

**Menstrual Hygiene among adolescent girls in the rural field practice area of medical college in Mandya**

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**ABSTRACT**

**Background:** Menstrual Hygiene is an issue that every girl and woman has to deal with once she enters adolescence. Adolescence in girls signifies the transition from girlhood to womanhood. Menstruation is a biological event imbued with social, cultural and personal significance. Hence this study was done with the objective to assess the menstrual hygiene practices among adolescent girls in rural Mandya district. **Methodology:** This cross sectional study was carried out among adolescent girls in schools coming under Bellur field practice area. A total of 257 adolescent girls formed the sample size. A pre tested semi structured questionnaire was used for collection of data. Data was entered in MS EXCEL and was analyzed, using percentages and chi square test. **Results:** Among 257 adolescent girls, Government school children constituted 44.4% and private school children of 55.6%. 85.6% of them had heard about menstrual hygiene. 72.8 % were using sanitary pads during menstruation. 36.2% were following burial method to dispose sanitary pads. 48.5% of them had good practice scores, 44.5% had fair scores and 7.0 % poor scores. **Conclusion:** Menstrual hygiene practices among participants were not satisfactory even though knowledge was good. Private school children were performing well when compared to government school children.

**Key Words:** Adolescent, Hygiene, Menstruation, Sanitary pad

**INTRODUCTION**

Worldwide more than 1.2 billion are adolescents, this indicates that roughly one in every 6 person is an adolescent.<sup>1</sup> About 21% of Indian population are adolescents.<sup>2</sup> Adolescence in girls signifies the transition from girlhood to womanhood. Menstruation is a phenomenon unique to the females. The onset of menstruation is one of the most important changes occurring among the girls during the adolescent years. The first menstruation (menarche) occurs between 11 and 15 years with a mean of 13 years.

Menstrual Hygiene is an issue that every girl and woman has to deal with once she enters adolescence around the age of 12years and until she reaches the menopause somewhere in her 40's. Overall, a woman spends approximately 2,100 days menstruating which is equivalent to almost six years of her life.<sup>3, 4</sup> Menstruation is a monthly occurrence that requires access to appropriate materials and facilities, without which females suffer from poor menstrual hygiene which restricts their movement and self-confidence.<sup>5</sup>

Hygiene-related practices of women during menstruation are of considerable importance, as it has a health impact in terms of increased vulnerability to reproductive tract infections (RTI). Women having better knowledge

regarding menstrual hygiene and safe practices are less vulnerable to RTI and its consequences. Therefore, increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women.<sup>3</sup> Good menstrual hygiene is therefore crucial for the health, education and dignity of girls and women.

Menstruation is a biological event imbued with social, cultural and personal significance. In general, it is observed that characteristics related to menstrual cycle show deviations during onset and conclusion of the reproductive phase of the life. Furthermore, studies show that factors such as socio- economic status, place of residence, marital status, ethnicity, body mass index and smoking habit affect cycle length, regularity in periods, premenstrual problems, duration of discharge and painful periods.<sup>6</sup>

In several cultures, there are (cultural and or religious) taboos concerning blood, menstruating girls, women and menstrual hygiene. In recent years, importance of health counseling for adolescents has been appreciated but there are no large scale community based studies to assess awareness about menarche and reproduction in Indian

adolescent girls. In India, problems are more difficult and complicated because of marked socioeconomic diversity. This is an important sanitation issue which has been in the closet and still there is a long standing need to openly discuss it. Hence this study was undertaken with the objective to assess the menstrual hygiene practices among adolescent girls in rural Mandya district.

**MATERIAL AND METHODS**

**Research Design:** The research design that was used to achieve the objectives of the study was Community based Cross sectional Study and was conducted in schools coming under Rural Health Training Centre (RHTC), Bellur of Adichunchanagiri Institute of Medical sciences (AIMS), BG Nagara.

**Sample size and Sampling technique**The study population comprised 257 adolescent girls who are studying in 8<sup>th</sup> to 10<sup>th</sup> standards. There were 8 schools in total, coming under our RHTC. For the purpose of the study, we chose 2 government and 2 private high schools using random sampling method. Convenient and Purposive sampling technique was used to select the study population.

**Inclusion and exclusion criteria:** Adolescent girls who were menstruating and were studying in 8<sup>th</sup> to 10<sup>th</sup> standards who were available during the period of data collection were included in the study. Exclusion criteria were those adolescent girls who were not willing to participate.

**Tool for Data Collection:** A Semi structured Questionnaire was drafted for this purpose with two parts and the relevant data was collected from the sample.

**Part – I:** Selected demographic variables such as age, educational status, religion, type of family, family income, source of information, age at menarche and educational status of the mother.

**Part- II:** Structured knowledge questionnaire regarding menstrual hygiene

**Procedure for Data Collection:** A predesigned, pre tested, semi structured questionnaire was prepared for collection of data. The schools were visited as per planned schedule for gathering information from adolescent girls. The questionnaire was designed in English initially, later translated to kannada and back translated to English to check the validity of translated questionnaire contained. The adolescent girls were explained about the purpose of study and were assured of confidentiality. A detailed proforma including socio-demographic profile of girls and awareness about menstruation and practices followed to maintain menstrual hygiene was taken. Practice scores were labeled as good (>8/11), fair (4-8/11), and poor (<4/11). Following data collection, queries from the participants relating to menstrual and reproductive health were clarified by the investigator.

**Statistical analysis:** Data was cleaned and entered in Microsoft Excel 2016 spreadsheet, and frequencies were presented in along with the percentages wherever appropriate. Data obtained was analyzed using SPSS statistical software package, version 20 (SPSS Inc., Chicago, IL, USA), and findings were reported in the form of descriptive statistics, quantitative variables using Chi-square test and Fischer exact test. p ≤ 0.05 was used to indicate a statistically significant association.

**RESULTS**

In this study, majority (35%) of study population belongs to age of 14years. In private schools, 52.4% of participants were 15 years old in contrast to government schools where majority respondents were of 14years age (64.9%). Mean age of respondents was 14.01years with standard deviation of 0.807. 45.1% of high school girls belong to Class IV socio economic status of modified B G Prasad classification.

**Table 1: Socio demographic characteristics of study participants**

Variables	Frequency (n=257)	Percentage
<b>Age in completed years</b>		
13	82	31.9
14	90	35
15	85	33.1
<b>SES Class *</b>		
I	6	2.3
II	29	11.3
III	87	33.9
IV	116	45.1
V	19	7.4
<b>Educational status of mother</b>		
Illiterate	8	3.1
Primary	30	11.7
Higher primary/middle	49	19.1
Secondary	80	31.1
Puc/diploma	63	24.5
Graduate	16	6.2
Post graduate	11	4.3
<b>Type of family</b>		
Nuclear	133	51.8
Joint	91	35.4
Three Generation	33	12.8

\* Socioeconomic status according to modified B G Prasad classification

It was found that 31.1% of participants’ mothers have completed Secondary education followed by PUC/diploma and higher primary education. Majority (51.8%) of adolescent girls belongs to Nuclear family.

Among participants, 80.7% of Government high school girls and 88.9% of private schools girls have heard about menstrual hygiene. Regarding the source of information on menstrual hygiene, 44.7% of children-

**Table 2: Menstrual hygiene practices among adolescent girls of different schools**

Variable	Government (%) n=114	Private (%) n=143	Total (%) N=257	P Value
<b>Heard about Menstrual Hygiene</b>				
Yes	92(80.7)	128(89.5)	220(85.6)	$X^2=3.396$ df=1
No	22(19.3)	15(10.5)	37(14.4)	p=0.065
<b>Participants Opinion on Menstruation</b>				
Good	22(19.3)	92(63.9)	114(44.4)	$X^2=54.517$ df=2
Bad	76(66.7)	36(25)	112(43.6)	p=0.000
Don't know	16(14)	15(10.5)	31(12.0)	
<b>What do they use during menstruation?</b>				
Sanitary Pads	48(42.1)	139(96.5)	187(72.8)	$X^2=94.484$ df=2 p=0.000
Cloth	38(33.3)	2(1.4)	40(15.6)	
Both	28(24.6)	2(1.4)	30(11.6)	
<b>How often they used to change the sanitary pads and cloth?</b>				
One time/day	8(7)	4(2.8)	12(4.7)	$X^2=53.968$ df=3 p=0.000
Two times/day	5(4.4)	35(24.5)	39(15.3)	
Three times/day	37(32.5)	80(55.9)	117(45.6)	
More than three times/day	64(56.1)	24(16.8)	88(34.4)	
<b>Disposal of Sanitary pads and cloth</b>				
Wash and throw	19(16.7)	4(2.8)	23(9.0)	$X^2=217.807$ df=3 p=0.000
Cover and throw	0(0.0)	87(60.8)	87(33.8)	
Burn	4(3.5)	50(35.0)	54(21.0)	
Burial	91(79.8)	2(1.4)	93(36.2)	
<b>Access to clean water</b>				
Yes	62(54.4)	138(96.5)	200(77.8)	p<0.00001 <sup>#</sup>
No	52(45.6)	5(3.5)	57(22.2)	
<b>Access to clean toilet</b>				
Yes	114(100)	143(100)	257(100.0)	P=1.000 <sup>#</sup>
No	0(0.0)	0(0.0)	0(0.0)	
<b>Rest during menstruation</b>				
Yes	56(49.1)	81(56.2)	137(53.3)	p=0.06 <sup>#</sup>
No	58(50.9)	52(43.8)	120(46.7)	
<b>Restrictions during menstruation</b>				
Yes	113(99.1)	134(93.8)	247(96.1)	p=0.004 <sup>#</sup>
No	1(0.9)	9(6.2)	10(3.9)	
<b>Attend school during Menstruation</b>				
Yes	24(21.1)	133(93)	157(61.0)	p=0.000 <sup>#</sup>
No	90(78.9)	9(7.0)	100(39.0)	
<b>Sleep Separately during menstruation</b>				
Yes	54(47.4)	33(23.0)	87(33.9)	$X^2=17.021$ df=1 p=0.000
No	60(52.6)	110(77.0)	170(66.1)	
<b>Distribution of participants based on Practice scores</b>				
Poor	18(15.8)	0(0.0)	18(7.0)	$X^2=42.133$ df=2
Fair	62(54.4)	52(36.4)	114(44.5)	P value<0.05
Good	34(29.8)	91(63.6)	125(48.5)	

# Fisher exact test

have heard menstrual hygiene from their mothers, 14.4% from friends, 19.1% from sister, 14.8% from teacher and 7.0% from others.

It was observed that almost equal proportion of participants opined menstruation as good and bad. In private schools, around 64% adolescent girls responded menstruation as good. 72.8% of adolescent girls were using sanitary pads during menstruation. Out of which, 96.5% of the private adolescent students were using sanitary pads when compared to government students. This association was statistically significant.

It was observed that 45.6% of participants change sanitary pads three times in a day. There was significant association between government and private schools students with respect to changing pads. It was observed that 79.8% of government high school girls were burying either sanitary pads or cloth when compared to private school in which it was indiscriminate throwing (63.6%). Significant association was found in disposing the used material.

It was found that 96.5% of private school children and 54.4% of government school children said they have access to clean water. Everyone had access to clean toilet. 49.1% and 56.2% of Government and private school girls respectively used to take rest during menstruation. Around 89.5% of study participants used to wash their hands after changing the pads.

Majority of respondents wash their genital area during menstruation (86.8% in private and 64.9% in government schools). It was observed that 99.1% and 93.8% of government and private school girls respectively, had restrictions during menstruation (p=0.046). Important one is restricting visit to temple (77.2%: 93.7% = Government: Private).

It was found that 93% of girls in private schools attend school during menstruation in contrast to government where 78.9% don't attend school. 66.1% of participants do not sleep separately during menstruation. Association was found to be significant. Menstrual hygiene practice score mean and standard deviation of participants was 7.80 and 1.888 respectively. 48.5% of study participants had good practice score. There was significant association between type of school and practice score.

## DISCUSSION

In present study, majority (35%) of study population belonged to age of 14years, which is similar to study conducted by Sowmya et al.<sup>7</sup> Abhay Bhausaheb Mudey et al.<sup>8</sup> noted that commercial educational material is an important source of information on menstruation but does not give accurate knowledge and does not deal with girl's emotional needs and anxiety. 51.8% of adolescent girls belong to Nuclear family. Similar findings were found out by Sowmya et al.<sup>7</sup>. 80.7% of Government high school girls and 88.9% of private schools girls have heard about menstrual hygiene. Study conducted by Aikanwaare<sup>9</sup>

showed that, 93.7% of the respondents had known about menstruation.

In present study, it was observed that, 44.7% of children have heard menstrual hygiene from their mothers. Mothers were the first informants in about 56.5% girls in Bangalore study.<sup>7</sup> 72.8% of adolescent girls were using sanitary pads during menstruation in our study which is less when compared to study done by Sowmya et al and Aikanwaare et al. Juya R et al<sup>7, 9, 10</sup> found that 38.4% adolescent girls were using sanitary napkins as menstrual absorbent, while 30% were using new cloth every time.

Drakshayani Devi and Venkata-Ramaiah<sup>3</sup> in a study on menstrual hygiene among rural adolescent girls observed that majority of girls were lacking in care and hygiene during menstruation. Sowmya et al<sup>7</sup> found that composite practice scores showed that 19%, 69%, and 12% samples had poor, fair, and good score of practices regarding menstrual hygiene, respectively. Present study had better practice scores (48.5% of study participants had good practice score) in comparison.

In Aikanwarre et al study<sup>9</sup>, 264 (76.2%) of the respondents claimed that they wash hands before changing their protective materials while 224 (64.5%) reported having access to toilet facilities during menstruation. In present study, it was 90.4% and 100% respectively. Regarding restrictions practiced, 97.6% girls practiced different restrictions during menstruation in Bangalore study<sup>7</sup>, which is similar to present study (96.1%).

Indeed, the findings showed a significant positive association between good knowledge of menstruation and educational status of the mother only. Lack of information about menstrual hygiene can be attributed to various factors, which need to be studied separately. Private school girls had good menstrual hygiene practices in comparison to government school. The above findings reinforce the need to encourage safe and hygienic practices among the adolescent girls and bring them out of traditional beliefs, misconceptions, and restrictions regarding menstruation.

The investigators improved the general awareness about cause of menstruation, and the organs involved. The use of sanitary napkins was promoted, and various schemes regarding menstrual health were briefed to the students. Early awareness can prevent students from suffering from the various reproductive tract infections. Pamphlets were distributed among the adolescent girls regarding the do's and do not's during menses and they were asked to show the same at home to their mothers to enhance their knowledge about menstruation and personal hygiene.

**Conclusion:** Menstrual hygiene practices among participants were not satisfactory even though knowledge was good. Private schools were performing well when compared to government. Menstrual hygiene practices are important at all times, the need for more careful attention to personal cleanliness before and during menstruation will contribute to a girl's comfort and confidence. The girls

should be educated about the significance of menstruation, use of proper sanitary pads or absorbents and its proper disposal. This can be achieved by giving them proper training and health education by teachers, family members, health workers, and media so that there will not be any misconception to the adolescent girls regarding menstrual hygiene.

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