

A Study on the Knowledge, Attitude and Practices Regarding Menstrual Hygiene among Adolescent Girls in Schools in a Rural Area of Goa

SHEENA MANOJ PATEL¹, SHEFALEE PAI VERNEKAR², ARCHANA MILIND DESAI³

ABSTRACT

Introduction: Menstruation is a natural physiological process surrounded by myths and taboos which often lead to misconceptions and faulty knowledge and practices in menstruation. Along with social and cultural barriers, lack of adequate facilities such as water supply and sanitation have posed a problem for maintaining menstrual hygiene especially in adolescent school girls.

Aim: To study the knowledge, attitudes and practices towards menstruation among adolescent school girls.

Materials and Methods: A cross-sectional study was conducted from August 2018 to September 2018 among 273 adolescent girls in the age group of 11-16 years studying in the five schools under field practice area of Rural Health and Training Centre, Mandur, using a semi structured, pretested questionnaire containing questions regarding their knowledge of origin, cause and source of menstrual bleeding as well as the various restriction imposed and various practices followed related to menstrual hygiene. Data were analysed using Statistical Package for the Social Sciences (SPSS) Version 22.

Results: The results showed that 83.9% were aware of menses before they attained menarche. Majority received their knowledge of menstruation from their mother. Only 54.9% of the participants were aware that menstrual blood arises from the uterus while 35.9% girls were aware that the cause of menstruation is physiological. Different restrictions were compared against different religions and it was found that there was a significant difference in the restrictions imposed between the Hindu, the Catholic and the Muslim religions with respect to entering prayer room, entering kitchen, visiting people's homes and attending family functions. Only 28.6% girls faced no restriction during menstruation. Around 73.6% girls used sanitary pads.

Conclusion: The study highlights that there are many aspects regarding the attitude and practices of menstruation that need to be addressed. Promoting health seeking behaviour and educating the people who play a role in being sources of information of menstruation will help to improve menstrual hygiene among rural adolescent girls.

Keywords: Counsellors, Cross-sectional studies, Menstrual hygiene products, Menstruation, Menarche, Reproductive health, Rural health

INTRODUCTION

Adolescence is a period in life when an individual is neither a child nor an adult and is characterised by the individual undergoing physical and psychological changes coupled with changes in social perception. The most striking change in adolescent girls is the onset of menstruation. Menstruation is the periodic discharge of blood and mucosal tissue from the uterus and is a normal biological process [1].

Many girls experience a variety of symptoms during menstruation such as abdominal cramps, headache, fatigue, pimples. It is imperative that adolescent girls be taught about commonly occurring symptoms. It was observed that up to 23% of school going girls in India leave schooling around the time of puberty [2].

Menstruation is a natural phenomenon, said that in a day 300 million women and girls worldwide would be menstruating [2]. Despite being such a common phenomenon, women continually face social and cultural restrictions surrounding menstruation. Most common of these are not being allowed to enter the kitchen, or engage in household activities or in physical activities like exercise and playing and even not being allowed to attend social functions [3]. Apart from restrictions, various families follow there are certain beliefs one example of which is that by placing sticks from a broom or leaves of particular plants around the girl during her menstruation, evil would be prevented from entering her body [4]. Another common belief is

that a woman must bathe after menstruation to purify herself [4]. There have been no evidence or scientific support of such beliefs and hence they need to be addressed and clarified so as to prevent any social stigma against a menstruating woman.

It is important that a woman must take adequate care of her diet, health and her hygiene during her menses. It is important to inculcate a habit of following strict hygiene practices during menstruation to prevent reproductive tract infections. Menstrual hygiene management is a problem for adolescent girls in rural settings particularly when attending school due to poor water, sanitation and hygiene facilities in schools [3,5].

It has been commonly observed that many girls are unaware of the origin or cause of menstrual blood or are even unaware of menstruation prior to menarche [6]. Girls need to have good knowledge of menstruation at an early age to enable a more positive attitude towards it. Thus, the aim of this study was to assess the knowledge, the attitudes and the practices followed regarding menstruation in adolescent school going girls.

MATERIALS AND METHODS

The present study was a cross-sectional study conducted among adolescent girls studying in the five schools under field practice area of Rural Health and Training Centre, Mandur, Goa, India. The study was conducted over a period of two months from August 2018

to September 2018. The study included 273 school going girls from ages 11-16 years. Ethical approval was obtained from the Goa Medical College, Institutional Ethics Committee prior to the study. Permission was obtained from the Principals of each of the five schools included in the study. A consent sheet, explaining the procedure with assurance of anonymity, was sent to the parents and a consent sign was obtained prior to data collection. Inclusion Criteria was: Adolescent girls from std 7th to 10th, those who have attained menarche and those who gave consent for the study (Informed consent from the parents of school girls) while Exclusion Criteria was: those who have not yet attained menarche, refusing to participate in the study.

Data Collection Tool

A structured, pre-tested questionnaire was administered to the school girls containing questions regarding the knowledge of the origin and source of menstrual bleeding and the source of this knowledge, the various restrictions faced during menstruation by school girls from different religions and the common hygiene practices followed during menstruation. The materials used as sanitary pads or cloth during menstruation and related questions about disposal and frequency of change of the materials were the other questions included in the questionnaire.

The questionnaire forms were distributed to the study participants in their respective classes and they were explained about the same. Confidentiality was assured by informing them not to write their names on any part of the questionnaire. This was followed by a health education session on menstrual hygiene which included topics on the anatomy and physiology of menstruation, the normal cycle of menstruation along with menstrual irregularities, combating various menstrual related myths and the common materials used during menstruation with its advantages and disadvantages with a mention of menstrual hygiene practices that should be followed.

STATISTICAL ANALYSIS

Data obtained were entered into Microsoft Excel. Data obtained was analysed using the SPSS version 22 and findings were reported in the form of descriptive statistics.

RESULTS

a) Knowledge

Out of the 273 girls included in the study, 229 of them (83.9%) were aware of menses before they attained menarche. It was seen that mothers were the most common source of this information in 154 girls (67.3%), while 36 girls (15.7%) received their knowledge from their friends, 8.7% received it from their sister followed by 4.8% from a teacher and 2.6% from another relative. It was seen that in a minority of two girls, a counsellor was source of their knowledge of menstruation.

Around 150 (54.9%) of the 273 participants were aware that menstrual blood arises from the uterus. A total of 98 (35.9%) girls were aware that the cause of menstruation is physiological, 97 (35.5%) were not aware of the cause of menstruation while 74(27.1%) believed menstruation is a god given [Table/Fig-1].

b) Attitudes

The findings from the study showed that 195 (71.4%) reported having different restrictions imposed upon them at the time of menstruation as depicted in [Table/Fig-2,3]. When restrictions imposed were compared with respect to religion it was found that there was significant difference between them with respect to entering prayer room, entering kitchen, visiting people's homes and attending family functions [Table/Fig-3].

Various restrictions were observed with different religions. Among the 253 girls that mentioned their religion, 160 (63.2%) of them faced

Knowledge	No.	%
Had knowledge of menses before attaining menarche	229	83.9
If yes, the source of knowledge was obtained from:		
Mother	154	67.3
Teacher	11	4.8
Friend	36	15.7
Relative	06	2.6
Sister	20	8.7
Counsellor	02	0.8
The origin of menstrual blood:		
Uterus	150	54.9
Other (stomach, bladder, unaware)	123	45.1
The cause of menstruation:		
Physiological	98	35.9
God given	74	27.1
Other (Result of sin or disease)	04	1.5
Do not know	97	35.5

[Table/Fig-1]: Knowledge of menstruation among adolescent school girls.

Attitudes	No.	%
Restrictions during menstruation:		
Restriction to enter prayer room	171	62.6
Restriction to go to school	05	1.8
Restriction to go to play	29	10.6
Restriction to talk to boys	12	4.4
Restriction to enter kitchen	33	12.1
Restriction to visit people's homes	54	19.8
Restriction to attend family functions	57	20.9
Made to sleep separately	63	23.1
Made to eat separately	37	13.6
Made to be separated from other family members	23	8.4
No restrictions	78	28.6

[Table/Fig-2]: Attitudes of adolescent school girls with regards to menstruation.

a restriction to enter their prayer room when menstruating. Among the Hindu girls, 91.8% faced this restriction followed by 90.4% of the Muslim girls and 8.1% of the Catholic girls [Table/Fig-3].

c) Practices

Only 31 (11.4%) of school girls reported taking iron tablets. A majority of 201 (73.6%) girls used sanitary pads while 18 (6.6%) girls used cloth and 54 (19.8%) girls used both sanitary pads and cloth. Among the girls using cloth, eight girls had no reason for not using sanitary napkins while four girls answered that it was difficult to dispose. Two girls reported cost as a factor and three girls were unaware of how to use it. A majority of 161 girls changed their pads or cloth 2-3 times a day [Table/Fig-4].

Methods of disposal varied with 218 (79.9%) of the girls choosing to wrap and dispose the pads in closed bins. A total of 41 (15%) girls preferred burning as a mode of disposal, 7 (2.6%) girls would wrap and throw in open bins and 6 (2.2%) girls disposed menstrual pads by flushing it down the toilet [Table/Fig-4].

In the results of the various hygiene practices followed, it was noted that 140 (51.3%) girls use plain water to clean private parts while 130 of the girls (47.6%) use soap and water. A total of 244 girls (89.4%) had a practice of daily bathing [Table/Fig-4].

To relieve abdominal cramps during menstruation, a majority of 70 (37.6%) girls were seen to use hot fomentation while 43(23.1%) girls altered their food habits during this period. Roughly an equal number of girls either used medicines or preferred sleeping to alleviate abdominal cramps [Table/Fig-4].

Restrictions	Religion								χ^2 value p-value
	Hindu (N=146)		Muslim (N=21)		Christian (N=86)		Total (N=253)		
	No.	%	No.	%	No.	%	No.	%	
Restriction to enter prayer room	134	91.8	19	90.4	07	8.1	160	63.2	170.2 <0.001
Restriction to go to school	02	1.4	0	0	02	2.3	04	1.6	0.7 0.710
Restriction to play	16	10.9	01	4.8	06	7	23	9.1	1.6 0.459
Restriction to talk to boys	06	4.1	01	4.8	02	2.3	9	3.6	0.6 0.741
Restriction to enter kitchen	28	19.2	01	4.8	01	1.2	30	11.9	17.9 <0.001
Restriction to visit people's homes	44	30.1	02	1.4	02	2.3	48	19.0	28.6 <0.001
Restriction to attend family functions	47	32.2	02	1.4	01	1.2	50	19.8	34.4 <0.001
Made to sleep separately	57	39	0	0	0	0	57	22.5	-
Made to eat separately	32	21.9	0	0	0	0	32	12.6	-
Made to be separated from other family members	22	15	0	0	0	0	22	8.7	-
No restrictions	05	3.4	01	4.8	71	82.6	77	30.4	167.2 <0.001

[Table/Fig-3]: Association of menstruation related restrictions and religion.

*20 girls did not mention their religion in the questionnaire

Chi-Square Test was used

Practices	No.	%
Taking Iron tablets	31	11.4
Materials used during menses:		
Cloth	18	6.6
Sanitary pad	201	73.6
Both	54	19.8
Reasons for not using sanitary pads (n=18):		
No reason	08	44.4
Costly	02	11.1
Difficult to dispose	04	22.2
Not easily available	01	5.6
Unaware of how to use	03	16.7
Reusing cloth	26	61.9
Change of pads/cloth per day:		
≥4	67	24.5
2-3	161	58.9
<2	45	16.5
Disposal of pads:		
Wrap and dispose in closed bins	218	79.9
Wrap and dispose in open bins	07	2.6
Flush it	6	2.2
Throw it out of window	1	4
Burn it	41	15
Cleaning of private parts:		
Plain water	140	51.3
Soap and water	130	47.6
Antiseptics	3	1.1
Take daily bath	244	89.4

Remedy to treat abdominal cramps during menses (n=186)*:		
Medicine	36	19.4
Changing food habits (Eating or avoiding certain types of foods)	43	23.1
Sleeping	37	19.9
Hot fomentation	70	37.6

[Table/Fig-4]: Practices among adolescent school girls with regards to menstruation.

*87 girls did not answer this question

DISCUSSION

Prajapati J et al., reported nearly 40% of girls knew about menstruation before menarche [7]. According to the study by Ade A et al., among rural adolescents in Raichur, 69% adolescent girls were aware about menstruation before they first experienced it and nearly 1/3rd of the girls never heard about menstruation before they first experienced it [8]. These findings are much lower compared to the findings of our study wherein 83.9% of girls were aware of menses before menarche in our study.

In a study by Hakim A et al., 59.6% of non-government school girls knew about menstrual cycle before menarche which was higher in comparison to the result among government school girls [9]. Mother was the most common channel of information in these studies including ours [7,8]. Ade A et al., reported the mother to be the main source of information for about half the girls followed by friends and relatives and 10% said that they received information from other sources like teachers and media [8].

A study by Drakshayani DK et al., among adolescent girls in Andhra Pradesh reported many girls to believe that menstruation was a curse from God and almost all of them used cloth during menstruation [10]. Thakre SB et al., reported, a majority of the study subjects were not aware of the cause of the bleeding, 18.4% girls believed that it was a physiological process while 1% believed it as a curse from God [11]. The same study showed that just 2.6% of the girls were aware of the uterine source of bleeding [11]. The results of our study were better wherein half of school girls were aware that the uterus was the source of menstrual bleeding and 35.9% reported the cause to be physiological.

It was seen that a majority of adolescent girls reported facing restrictions from household work, taking part in religious activities and playing or attending school during menstruation which was consistent with the findings by Dasgupta A et al., and with the results of our study being only marginally lower in comparison to that study [12]. The same study found that half the girls avoided certain types of food during menstruation e.g., Banana, sour foods [12].

According to a study by Maji S, majority of the subjects used sanitary pad with 1/3rd of the study subjects using old cloths and most of them reusing them [13]. Dabade KJ et al., reported only 52.3% of girls in rural Gulbarga to use sanitary napkins which is lesser than the findings of our study, which has reported a higher percentage of 73.6% girls using only sanitary pads [14]. A majority of the adolescent girls in our study disposed the menstrual waste products in bins which were also seen in the study conducted by Chauhan P et al., among rural school going girls [15].

Dabade KJ et al., found that nearly 75% of the girls washed their private parts daily with soap and water which is seen to be higher than the results of our study [14].

LIMITATION

There was some degree of non-response to some questions which could give result in either underestimation or overestimation of the key findings.

CONCLUSION

The results of this study revealed that despite changes in trends and modernization over the years, we still fall behind in creating a satisfactory level of awareness of menstrual health and hygiene.

Menstruation being a physiological process is still shunned upon and restrictions with no scientific basis are still practiced in various households.

This study has highlighted the need to educate girls and give them correct information about menstruation and reproduction before they attain menarche. Also, it is important to educate them about good practices during menstruation and consequences of poor hygiene. The need for the hour is to employ enough counsellors in every school trained in the knowledge of menstruation to make sure that girls and boys are made aware of the process and importance of menstruation.

The study also revealed that a majority of the girls received their knowledge of menses prior to menarche from their mother, stressing the fact that mothers play an important role in building the foundation of menstrual health of the future generation and hence counselling programmes for parents are equally important. Teachers should also be trained and made aware of menstrual problems. Regular health care visits need to be encouraged to make sure menstrual hygiene is followed. This can be done through health camps and organising school visits.

ACKNOWLEDGEMENTS

Author expresses deep gratitude to the Principals, teachers and students who participated in the study for their active cooperation in the study.

REFERENCES

- [1] World Health Organization; Department of Child and Adolescent Health and Development; Orientation Programme on Adolescent Health for Health-care Providers Handout; Module B. Published in 2006.
- [2] Rose G. Celebrating Womanhood-Menstrual Hygiene Management Report. Water Supply and Sanitation Collaborative Council; 2013. Available at <https://www.wsscc.org/resources-feed/celebrating-womanhood-report-2013/>
- [3] van Eijk AM, Sivakami M, Thakkar MB, Bauman A, Laserson KF, Coates S, et al. Menstrual hygiene management among adolescent girls in India: A systematic review and meta-analysis. *BMJ Open*. 2016;6:e010290. doi:10.1136/bmjopen-2015-010290
- [4] Patil R, Agarwal L, Khan M, Gupta SK, Vedapriya DR, Raghavia M, et al. Beliefs about menstruation: A study from rural Pondicherry. *Indian Journal of Medical Specialities*. 2011;2(1):23-26.
- [5] Yadav RN, Joshi S, Poudel R, Pawan P. Knowledge, attitude, and practice on menstrual hygiene management among school adolescents. *Journal of Nepal Health Research Council*. 2017;15(37):212-16.
- [6] Agarwal V, Fancy MJ, Shah H, Agarwal AS, Shah JH, Singh S. Menstrual hygiene: Knowledge and practice among adolescent girls of rural Sabarkantha district. *National Journal of Community Medicine*. 2017;8(10):597-601.
- [7] Prajapati D, Shah J, Kedia G. Menstrual hygiene, knowledge and practice among adolescent girls of rural Kheda District. *National Journal of Community Medicine*. 2015;6(2):349-53.
- [8] Ade A, Patil R. Menstrual hygiene and practices of rural adolescent girls of Raichur. *International Journal of Biological & Medical Research*. 2013;4(2):3014-17.
- [9] Hakim A, Rizwana S, Manisha, Tak H. A cross sectional study on the knowledge, attitudes and practices towards menstrual cycle and its problems: A comparative study of government and non-government adolescent school girls. *International Journal of Community Medicine and Public Health*. 2017;4(4):973-81.
- [10] Drakshayani DK, Venkata RP. A study on menstrual hygiene among rural adolescent girls. *Indian J Med Sci*. 1994;48(6):139-43.
- [11] Thakre SB, Thakre SS, Reddy M, Rathi N, Pathak K, Ughade S. Menstrual hygiene: Knowledge and practice among adolescent school girls of Saoner, Nagpur District. *Journal of Clinical and Diagnostic Research*. 2011;5(5):1027-33.
- [12] Dasgupta A, Sarkar M. Menstrual hygiene: How hygienic is the adolescent girl? *Indian Journal of Community Medicine*. 2008;33(2):77-80.
- [13] Maji S. A study on menstrual knowledge and practices among rural adolescent girls in Burdwan district, West Bengal. *International Journal of Advance Research*. 2016;4(9):896-902.
- [14] Dabade KJ, Dabade SK. Comparative study of awareness and practices regarding menstrual hygiene among adolescent girls residing in urban and rural area. *International Journal of Community Medicine and Public Health*. 2017;4:1284-88.
- [15] Chauhan P, Shaik RA, Anusha DVB, Sotala M. A study to assess knowledge, attitude, and practices related to menstrual cycle and management of menstrual hygiene among school-going adolescent girls in a rural area of South India. *Int J Med Sci Public Health*. 2019;8(2):114-19.

PARTICULARS OF CONTRIBUTORS:

1. Intern, Department of Preventive and Social Medicine, Goa Medical College and Hospital, Panaji, Goa, India.
2. Postgraduate, Department of Preventive and Social Medicine, Goa Medical College and Hospital, Panaji, Goa, India.
3. Assistant Professor, Department of Preventive and Social Medicine, Goa Medical College and Hospital, Panaji, Goa, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Archana Milind Desai,
Flat No. 205, Crossroads Avenue, Eastern Express Bypass, Arlem, Raia, Fatorda, Margao-403720, Goa, India.
E-mail: archanadesai205@gmail.com

Date of Submission: **Feb 12, 2019**

Date of Peer Review: **Feb 22, 2019**

Date of Acceptance: **Apr 18, 2019**

Date of Publishing: **Jun 01, 2019**

FINANCIAL OR OTHER COMPETING INTERESTS: None.