 (30.23%), 4 (4.65%), 36 (41.86%) were scared, experienced discomfort and embarrassment respectively during their first menstrual cycle (Table 4). According to a cross sectional study done in the rural area of Wardha District, 43.67% felt scared, 21.67% felt usual, 14.33% felt irritated or disgusted 9.67% had a different reaction besides the above.⁵

7 (8.14%) used cloth during menstruation as absorbent material and 79 (91.86%) used sanitary napkins (Table 5) as compared to 89.5% girls who used sanitary pads and 10.5% who used cloth during menstruation as reported by

Kanotra et al.⁶ According to NFHS-4, from a sample size of 166,100 rural women of the age 15-24 years, 71.4% use cloth, 14.8% use locally prepared napkins, 33.6% use sanitary napkins, 1.9% use tampons, 0.1% use other means whereas 0.6% use nothing with percentage of usage by hygienic method being 48.2%.⁷

 $30\ (34.88\%)$ throw the sanitary pad in the routine waste, $51\ (59.30\%)$ burn it, $1\ (1.16\%)$ flushes it and $3\ (3.49\%)$ employ other methods of disposal (Table 5). Thakre et al has reported that 12.3% throws the sanitary napkin, 60.9% burns it, 22.6% employ other methods of disposal in rural Nagpur. 8

The study findings revealed that 67 (77.91%) girls felt that they should not be treated differently and 59 (68.60 %) felt that restrictions should not be followed (Figure 1). This is in contrast to the actual practices regarding restrictions followed. The data showed that 50 (58.14%) girls followed restrictions (Figure 2). The study revealed 4 (8.7%) did not attend religious functions, 35 (76.09%) did not visit temples, 1 (2.17%) avoided physical activities like playing and exercises, 2 (4.35%) avoided sour food and 6 (13.04%) did not touch pickle when it was being made. This reflects the persistence of deeprooted beliefs; customs prevailing in the society and being followed. There were no restrictions observed towards going to school and having bath every day during menstruation. According to a cross sectional study done in the rural area of Wardha District, 87% did not attend religious occasions during menstruation, 18.67% avoided physical activities, 12.67% avoided school, 14.33% avoided family functions, 6.33% avoided regular bath and 17% observed no restrictions at all.⁵

The study revealed that 38 (44.19%) of the girls make use of only water to clean their external genitalia (Table 5).

49 (56.98%) perceived menstrual blood as dirty despite the fact that the majority of the girls had received education regarding the reproductive system. This highlights the need to address the myths and misconceptions regarding menstrual cycle and not just informing about the anatomy of the reproductive system.

85 (98.4%) felt that girls should be addressed regarding menstrual cycle, hygiene before achieving menarche (Table 4).

CONCLUSION

The findings of the present study emphasize the need to address physiology about menstrual cycle as well as the myths and misconceptions associated with it. The importance of menstrual hygiene needs to be stressed, especially about the use of soap and water and not just water to clean the external genitalia.

Recommendations

Health education regarding the anatomy of the reproductive system along with physiology of menstrual cycle before achieving menarche so as to allay the anxiety and stress.

Addressing myths and misconceptions through interactive sessions. Methodologies like use of agree and disagree statements, case scenarios can be used as icebreakers to initiate the topic and address these misconceptions. These can be done by involving preidentified female teachers. Female medical interns can also be trained and can impart health education under the supervision of faculty.

Students and faculty alike should be urged to take up activities and skits to educate men and women of the village regarding menstrual hygiene. This can be taken up in phases where mothers are initially educated and later it can be expanded to involve the male members of the community as well. This will help to bridge the communication gap between adolescent girls and their parents with regards to physiology of the reproductive system.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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