

## Original Research Article

DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20180973>

# Assessment of knowledge and practices regarding menstrual hygiene among adolescent girls of Government higher secondary school, station Murhipar, Rajnandgaon (C.G.)

Anjana Tiwari<sup>1</sup>, Indu Jyotsna Ekka<sup>1\*</sup>, Rajni Thakur<sup>2</sup>

<sup>1</sup>Department of Community Medicine, Government Medical College Rajnandgaon, Chhattisgarh, India

<sup>2</sup>Department of Anatomy, Pt. JNM Medical College Raipur, Chhattisgarh, India

Received: 10 February 2018

Accepted: 28 February 2018

**\*Correspondence:**

Dr. Indu Jyotsna Ekka,

E-mail: dr.indujyotsna@gmail.com

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** Poor menstrual hygiene practices result into adverse health outcome in terms of increased vulnerability to reproductive tract infections (RTIs) and its consequences. The objective of present study was to assess the Knowledge and Practices regarding menstrual hygiene among adolescent school girls.

**Methods:** A community-based, cross-sectional study was done among adolescent girls of class VII, VIII, IX and X (who attained menarche) in Government higher secondary school, station Murhipar, Rajnandgaon (C.G.) during September 2017 to October 2017 (two months) using a pre-designed, pre-tested questionnaire. Statistical analysis: Collected data was analyzed by using descriptive statistics (frequency and percentage).

**Results:** A total of 141 adolescent school girls in the age group 12 to 17 years participated in this study. The mean age of menarche of the respondents was 12.9 years (range 11-15 years). Majority of girls (85.8%) were aware about menstruation prior to attainment of menarche. Mother was the first informant in case of 55.4% girls. Majority of girls (90.1%) practiced different restrictions during menstruation. Only 2.1% girls used sanitary pads during menstruation. Regarding hygienic practices, only 29.8% of girls change their cloths/pads three and above times per day and 98.6% girls had daily bath with soap during menstruation. Satisfactory hand washing with soap and water after changing pad during menstruation was present in 96.4%. Cleanliness of external genitalia was satisfactory in case of 80.1% girls.

**Conclusions:** The adolescent girls need to be educated about fact of menstruation and menstrual hygiene practices in order to improve the menstrual hygiene.

**Keywords:** Knowledge, Practices, Menstrual hygiene, Adolescent girls

## INTRODUCTION

Menstruation is a normal physiological event. It is the phenomenon unique to the females.<sup>1</sup> Poor menstrual hygiene practices result into adverse health outcome in terms of increased vulnerability to reproductive tract infections (RTIs) and its consequences.<sup>2</sup> WHO has defined adolescence as the period between 10-19 years of life. Adolescent girls constitute about 1/5<sup>th</sup> total female population in the world.<sup>3</sup> Adolescent girls constitute a

vulnerable group that requires specific and special attention. In India menstruation is considered unclean or dirty and linked with several misconceptions and practices resulting in adolescent girls remaining ignorant of the scientific facts and hygienic health practices.<sup>4</sup> Study indicate that poor knowledge and practices about menstrual hygiene is responsible for a significant proportion of school absenteeism, illness and infection associated with female reproductive health of school going adolescent in developing countries.<sup>5</sup> Keeping in

view the above points, the present study is designed to assess the knowledge and practices regarding menstrual hygiene among adolescent school girls to understand the deficits and further formulating education protocol in this regard.

## METHODS

A community-based, cross-sectional study was conducted among adolescent girls of class VII, VIII, IX and X (who attained menarche) of Government higher secondary school, station Murhipar in the rural field practice area of Government Medical College and Hospital, Rajnandgaon (C.G.) during September 2017 to October 2017 (two months) after obtaining formal permission from the concerned school authority. All adolescent school girls who attained menarche and present in school during the days of survey, were included in study. The school girls were explained about purpose of study and assured about the confidentiality of data. Informed consent was obtained from each participant prior to interview. All information regarding menstrual hygiene was recorded in a pre-designed pre-tested proforma. Collected data will be entered in the Microsoft excel sheet and analyzed by using descriptive statistics (frequency and percentage).

## RESULTS

In present study, 141 adolescent school girls in age group 12 to 17 years participated. The mean age of menarche of the respondents was 12.9 years (range 11-15 years). Majority of girls (85.8%) were aware about menstruation prior to attainment of menarche. Mother was the first informant in case of 55.4% girls. Other sources of information were friends (28.1%) and relatives (16.5%) (Table 1).

**Table 1: Distribution of respondents according to their information about menarche (N=141).**

Information	No.	Percentage (%)
<b>Age of menarche (years)</b>		
11	8	5.7
12	34	24.1
13	63	44.7
14	26	18.4
15	10	7.1
<b>Awareness about menstruation before menarche</b>		
Yes	121	85.8
No	20	14.2
<b>Source of information about menstruation before menarche (n=121)</b>		
Mother	67	55.4
Relatives	20	16.5
Friends	34	28.1

**Table 2: Distribution of respondents according to their knowledge about menstruation (N=141).**

Knowledge	No.	Percentage (%)
<b>What is menstruation?</b>		
Physiologic process	105	74.5
Pathological process	08	05.7
Curse from god	09	06.4
Other	19	13.4
<b>What is the cause of menstruation?</b>		
Hormones	18	12.8
Curse of god	01	0.7
Caused by disease	03	02.1
Don't know	119	84.4
<b>From which organ does the menstrual blood come?</b>		
Uterus	18	12.8
Vagina	03	02.1
Urinary bladder	12	08.5
Ureter	51	36.2
Abdomen	03	02.1
Don't know	54	38.3

Majority of girls (74.5%) had knowledge about menstruation as a physiological process, 6.4% girls told that it as a curse of god and 05.7% girls told that it was a disease. Only 12.8% knew about hormones, as correct cause of menstrual bleeding. Majority of the girls (87.2%) did not know about the source of menstrual bleeding (Table 2).

Only 2.1% girls used sanitary pads, 37.6% girls used cloth pieces and 60.3% girls used both cloth pieces and sanitary pads during menstruation. Only 29.8% of girls change their cloths/pads three and above times per day. Regarding the method of disposal of the used material, 34.7% of girls dispose their used cloth piece/sanitary pad by burning, 25.5% by burying and 17.7% flush used materials in toilet. Regarding hygienic practices 98.6% girls had daily bath with soap during menstruation. Satisfactory hand washing with soap and water after changing pad during menstruation was present in 96.4%. Cleanliness of external genitalia was satisfactory in case of 80.1% girls. For cleaning purpose, 70.2% girls used both soap and water. Majority of girls (90.1%) practiced different restrictions during menstruation. Among them, 99.2% girls did not attend any religious occasion and 81.5% girls did not eat certain foods during the menstrual period (Table 3).

## DISCUSSION

In the present study, the mean age of menarche was 12.9 years which was almost similar to the study by Dasgupta et al where the mean age of menarche of the respondents was 12.8 years but in a study conducted in Rajasthan by Khanna et al, the mean age at menarche was found to be 13.2 years.<sup>4,6</sup>

**Table 3: Distribution of respondents according to their practices during menstruation (N=141).**

Parameters of practice	No.	Percentage (%)
<b>Use of absorbent material during menstruation</b>		
Sanitary pads	03	02.1
New cloth	30	21.3
Old washed cloth	23	16.3
Pad+old washed cloth	34	24.1
Pad+new cloth	51	36.2
<b>Changing pads/cloths during menstruation</b>		
Once daily	04	02.8
Twice daily	95	67.4
Thrice daily	32	22.7
More than thrice daily	10	07.1
<b>Disposal of absorbent</b>		
Using routine waste and dust bin	08	05.7
Throw away in open space	23	16.3
Burning	49	34.7
Burying	36	25.5
Flush in toilet	25	17.7
<b>Takes bath daily with soap during menstruation</b>		
Yes	139	98.6
No	02	01.4
<b>Hand washing</b>		
Satisfactory #	136	96.4
Unsatisfactory	05	03.6
<b>Clean external genitalia during menstruation</b>		
Satisfactory ##	113	80.1
Unsatisfactory	28	19.9
<b>For external genitalia cleaning purpose used</b>		
Only water	42	29.8
Soap and water	99	70.2
<b>Different restrictions practiced during menstruation</b>		
Not practiced	14	09.9
Practiced for**	127	90.1
Any religious occasion	126	99.2
Playing	05	03.9
Do enter kitchen	23	18.1
Do not bath	01	00.8
Do not go school	03	02.4
Food	22	81.5

\*\*(Multiple responses); #Satisfactory: Hand washing every time after changing pad during menstruation; ##Satisfactory: Frequency of cleaning of external genitalia is  $\geq 2$ /day.

The present study revealed that most of girls (85.8%) were aware about menstruation prior to attainment of menarche. Mother was the first informant in case of 55.4% girls. This gap might be due to poor literacy and socio-economic status of mothers. So mothers should be taught about the menstruation and hygienic practices to break their inhibitions about discussing with their daughters about menstruation prior to attainment of menarche. In a similar study conducted in Mansoura, Egypt by El-Gilany et al mass media were the main source of information about menstrual hygiene, followed

by mothers.<sup>7</sup> Another study conducted by Deo et al reported that 42.5% urban and 55.4% rural girls were aware about menstruation prior to attainment of menarche.<sup>8</sup> In urban girls, mother was the main source of information about menstruation (27.5%), whereas it was teacher in the rural counterparts (27.01%). In a study conducted in Rajasthan by Khanna et al, most of the girls got first information about menstruation from their mothers with other major informants being sisters and friends.<sup>6</sup>

In present study, most of girls (74.5%) know that menstruation as a physiological process. Only 12.8% knew about correct cause of menstrual bleeding. Most of the girls (87.2%) did not know about the source of menstrual bleeding. This findings shows that these students did not have the right knowledge about menstruation which might be due to poor literacy level of mothers or absence of proper health education programmes in school, which should focus on menstrual hygiene among girls.

In present study, it was found that 37.6% girls used cloth pieces during menstruation which might be due to poverty and high cost of disposable sanitary pads in the study area. In a similar study conducted by Dasgupta et al reported that only 11.25% girls used sanitary pads during menstruation.<sup>4</sup> Study by Khanna et al reported that three-fourths of the girls used old cloth during their periods and only one-fifth of the girls using readymade sanitary pads.<sup>6</sup> Several studies showed that mother's education, residence and socioeconomic status was significantly associated with hygienic management and utilization of disposable sanitary napkins.<sup>9-11</sup>

In this study, it was found that only 29.8% of girls change their cloths/pads three and above times per day and 98.6% girls had daily bath with soap during menstruation. Satisfactory hand washing with soap and water after changing pad during menstruation was present in 96.4%. Cleanliness of external genitalia was satisfactory in case of 80.1% girls and for cleaning purpose, 70.2% girls used both soap and water. This shows that there were lacunae in knowledge about complete menstrual hygiene in the study population. In a study in Mansoura, Egypt by El-Gilany et al the different aspects of personal hygiene were generally found to be poor, such as not changing pads regularly or at night, and not bathing during menstruation.<sup>7</sup>

Different restrictions were practiced by most of the girls (90.1%) in the present study was possibly due to their ignorance and false perceptions regarding menstruation. Similar type of restriction was reported by other studies also.<sup>4,9</sup>

## CONCLUSION

This study concludes that the adolescent girls need to be educated about fact of menstruation and menstrual hygiene practices in order to improve the menstrual

hygiene and bring them out of traditional beliefs, misconceptions and restrictions regarding menstruation.

## ACKNOWLEDGEMENTS

The authors are thankful to staff of Department of Community Medicine, Government Medical College Rajnandgaon for their valuable cooperation during the entire research. Authors also acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

1. United Nations Children's Fund. Sharing simple facts: useful information about menstrual health and hygiene. New Delhi, India: Child's Environment Section, UNICEF House, 2008.
2. Kamaljit K, Arora B, Singh GK, Neki NS. Social Beliefs and Practices associated with Menstrual Hygiene among Adolescent Girls of Amritsar, Punjab, India. *JIMSA.* 2012;25(2).
3. World Health Organization, Programming for adolescent health and development. WHO Technical report series No.886, 1996: 2.
4. Dasgupta A, Sarkar M. Menstrual hygiene: how hygienic is adolescent girl? *Indian J community Med.* 2008;33(2):77-80.
5. Sumpter C, Torondel B. A systematic review of the health and social effects of menstrual hygiene management. *PLoS One.* 2013;8(4):e62004.
6. Khanna A, Goyal RS, Bhawsar R. Menstrual practices and reproductive problems: a study of adolescent girls in Rajasthan. *J Health Manag.* 2005;7:91-107.
7. El-Gilany AH, Badawi K. Menstrual hygiene among adolescent schoolgirls in Mansoura, Egypt. *Reprod Health Matters.* 2005;13:147-52.
8. Deo DS, Ghattargi CH. Perceptions and practices regarding menstruation: a comparative study in urban and rural adolescent girls. *Indian J Community Med.* 2005;30:33-4.
9. Thakre B, Thakre S, Reddy M, Rathi N, Pathak K, Ughade S. Menstrual hygiene: knowledge and practice among adolescent school girls of Saoner, Nagpur district. *J Clin Diagn Res.* 2011;5(5):1027-33.
10. Dasgupta A, Ray S. Determinants of menstrual hygiene among adolescent girls: a multivariate analysis. *National J Community Med.* 2012;3(2):294-301.
11. Omidvar S, Begum K. Factors influencing hygienic practices during menses among girls from south India- a cross sectional study. *Int J Res Int Med Public Health.* 2010;2(12):411-23.

**Cite this article as:** Tiwari A, Ekka IJ, Thakur R. Assessment of knowledge and practices regarding menstrual hygiene among adolescent girls of Government higher secondary school, station Murhipar, Rajnandgaon (C.G.). *Int J Community Med Public Health* 2018;5:1335-8.