

# A cross-sectional Study on Menstrual Hygiene among Rural Adolescent Girls of West Bengal

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## ABSTRACT

**Introduction:** Adolescent period is the turbulent phase between childhood and adulthood, and girls are especially vulnerable to various diseases. Lack of understanding and social taboos are associated with menstrual practices. Proper menstrual hygiene management is crucial for healthy genitor urinary tract. The objective of the study was to assess knowledge and practices regarding menstrual hygiene among adolescent girls.

**Material and methods:** An institution based descriptive, cross-sectional study was conducted among the adolescent girls at OPD and Anwasha clinic of Hariharpur BPHC. It was carried out from December 2018 to March 2019. Data was collected on Monday to Friday in a week for the total duration. A total of 188 girls were interviewed after taking informed verbal consent.

**Results:** Out of total 188 respondents, 39.9% belonged to the age group 14-15 yrs followed by 16-17 yrs age group (33.5%). Their mean age was  $16.2 \pm 1.63$  yrs. 46.2% girls knew about menstruation before attainment of menarche. 43.3% had adequate knowledge regarding menstruation. 44.7% were using sanitary pads as menstrual absorbent whereas 19.1% and 36.2% were using new cloth and old washed cloth respectively. About 68.1% girls changed their soaked pad 2-5 times per day, within the first two days of menstruation.

**Conclusion:** Proportion of sanitary pad user was far away from satisfactory and many girls reported various restrictions practiced during menstruation.

**Keywords:** Adolescent, Menstrual Hygiene, Anwasha Clinic, Genito-Urinary, Sanitary

## INTRODUCTION

Adolescent is the transition period between childhood and adulthood, characterized by rapid physical, psychological and reproductive development. In India there are 243 million adolescents comprising 20% of the total population.<sup>1</sup> Studies revealed that they are often unprepared for these changes. A substantial number of adolescent girls in many countries have knowledge gaps and misconception about menstruation that cause fear, anxiety, and leave them unprepared when they begin menstruating.<sup>2</sup>

The onset of menstruation is called Menarche; is the landmark of pubertal development. Although menstruation is a physiological phenomenon, but still, in many traditional Indian societies it is considered as unclean or dirty. Good hygienic practices like use of sanitary pads and washing of private parts with soap and water is utmost important to maintain a healthy genitor-urinary tract. Poor menstrual hygiene management can lead to many genitor-urinary

infections and their long term consequences. Women having better knowledge regarding the menstrual hygiene are less susceptible to RTI and their consequences.<sup>3</sup> Most of these problems can be avoided by hygienic menstrual practices. Shyness and silence is one of the important factors which delay the girl for seeking care for RTI.<sup>4</sup> With this background the study was conducted with the following objectives:

To assess the knowledge and practices regarding menstrual hygiene among adolescent girls.

To find out the restrictions practiced during menstruation

## MATERIAL AND METHODS

An institution based descriptive cross-sectional study was carried out among adolescent girls of 14-19 years age group, with the aims to find out, knowledge and practice regarding menstrual hygiene. Study period was over four months from December 2018 to March 2019. It was conducted at OPD and Anwasha clinic of Hariharpur BPHC which belonged to rural field practice area of NRS medical college, under the Department of Community Medicine. All the adolescent menstruating girls of 14- 19 yrs, who attended this clinic within this period, wanted to participate and gave consent, were included in the study. Data was collected on Monday to Friday in a week for the total duration. A predesigned, structured, validated schedule was applied to the study subjects containing questions on knowledge and practice of menstrual hygiene. Aims and objectives of the study were explained to the study subjects and informed verbal consent was taken. Study participants were interviewed in their local language and after maintaining their privacy. Before the actual study, the study proposal was approved by the institutional ethics committee. Within the specific study period a total of 188 participants were interviewed who had attended menarche at the time of data collection. The practices regarding menstrual hygiene, was considered hygienic when sanitary napkin used as an absorbent. When cloth was used it

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**How to cite this article:** Boral K, Burman J, Sembiah SM. A cross-sectional study on menstrual hygiene among rural adolescent girls of West Bengal. International Journal of Contemporary Medical Research 2020;7(10):J10-J14.

**DOI:** <http://dx.doi.org/10.21276/ijcmr.2020.7.10.29>



was considered as non hygienic. After complete collection of data, it was entered in Microsoft excel 8 and finally analysed in SPSS version 16. Results were described in percentage and proportion. To find out the association between Socio-demographic variables and hygienic practices Chi square/ Fisher exact test was used.

## RESULTS

### Socio-demographic profile

Total 188 subjects were participated in this study. Out of the study population, 39.9% belonged to the age group 14-15 yrs followed by 16-17 yrs age group (33.5%). Their mean age was  $16.2 \pm 1.63$  yrs. Majority (72.3%) were Hindus and 60.6% were coming from joint family. More than half of the respondents (53%) belonged to class III and class IV jointly according to modified B. G. Prasad's socio-economic Scale 2018. About 46.3% girls were completed middle school education at the time of survey. Majority (51.1%) of mothers of study subjects educated up to middle school.

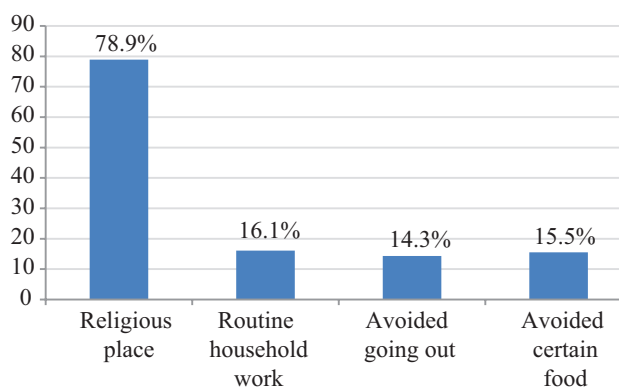
### Knowledge regarding menstruation

Regarding the knowledge of menstruation, 46.2% girls knew about menstruation before attainment of menarche. In response to the reaction to onset of menstruation 39.4% girls stated, that they got frightened and 9.6% were felt ashamed. About the cause of menstruation 75.5% considered that it was a physiological phenomenon, 12.3% mentioned curse of God and only 2.1% stated that it was a disease. Regarding the knowledge about the source of blood, only 38.3% believed from uterus, one third (29.2%) of the girls had no idea. 37.2% of the respondents believed pregnancy as the cause of missed period and 30.9% stated anaemia was the cause of missed period. Majority (56.4%) had knowledge about the

duration of normal menstrual cycle. 61.8% mentioned their mother to be the primary source of information, followed by sisters in 18.6% girls. About 12.2% girls reported that they got information from mass media.

### Practice regarding menstruation

In this study it was observed that, out of total 188 respondents 44.7% were using sanitary pads as menstrual absorbent whereas 19.1% and 36.2% were using new cloth and old washed cloth respectively. About 68.1% girls changed their soaked pad 2-5 times per day and 16.5% changed less than 2 times, within the first two days of menstruation. Majority (61.2%) girls were using soap and water for cleaning of genital area during menstruation. All the respondents had taken bath regularly. The study also revealed that 69.1% had separate toilet facility in their house. Regarding the disposal of used absorbent, 33.5% respondents were disposed their absorbent along with the domestic refuse, 22.9% were disposed in wasteland and 7.4% followed burning or burial method.



\*\*Multiple responses

Figure-1: Restriction practiced during menstruation (n=161)

Variables		Number	Percentage (%)
Age Group (Years)	14 -15	75	39.9
	16 -17	63	33.5
	18-19	50	26.6
Type of family	Joint	114	60.6
	Nuclear	74	39.4
Religion	Hindu	136	72.3
	Muslim	52	27.7
Socioeconomic status	Class I	10	5.3
	Class II	53	28.2
	Class III	45	23.9
	Class IV	56	29.8
	Class V	24	12.8
Literacy Status of Respondent	Below primary	6	3.2
	Primary	21	11.2
	Middle	87	46.3
	Secondary and above	74	39.3
Literacy status of Mother	Illiterate	3	1.6
	Below primary	14	7.4
	Primary	38	20.2
	Middle	96	51.1
	Secondary and Above	37	19.7

Table-1: Socio-demographic characteristics of study subjects (n =188)

Variables		Number	Percentage (%)
Knew about menstruation before menarche	Yes	87	46.2
	No	101	53.8
Reaction to onset of menstruation	Frightened	74	39.4
	Worried	45	23.9
	Normal	51	27.1
	Felt ashamed	18	9.6
Cause of menstruation	Physiological	142	75.5
	Curse of God	23	12.3
	Some disease	4	2.1
	Don't know	19	10.1
Source of menstrual blood	Uterus	72	38.3
	Vagina	19	10.1
	Abdomen	34	18.1
	Urinary bladder	8	4.3
	Don't know	55	29.2
Cause of missed period	Pregnancy	70	37.2
	Hormonal imbalance	6	3.2
	Anaemia	58	30.9
	Don't know	54	28.7
Duration of normal menstrual cycle	<20 days	26	13.8
	28 -30 days	106	56.4
	> 40 Days	56	29.8
Source of knowledge	Mother	116	61.8
	Sister	35	18.6
	Friend	10	5.3
	Mass media	23	12.2
	others	4	2.1

**Table-2:** Knowledge of adolescent girls regarding menstruation (n =188)

Variables		Number	Percentage (%)
Type of absorbent used	Sanitary pad	84	44.7
	New cloth	36	19.1
	Old washed cloth	68	36.2
Frequency of absorbent changed	< 2 times	31	16.5
	2-5 times	128	68.1
	>5 times	29	15.4
Cleaning of external genital area with soap and water	Yes	115	61.2
	No	73	38.8
Disposal of absorbent	Domestic refuse	63	33.5
	Threw in waste land	43	22.9
	Wash and reuse	68	36.2
	Burning/ Burry	14	7.4

**Table-3:** Respondents hygienic practices during menstruation (n =188)

**Restrictions practiced during menstruation**

Regarding various types of restriction practiced during menstruation, only 14.4% adolescent girls did not practice any restriction. Those who practiced various restrictions, 78.9% were restricted to attend religious place or event, 16.1% girls did not carry out few household activities and only 14.3% did not go for any outdoor activities.

The study revealed that, the average knowledge score was 2.93 (0-6). Only 43.6% had adequate knowledge regarding menstruation (scored 3 or more). There was significant association found between age group, type of family and knowledge score of the respondents. It was observed that

with increasing age there was proportionate increase in usage of sanitary pad. The difference between respondents age group and hygienic practice was significant (p<0.05). There was no significant association found between type of family, religion and hygienic practices. The significant association was found between Socio-economic status, mother's education of the respondent and hygienic practices.

**DISCUSSION**

The present study revealed that, less than half (46.2%) of the respondents were aware about menstruation before menarche which was corroborated with the findings of Verma et al<sup>5</sup> and

Variables	Sanitary pad use		Chi square test
	Yes	No	
Age group			
14-15	26	49	X <sup>2</sup> =15.14** P=0.0005 P <0.05
16-17	24	39	
18-19	34	16	
Type of family			
Joint	51	63	X <sup>2</sup> =0.0004 P >0.05
Nuclear	33	41	
Religion			
Hindu	64	72	X <sup>2</sup> =1.12 P >0.05
Muslim	20	32	
Socioeconomic Status			
Class I	6	4	X <sup>2</sup> =22.2**P=0.0001 P <0.05
Class II	27	26	
Class III	30	15	
Class Iv	13	43	
Class V	8	16	
Literacy status of respondent			
Below Primary	3	3	X <sup>2</sup> =1.64 P >0.05
Primary	9	12	
Middle	35	52	
Secondary and above	37	37	
Literacy status of Mother			
Illiterate+ Below Primary	3	14	X <sup>2</sup> =18.45**P=0.0003 P <0.05
Primary	10	28	
Middle	46	50	
Secondary and above	25	12	

**Table-4:** Association between Hygienic practices and socio demographic profile (n= 188)

Mathiyalagen et al.<sup>6</sup> In response to the reaction to onset of menstruation 39.4% girls stated, that they got frightened and 9.6% were felt ashamed. The study showed dissimilar finding from the study by Paria et al<sup>7</sup> and Gandhinagar<sup>8</sup> study (33.1%) but corroborated with the finding of Dasgupta et al.<sup>9</sup> It was observed that 38.3% girls believed the source of bleeding was uterus which was higher than the result of Gandhinagar study<sup>8</sup> and study done by Deshpande et al.<sup>10</sup> Present study showed 37.2% girls were aware that pregnancy is the cause of missed period and 28.7% did not know about the cause of missed period. Nearly 62% mentioned their mother to be the primary source of information, followed by sisters in 18.6% girls. Similarly most of the studies depicted similar finding that mother is the primary source of information.<sup>7,8,11</sup> Therefore for the dissemination of write knowledge to the adolescents, mother's education is very necessary. This study showed 44.7% of the girls were using sanitary pads as absorbent. This finding was higher than the finding of the study conducted in West Bengal<sup>9</sup> (11.2%) and In Tamil Nadu.<sup>12</sup> It was found that nearly 70% girls changed their absorbent 2-5 times per day. This result was corroborated to the study in Puducherry<sup>11</sup> (65.3%). Nearly 61% girls reported that they were washing genitalia with soap and water. Pundkar et al<sup>13</sup> reported 63% and the study in Tamil Nadu<sup>12</sup> the finding was 53.7%. In the view of disposing the used absorbent 33.5% reported they disposed with domestic refuse and 7.4% burnt or buried their absorbent. In contrary to the present study the study in Puducherry<sup>11</sup> reported that 60.8% girls burnt or buried

their absorbent. From this study it was observed that 14.4% did not practice any type of restriction during menstruation where as Deshpande et al<sup>10</sup> reported the finding in 20% girls. Among the respondents who practiced various types of restriction during menstruation, 78.9% were restricted to attend religious place or event, 16.1% girls did not carry out few household activities.

## CONCLUSION

The study revealed that the knowledge regarding menstruation was far away from satisfactory. Menstrual hygiene practice also depicted similar picture. More than half of the adolescent girls were using cloths as an absorbent. Although many factors interplay in the proper menstrual hygiene management but awareness generation through mass media, inclusion of education regarding reproductive health and hygiene in school curriculum may have a very important role. A fair proportion of girls were using soap and water for cleaning of genital area however, for increased usage of sanitary pads availability of pads at affordable prices is crucial. Most of them got the information from their mother so, there is definite role of women education in awareness generation.

## ACKNOWLEDGEMENTS

Authors are grateful to all the participants of the study and staffs of Rural health and training centre for their valuable support.

## REFERENCES

1. UNICEF state of Worlds Children-2011: An age of opportunity.
2. World Health Organisation. Factsheet on Adolescent health. Geneva: WHO. c2013. Available at: [http://www.who.int/topics/adolescent\\_health/en](http://www.who.int/topics/adolescent_health/en).
3. Wasserheit JN. The significance and scope of reproductive tract infections among third world women. *Suppl Int J Gynaecol Obstetr* 1989;3:145-68
4. Bhattacharyya M, Sen P, Hazra S, Sinha RN, Sahoo S. A study of menstrual hygiene among adolescent school girls in a slum area of Kolkata. *National Journal of Community Medicine*. 2015;6:345-48.
5. Verma P, Ahmad S, Srivastava RK. Knowledge and practices about menstrual hygiene among higher secondary school girls. *Indian J of Community Health*. 2013; 25:265-71
6. Mathiyalagen P, Peramasamy B, Vasudevan K, Basu M, Cherian J, Sundar B. A descriptive cross-sectional study on menstrual hygiene and perceived reproductive morbidity among adolescent girls in a union territory, India. *J Family Med Prim Care*. 2017; 6: 360-65.
7. Paria B, Bhattacharyya A, Das S. A comparative study on menstrual hygiene among urban and rural adolescent girls of West Bengal. *J Family Med Prim Care*. 2014; 3:413-17.
8. Prajapati J, Patel R. Menstrual hygiene among adolescent girls, A cross sectional study in urban community of Gandhinagar. *The J Med Research*. 2015; 1:122-25.
9. Dasgupta A, Sarkar M. How hygienic is the adolescent girl? *All India Institute of Hygiene and Public Health, Kolkata*. 2008; 33:77-80.
10. Depande TN, Patil SS, Gharai SB, Patil SR, Durgawale PM. Menstrual hygiene among adolescent girls – A study from urban slum area. *J Family Med Prim Care*. 2018; 7:1439-45.
11. Hema Priya S, Nandi P, Seetharaman N, Ramya MR, Nishanthini N, Lokeshmaran A. A study of menstrual hygiene and related personal hygiene practices among adolescent girls in rural Puducherry. *Int J Community Med Public Health*. 2017; 4:2348-2355
12. Balamurugan SS, Shilpa S, Shaji S. A community based study on menstrual hygiene among reproductive age group women in a rural area, Tamil Nadu. *J basic clin reprod Sci*. 2014; 3: 83-7.
13. Pundkar RD, Zambare MB, Baride JP. The knowledge and practice of menstrual hygiene among adolescent girls in one of the municipal corporation school of Ahmednagar. *VIMS Health Sci J*. 2014;1:118-24.

**Source of Support:** Nil; **Conflict of Interest:** None

**Submitted:** 23-09-2020; **Accepted:** 01-10-2020; **Published:** 31-10-2020