

## Menstrual Hygiene and Myths Associated with it among Adolescent Girls: A Quantitative Study in Coastal Karnataka

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**How to cite this article:** Prashant M Naik, Akankshya Panda, Abhishek M Prayag et. al. Menstrual Hygiene and Myths Associated with it among Adolescent Girls: A Quantitative Study in Coastal Karnataka. Indian Journal of Public Health Research and Development 2023;14(1).

### Abstract

**Introduction:** India has largest adolescent population in world, every month 1.8 billion people across the world menstruate. The onset of menstruation means new phase and vulnerabilities in the lives of adolescents. Although menstruation is a natural process, it is linked with several perceptions and practices within the community, which sometimes may result in adverse health outcomes. SGD 6.2 acknowledges right to menstrual health and hygiene.

**Objectives:** To assess knowledge regarding menstrual hygiene and myths associated with it among adolescent girls.

**Methodology:** Community based cross sectional study among 298 adolescent girls. Information was collected using semi-structured and pre tested questionnaire. The data analyzed using Epi-info 7.2 and results interpreted in percentages and proportions.

**Results:** Mean age of menarche is  $12.7 \pm 1.7$  years. 68.5% of study participants knew about menstruation before menarche. Mothers (41.6%) were source of information regarding knowledge about menstruation. 94.3% used sanitary napkin as absorbent. Girls had multiple restrictions.

**Conclusion:** Majority knowing about menstruation before menarche and understanding that it is a physiological process. Majority using sanitary napkins as absorbent emphasising the good menstrual hygiene practices. But sill myths associated with it like the age old practice of following certain restriction is observed.

**Keywords:** menstruation, hygiene, adolescent

### Introduction

India has the largest adolescent population in the world and every fifth person is between 10 to 19 years. India stands to benefit socially, politically

and economically if this large number of adolescents are safe, healthy, educated and equipped with information and life skills to support the country's continued development.<sup>1</sup> The onset of menstruation

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means a new phase and new vulnerabilities in the lives of adolescents. Yet, many adolescent girls face stigma, harassment and social exclusion during menstruation.<sup>2</sup> Although menstruation is a natural process, it is linked with several perceptions and practices within the community, which sometimes may result in adverse health outcomes.<sup>3</sup>

WHO and UNICEF Joint Monitoring Programme has defined menstrual hygiene as using clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary and having facilities to dispose it.<sup>4</sup> SGD 6.2 acknowledges the right to menstrual health and hygiene, with special attention to those in vulnerable situations by 2030.<sup>5</sup> Therefore, to understand the consequences and importance of menstrual hygiene practices among adolescent girls, it is important to study the current practices about the same so that future interventions can be planned accordingly.<sup>6</sup> Hence this study was conducted among adolescent girls on menstrual hygiene with regard to knowledge and myths associated with it.

### Methodology

This is community based cross sectional study conducted among adolescent girls between 10 to 19 years who had attained menarche in the rural field practice area of KRIMS Karwar, Karnataka. Study period was from Nov 2019 to Jan 2020. Population covered by Angadi Primary Health Centre is 12700 (2019), in that adolescent girls population is 349. Universal sampling technique was followed where all adolescent girls who had attained menarche were included in study. Adolescent girls who had not attained menarche, severely ill, mentally disabled and refusal to participate were excluded. Thus the final study sample size was 298. After obtaining IEC clearance and before the interview, informed consent was obtained from the parent or guardian and ascent was taken from adolescent girls. Information on socio-demographic variables, knowledge, myths, beliefs and practices regarding menstruation was collected by door to door survey through semi-structured and pre tested questionnaire. Participants were given assurance that information collected would be confidential. After the interview girls were educated about menstrual health and hygiene. The

data was cleaned, coded and analyzed using Epi-info 7.2 version software and results were interpreted in percentages and proportions.

### Results

The total study participants were 298 of which 126 (42.3%) were in early adolescence (10-14 yrs) age and 172(57.7%) were in late adolescence (15-19 years) age. Mean age of study participants is  $15.9 \pm 1.9$  years. Out of 298 study participants Hindus were 81.5% followed by Christians 17.4%. Education of mothers of study participants 43.3% were educated till secondary school, followed by primary school 10.4%, higher secondary 17.4%, degree or above 16.1% and 12.8% were illiterate. (Table:1).

Table:2 Study participants menstruation history shows 62.8% age of menarche 11-12 years followed by 13-14 years 30.5% and 15-16 years 5.4%. Mean age of menarche of study participants is  $12.7 \pm 1.7$  years. Among study participants 78.9% had regular and 21.1% had irregular menses.

Knowledge regarding menstruation showed that 68.5% knew about menstruation before menarche. When assessed about reaction at first menstruation, 42.3% had discomfort, 35.6% were scared, 14.1% were emotional and 8.1% were happy. It was observed that 72.5% knew that menstruation was a physiological process. Regarding source of information about knowledge on menstruation, 41.6% was from mothers, 32.9% from friends, 22.5% from sisters, 17.4% from teachers and 4% from Internet/online. (Table:3).

Menstrual hygiene practices shows that 94.3% used sanitary napkin as absorbent while 5.7% used cloth. Regarding frequency of change of absorbent, 73.2% changed every 3-6 hours followed by 15.4% every 6-9 hours. Method of disposal of the used absorbent, 89.6% wrap in paper and disposed with routine waste. 4.7% buried in soil, 3.7% flushed in toilet and 6.2% burned it. (Table:4)

Restrictions practiced during menstruation, 74.6% followed one or the other restrictions. Restrictions like going to religious place 70.8%, sleeping separately 39.6%, playing sports 28.9%, going to school 17.8%, household work 9.1% and entry to kitchen 7.7%. (Table: 5)

**Tables:**

Table 1: Sociodemographic characteristics of adolescent girls

	Number (n=298)	Percentage (%)
<b>Age Group</b>		
Early Adolescence (10-14 years)	126	42.3
Late Adolescence (15-19 years)	172	57.7
<b>Religion</b>		
Hindu	243	81.5
Christian	52	17.4
Muslim	03	1.0
<b>Education of mother</b>		
Illiterate	38	12.8
Primary	31	10.4
Secondary	129	43.3
Higher secondary	52	17.4
Degree and above	48	16.1

Table 2: Menstruation history of study participants

	Number (n=298)	Percentage (%)
<b>Age at Menarche (years)</b>		
11-12	187	62.8
13-14	91	30.5
15-16	16	5.4
> 16	04	1.3
<b>Duration of flow (days)</b>		
<3	151	50.7
3-5	143	48.0
>5	4	1.3
<b>Regularity of Menses</b>		
Regular	235	78.9
Irregular	63	21.1

Table 3: Knowledge of study participants regarding menstruation

		Number	Percentage(%)
Knew about Menstruation before Menarche?	Yes	204	68.5
	No	94	31.5
Reaction to FirstMenstruation	Discomfort	126	42.3
	Emotional	42	14.1
	Happy	24	8.1
	Scared	106	35.6
Knowledge about Menstruation	Physiological process	216	72.5
	No information	82	27.5
Source of Information*(n=216)	Mother	124	41.6
	Sister	67	22.5
	Friends	98	32.9
	Teachers	52	17.4
	Internet/online	12	4.0

\* Multiple responses

**Table 4: Menstrual hygiene practices followed by the study participants**

	Number (n=298)	Percentage (%)
Absorbent used		
Sanitary Napkin	281	94.3
Cloth	17	5.7
Frequency of change (Hrs)		
1-3	3	1.0
3-6	218	73.2
6-9	46	15.4
>9	31	10.4
Disposal Method		
Burn	6	2.0
Bury in soil	14	4.7
Flush in toilet	11	3.7
Wrap in paper and throw in dustbin	267	89.6

**Table 5: Restrictions followed during menstruation**

Types of restrictions*	Number	Percentage (%)
Going to Religious Place	211	70.8
Going to school	53	17.8
Playing Sports	86	28.9
Household work	27	9.1
Sleeping separately	118	39.6
Entry to kitchen	23	7.7
No restrictions	46	15.4

\*Multiple responses

### Discussion

This cross sectional study among the 298 menstruating adolescent girls in coastal Karnataka shows that majority were in late adolescence (15-19 years) age. Mean age of study participants is 15.9 ± 1.9 years. Similar observations were made by Deshpande, et al in a study in Karad where 72% were in age group 15-19 years,<sup>7</sup>Jain et al in their study at Faridabad found 67.55% girls were between 14-16 years.<sup>8</sup>Another study by Sudeshna et al in a study in Kolkata where 57% girls belonged to 15-19 years age group.<sup>9</sup>

Most of the mothers of study participants were educated till secondary school (43.3%) and education till degree or above (16.1%). The overall literacy status among mothers of study participants is 87.2 % which correlates with female literacy of Karwar taluka of 84.8%.<sup>14</sup> Similarly other studies by Bachloo T et al 87.4%, Jaikhani SM et al 80.6% ,Thakre SB et al 92.5%, Rokade HG et al 97.8%, Patavegar BN et al 92.9% respectively were observed.<sup>10,15-18</sup>

In Indian society discussion related to menstruation and its hygiene is still considered a taboo. In the present study, menstruation history reveals that most of them attained menarche between 11-12 years. Mean age of menarche of study participants is 12.7 years. Bachloo T et al 12.2 years, Sharma R et al 12.8 years, Dasgupta A et al 12.8 years and Thakre SB et al 12.9 years reported these mean age of menarche in their similar community based studies.<sup>10,11,13,16</sup> Whereas Jain R et al and Sharma S et al<sup>12</sup> reported 13.4 years and 11.4 years as mean age of menarche.<sup>8,12</sup> Genetic, nutritional, environmental and geographical factors could have influenced in such variations in mean age of menarche. Pathak PK et al in their secular trends in menarche age in India documented that age at menarche is been declining trend in India from 13.8 years in 1972 to 12.4 years in 2011.<sup>19</sup>

The duration of blood flow was <5 days in 98.7% and >5 days in 1.3% of the girls which is again comparable to study by Deshpande et al, Kanotra et al and Patil MS et al.<sup>7,20,21</sup> Regularity of menstruation in our study shows that majority of them had regular menses. Deshpande et al in their study found 82% having regular menses.<sup>7</sup> Kanotra et al observed that 94.4% had regular menstrual cycles.<sup>20</sup> Wasnik et al found that 78.2% had regular menstrual cycles.<sup>22</sup>

Knowledge regarding menstruation, 68.5% of study participants knew about menstruation before menarche. It was observed that majority knew that menstruation was a physiological process. Mothers were the major source of information followed by friends. The awareness of menstruation before menarche reported by Dasgupta A et al 67.5%, Juyal Ret al 64.5%, Jaikhani MK et al 63.4% and Kumar D et al 60.2% are comparable to the present study.<sup>13,15,23,24</sup>

Where as many similar studies found less percentage of adolescents knowing about menstruation before attainment of menarche like Deshpande et al 24%, Thakre SB et al 36.95% and Bachloo T et al 41.5%.<sup>7,10,16</sup> Majority studies found that main informant was mothers and menstruation is a physiological process. These wide variations could be due to differences in the female literacy status (mothers of adolescent girls) in these geographical areas.

The higher percentage of adolescent girls knowing about menstruation before menarche in the present study could be correlated to the higher literacy rate among those mothers of these adolescent girls. This study also highlights that only 17.4% took information from teachers, which is a neglected issue because adolescence education programme co-ordinated by the NCERT under MHRD aims to provide adolescents with accurate, age appropriate and culturally relevant information on menstrual hygiene.<sup>25</sup> In the present-day world of smart phones and internet it was unfortunate to see that very few (4%) accessed information from Internet/online.

The present study documented reactions to first menstruation like discomfort, scared, emotional and happy as responses as in Table:3. Deo DS et al and Patle R et al in their studies have also documented similar reactions like scare, indifference, discomfort, disgust, guilt, surprise, pleasure, depression and fear.<sup>26,27</sup>

In the present study majority (94.3%) used sanitary napkins as absorbent. Similar findings were found by Kanotra SK et al 89.5%, Patavegar BN et al 85.9%, Jain R et al 78.7%, Mathiyalagen, et al 78.1%, using sanitary napkins as absorbent.<sup>8,18,20,30</sup> Most (73.2%) of the study participants change of absorbent every 3-6 hours which was higher compared to findings in study done by Patavegar BN et al 40.2%.<sup>18</sup> Comparable findings were found by Rokade HG et al 62.96%.<sup>17</sup>

Regarding the method of disposal of the used absorbent, 89.6% wrap in paper and disposed with routine waste, other methods being burying in soil, flushing in toilet and burning. Wide variations were observed in regard to disposing the absorbent with routine waste from Thakre SB et al 39.8%, Patle R et

al 52.8%, Dasgupta A et al 57.5% to Patavegar BN et al 89.8%.<sup>13,16,18,27</sup>

Present study reveals that 74.6% did face one or the other restrictions like going to religious place (70.8%), sleeping separately (39.6%), playing sports (28.9%), going to school (17.8%), household work (9.1%) and entry to kitchen (7.7%). Similar restrictions were also observed by Deshpande et al, Sudeshna R et al, Bachloo T et al, Sharma S et al, Dasgupta A et al, Thakre SB et al, Rokade HG et al and Patavegar BN et al ranging from going to religious place, to play or exercise, eating certain food items, doing kitchen work, doing routine household work, going to school, sleep on the routine bed, to touch anybody, etc.<sup>7-13,16-18</sup>

## Conclusion

Mean age of menarche  $12.7 \pm 1.7$  years which is also a sign of normal functioning reproductive system. Literacy among mothers of adolescent girls is good. Majority knowing about menstruation before menarche and understanding that it is a physiological process. Such knowledge being given by their mothers. Correlating that education among the mothers will lead to imparting life science information. Majority using sanitary napkins as absorbent. Still the myths associated with it like the age old practice of following certain restriction during menstruation is observed in present study also. GOI's Adolescence Education Programme in school curriculum with teachers playing influential role in imparting reproductive health knowledge could make achieve SDG 6.2 by 2030.

**Acknowledgement:** We thank study participants for their co-operation and valuable information.

**Conflict of Interest - Nil**

**Ethical Clearance - Taken**

**Source of Fund - Nil**

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