Original Research Article

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20183608

Assessment of knowledge and menstrual hygiene management among adolescent school girls of Nelamangala

Kavitha M., Jyothi Jadhav*, Ranganath T. S., Vishwanatha

Department of Community Medicine, Bangalore Medical College and Research Institute, Bengaluru, Karnataka, India

Received: 27 June 2018 Revised: 01 August 2018 Accepted: 02 August 2018

*Correspondence: Dr. Jyothi Jadhav,

E-mail: drjyothijadhav28@gmail.com

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ABSTRACT

Background: Menstruation is a physiological process but generally it is considered as unclean in the Indian society. Hygiene related practices of menstruation are of considerable importance as it has health impact in terms of increased vulnerability to reproductive tract infections (RTI) and drop outs from school. A good knowledge regarding menstrual hygiene is important during adolescence age which helps to practice good hygiene, minimize the sufferings of women and to manage their menstruation without any hesitation.

Methods: A cross sectional study was undertaken in a rural field practice area of BMCRI, Bengaluru. Data was collected from 311 adolescent girls by using predesigned semi structured questionnaire.

Results: It was evident that 38.3% participants were aware about menstruation before their menarche and among them; mothers were the main source of the information for 72.3% girls. It was found that 80.4% respondents used sanitary pads and 73.6% girls did not have practice of changing the adsorbent in the school. Only 27.7% had the practice of changing ≥4 pads/cloths per day during the menstruation. Majority of the girls were restricted to enter the place of worship (73.3%) and to attend the religious functions (41.5%) and also restriction to eat certain food items among 20.3% girls. There was a significant association between the religion and the frequency of changing the adsorbent and cleaning the external genitalia during the menstrual period.

Conclusions: This study could found that majority of the girls had no information about menstruation before menarche. Menstrual hygiene management (MHM) was very poor.

Keywords: Adolescent girls, Menstruation, Menstrual hygiene, Practice, Restrictions

INTRODUCTION

Menstruation is a normal physiological process and a key sign of reproductive health, yet in many cultures it is treated as something negative, shameful or dirty.

This leads to limited access to knowledge about affordable and hygienic sanitary pads and safe disposal methods due to which many girls are managing their menstrual period in an uncomfortable and unhygienic way.

Menstrual hygiene management (MHM) has been defined as "Women and adolescent girls use a clean material to absorb or collect menstrual blood, and this material can be changed in privacy as often as necessary for the duration of menstruation. MHM also includes using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials".2

Women spend around six to seven years of their lives menstruating. But still the importance of menstrual hygiene management (MHM) is neglected. Water Aid India recognises that menstrual hygiene is fundamental to the dignity and well-being of women and girls. MHM is an important part of the basic hygiene, sanitation and reproductive health services to which every woman and girl has a right.³

There are 355 million menstruating women in India. It is accounting for nearly 30 per cent of the country's population. 71% adolescent girls in India are unaware of menstruation till menarche. Menstruation is a rarely discussed topic at homes and schools in India. In India, 23 million girls drop out of school early when they start menstruating and many of them end up facing acute health problems. During 2014 UNICEF showed that in Tamil Nadu, 79 per cent girls and women were unaware of menstrual hygiene practices and the same was 66% in Uttar Pradesh, 56% in Rajasthan and 51% in West Bengal.⁴

Menstruation related problems among adolescent girls might have an adverse effect on their performance in academic and other activities of daily life which may lead to school absenteeism during menstrual days.⁵ Hence this study was conducted to assess the knowledge and Menstrual Hygiene Management among adolescent girls.

METHODS

After taking ethical clearance from the institution study was conducted. It was a cross sectional study conducted on adolescent girls studying in 7th, 8th, 9th and 10th standard in Nelamangala, the rural field practice area of Bangalore Medical College and Research Institute, Bengaluru.

A Simple Random Sampling Technique was used to collect the data regarding the Socio Demographic details, Knowledge and Menstrual hygiene Management. Data was collected by self-administered, pre tested, semi structured questionnaire. The study was conducted for a period of 4 months from 1 December 2016 to 31March 2017.

Based on the previous study done by Boratne, the use of sanitary pads among adolescent girls was 77.09% and with 5% absolute precision the sample was estimated by using the formula,⁶

n= $4pq/d^2$ Where n= Sample size p=Percentage of adolescent girls using sanitary pads (77.09%) q= (100- p) d= Absolute precision= 5

$$n = \frac{4 \times 77.09 \times 22091}{5^2}$$

n = 282.58

With nonresponse rate of 10%, the sample size was estimated to 311.

There are 59 government schools in Nelamangala. Out of 59 schools, 21 schools were randomly selected. 15 girls were randomly selected from each school from 20 schools and11 girls from the last school. Data was collected regarding the socio demographic details, Knowledge and Menstrual Hygiene Management by using self administered questionnaire.

Descriptive data was analyzed by using MS Excel Sheet and SPSS software (version 20) was used for Chi square test.

RESULTS

Table 1 shows Majority of participants, 113(36.33%) attained menarche by 12 years of age and the mean age was 14.32±1.03 years and the mean age of menarche was 12.7±0.94 years. Out of 311 participants, majority of the participants 218 (70.1%) were Hindu and remaining 93(29.9%) were Muslim. Most of the mothers of the study subjects 125 (40.2%) had done their education till the secondary school.

Table 1: Socio demographic characteristics of the study subjects.

SN	Characteristics	N (311)	Percentage (%)				
	Age (in years)						
	12	4	1.2				
1	13	66	21.2				
1	14	113	36.3				
	15	94	30.3				
	16	34	11				
	Religion						
2	Hindu	218	70.1				
	Muslim	93	29.9				
	Education of mother						
	Illiterate	46	14.6				
	Primary	32	10.8				
3	Middle	56	18				
	Secondary school	125	40.1				
	Higher secondary	41	13.1				
	Degree and above	11	3.4				

Table 2 shows majority 236 (75.9%) participants belong to class IV followed by Class III (16.7%) then Class II (7.4%) socio economic status according to modified BG Prasad's Classification.

Table 3 shows only 119 (33.8%) girls were aware of menstruation before the attainment of menarche and mothers were the source of the information for majority (72.3%) of the girls (Figure 1). 164 (52.7%) girls did not know the cause of menstruation and 143 (46%) knew that

it's a physiological process. 199 (64%) girls were unaware of from which organ does the menstrual blood come and only 56 (18%) girls knew that blood come from uterus. Only 86 (27.7%) know the ideal frequency of changing sanitary pads or cloths per day (4 to 6 hourly).

Table 2: Socio economic status of the study participants.

SN	Socio economic status [*]	N=311 n (%)	Percentage (%)
1	Upper class	-	-
2	Upper middle class	23 (7.4)	7.4
3	Middle	52 (16.7)	16.7
4	Lower middle	236 (75.9)	75.9
5	Lower	-	-

^{*}Modified BG Prasad's Classification of Socio Economic Status (January 2017).

Table 3: Knowledge of the participants about menstruation.

SN	Characteristics	N=311	%				
1	Knowledge about menstruation before menarche	119	38.3				
,	Cause of menstruation						
	Don't know	164	52.7				
4	Physiological process	143	46				
	Due to some disease	4	1.3				
	From which organ does the menstrual blood come						
3	Don't know	199	64				
	Uterus	56	18				
	Urethra/ vagina	56	18				
	Ideal frequency of changing pad/cloth						
4	<4 pads/cloths	225	72.3				
	≥4 pads/cloths (4–6 hourly)	86	27.7				

Table 4 shows 246 (79.1%) girls take bath daily during the menstrual period, 250 (80.4%) girls use sanitary pads and remaining 61 (19.6%) used cloths during menstruation, of which 23 (37.7%) girls dry the used cloths outside the house. Among 61 cloth users 51 (83.6%) said that the reason for not using the sanitary pads was difficulty in disposing the used pads. Only 58 (18.6%) girls change \geq 4 pads or cloths per day and majority 229 (73.6%) of girls do not practice changing of pads or cloths in the schools because of misconception. 223 (71.7%) girls dispose the used pad or cloth as routine waste and only 105 (33.7%) practice washing of hands with soap and water.

Table 5 shows certain restrictions were practiced among 238 (76.5%) girls. Majority of the girls were restricted to enter the place of worship 228 (73.3%) followed by, attending the religious function 129 (41.5%). It was observed that 63 (20.3%) girls were restricted to eat certain food like papaya, curds, onion, egg and non-

vegetarian food. 6 (1.9%) girls were restricted to go to school.

Table 4: Practice of menstrual hygiene among the participants.

SN	Characteristics	N=311	%				
1	Daily bath						
	Yes	246	79.1				
	No	65	20.9				
2	Absorbent used						
	Sanitary pad	250	80.4				
	cloth	61	19.6				
	Frequency of changing pad	/ cloths					
3	1/day	27	8.7				
3	2-3/day	226	72.7				
	≥4/day	58	18.6				
	Change of pad/cloths in school						
4	Yes	82	26.4				
	No	229	73.6				
	Drying of used cloths (n=61)						
5	Inside the house	38	62.3				
	Outside the house	23	37.7				
	Method of disposal						
6	Throw it as routine waste	223	71.7				
	Burn it	60	19.3				
	flush	28	9.				
	Hand wash after changing pad/cloth						
7	Only water	206	66.3				
	Soap and water	105	33.7				

Table 5: Restrictions practiced during the menstrual period.

SN	Restriction practiced during menstruation	N=311	%
1	Not restricted	73	23.5
2	Restriction practiced for*	238	76.5
	Not entering the place of worship	228	73.3
	Not attending religious function	129	41.5
	Use of separate bed and blanket to sleep	31	10
	Not entering the kitchen	28	9
	Not allowed to touch other family members	23	7.4
	Separate utensils should be used	12	3.9
	Restriction to take bath	9	2.8
	Restriction to play outside	8	2.5
	Restriction to school	6	1.9
	Restriction for certain food items	63	20.3

^{*}Participants had given multiple responses.

Religion	No of pads/cloths changed/day		Total	P value	Frequency of cleaning external genitalia/day		Total	P value	
	1	2-3	≥4			>2 times	≤2 times		
Hindu	13	156	49	218		183	35	218	
Muslim	14	70	09	93	0.002	57	36	93	0.001
Total	27	226	58	311	_	240	71	311	

Table 6: Association between religion and menstrual hygiene.

Table 6 shows significant association between the religion and frequency of changing the adsorbent (p<0.002) and frequency of cleaning external genitalia (p<0.001) during the menstruation.

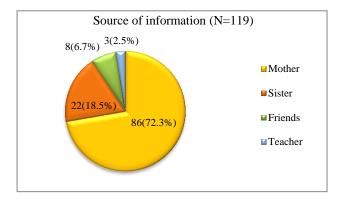


Figure 1: Source of information about menstruation before menarche.

DISCUSSION

In this study only 38.3% girls had knowledge about the menstruation before menarche and mothers were the main informants for 72.3% of girls. However the knowledge was poor compared to a study by Krishnamurthy et al, the knowledge were 63.3% and mothers were the informants for 52.7% girls.⁸

This study showed that the usage of sanitary pads was 80.4% which was similar to a study conducted by Bhattacharyya et al where the usage of sanitary pads was 81.73%.

In this study socio cultural restriction was practiced among 76.5% of the participants and diet restriction was practiced among 20.3%; where as in a study conducted by Dixit et al, it was 81% and 86% respectively.¹⁰

CONCLUSION

The prevalence of knowledge about menstruation before menarche was only 38.3%. Majority of the study participants did not know that menstruation is a physiological process. Menstrual hygiene management and hand wash practice was very poor among the participants. Restriction was practiced among majority of the participants.

Recommendations

Menstrual hygiene plays an important role in reducing the risk of reproductive tract infections. All the girls should be educated about the facts of menstruation and proper hygienic practices during menstruation. Universalized use of sanitary pads can be advocated to every girl through the health care providers and the school teachers. Educational television programmes, motivated school teachers and knowledgeable parents can play a very important role in transmitting the vital message of proper menstrual hygiene management to the adolescent girls.

Usage of sanitary pads leads to non-biodegradable waste, it is recommended to educate regarding re-usable or biodegradable sanitary pads or menstrual cups which can reduce the burden of waste management.⁴

Limitation

This was a school based study conducted only among girls studying in the 8th, 9th and 10th standard in the rural area. It is excluding the Adolescent girls of other age group hence the results cannot be generalised.

ACKNOWLEDGEMENTS

The authors are grateful to all entire health care workers of General Hospital, Nelamangala and Principals of the schools who supported and gave permission to conduct the study.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

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Cite this article as: Kavitha M, Jadhav J, Ranganath TS, Vishwanatha. Assessment of knowledge and menstrual hygiene management among adolescent school girls of Nelamangala. Int J Community Med Public Health 2018:5:4135-9.