

## A Cross Sectional Study Regarding Menstrual Hygiene Practices and Myths among Rural Adolescent Girls

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### Abstract:

**Introduction:** Menstruation, though a natural process, is still regarded as unclean/dirty in Indian society, clouded by taboos and socio-cultural restrictions resulting in adverse health outcomes. This poses a serious problem for adolescent girls of low and middle-income countries, directly/indirectly influencing Sustainable Development Goals affecting their and nation's overall development. **Objective:** To find out the prevalent menstrual hygiene practices and myths in rural adolescent girls. **Method:** A cross sectional study was conducted, with a pre-tested, pre-designed questionnaire among 180 girls aged 13 to 16 years of a secondary school in the rural field practice area for 6 months. **Results:** The mean age of menarche was  $12.5 \pm 2(0.85)$  years. 76% of the girls were aware about menstruation before its onset and mothers (85%) were the source of information. 78% girls used commercial sanitary pads, while 22% used cloth/napkin and half of them changed pad twice daily while 1/3rd thrice daily. External genitalia were cleaned once (51%), using water (56%) and 64% preferred using a separate underwear during periods. Following were their complaints in the last 6 months: 59% white discharge per vagina, 32% itching in private parts, 16% burning micturition. Almost half weren't involved in religious activities and abstained from household chores. Around one third were restricted from playing, absented from school, barred from entering kitchen, slept in isolation and ate from separate utensils. **Conclusion:** Awareness on correct menstrual hygiene practices and demystifying related myths can improve rural adolescent's health.

**Key Words:** Adolescent, Menstrual hygiene, Myth

### Introduction:

Menstruation, though natural process is still a taboo in rural India with stigma not permitting discussion or even information seeking.<sup>[1,2]</sup> Women spend several days of their lifetime in this phase and practically there are more needs to be addressed during this period. But due to associated shame, superstitions, myths related with this biological phenomenon their capability to address this basic need of menstrual hygiene remains unnoticed. This impacts into poor menstrual hygiene hence poor women health.<sup>[1]</sup> Adolescent girls constitute a vulnerable group, particularly in India where female child is neglected one.<sup>[2]</sup> Among adolescent girls and women menstruation is a key indicator of vitality.<sup>[1]</sup>

Adolescent girls constitute 1/5th of total female population in the world.<sup>[3]</sup> This indicates roughly, 1 in every 6 persons is adolescent. They are the future of nation forming the major demographic and economic force. They have specific needs and they face challenges like and one of them is lack of access to adequate knowledge, safe environment and healthcare services. In view of this Government of India launched its first comprehensive programme for adolescents, 'Rashtriya Kishor Swasthya Karyakram', during January 2014.<sup>[4]</sup> Of the 1.2 billion adolescents aged 10-19 years worldwide, 243 million that is around 20% live in India.<sup>[5]</sup> India's 113 million adolescent girls are particularly vulnerable at the onset of menarche which occurs between 11-15 years.<sup>[1]</sup> The menarche is one part of the

maturation process, but it is often, culturally defined as the indicator of girl's maturity and readiness for marriage and sexual activity.<sup>[6]</sup>

Menstrual hygiene is an issue that is insufficiently acknowledged and has not received adequate attention in the reproductive health and water, sanitation and hygiene (WASH) sectors in developing countries including India and its relationship with and impact on achieving many Millennium Development Goals (MDGs) is rarely acknowledged.<sup>[3]</sup> Adolescent girls of low and middle-income countries, directly/indirectly influencing Sustainable Development Goals affecting their and Nation's overall development.

Access to safe menstrual hygiene practices is their right which most of them are not able to avail. Menstrual practices among adolescent girls varies due to population diversity and cultural practices in Indian context.<sup>[7]</sup>

An adolescent girl having better knowledge regarding menstrual hygiene and safe practices will be less vulnerable to Reproductive Tract Infections and its consequences in near future. Therefore, increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women.<sup>[2]</sup>

These younger generations are tomorrow's parents. The reproductive health decisions that they make today will affect the health and wellbeing of their upcoming generations and their community. Even though all initiatives took place, by government of India, a major section of the adolescent girls do not have a prior awareness about the menstrual cycle and its hygienic practices leading to poor menstrual hygiene.<sup>[8]</sup>

In view of this, the study was conducted with the following objectives:

1. To find out the prevalent menstrual hygiene practices in adolescent girls.
2. To study myths associated with menstruation.

The data obtained from this study will be beneficial for planning awareness program which can

improve their menstrual hygiene practices. This will help improve the quality of life in rural adolescent girls.

#### **Method:**

A cross sectional study was conducted, with a pre-tested, pre-designed questionnaire among 180 girls aged 12 to 16 years of a secondary school in the rural field practice area for 6 months. This Cross-sectional study was conducted at rural field practice area of the teaching medical institute run by Municipal Corporation. There was only one Government school situated in that area and hence convenient sampling method was used for data collection. The permission to carry out the research was obtained from school authorities. The school had classes from 1st to 10th standards. All adolescent girls who had attained their menarche and were above age of 13 years were considered after taking valid informed consent. Their participation was purely voluntary and they were also assured that the study will not have any detrimental effect on the participant. They were assured that any information, thus obtained will be treated with utmost confidence.

The study duration was from June 2018 to November 2018. A predesigned, pretested semi structured questionnaire was used encompassing of Part 1- where personal information such as age, family size, family income was enquired; Part 2 - menstrual history like duration of menstrual cycles, menarche, dysmenorrhea etc; Part 3 - menstrual hygiene practices like use of sanitary pads, their disposal, washing of external genitalia were asked and Part 4 - myths related to menstruation like restrictions in sleeping, playing, using of washroom, household chores etc were enquired.

#### **Results:**

Age group of all 180 participants was from 12 to 16 years with mean age of  $13.90 \pm 2(0.97)$  years. Most of them belonged to middle and upper middle socioeconomic class according to modified B. G. Prasad classification.<sup>[9]</sup> Mean age of menarche was  $12.5 \pm 2(0.85)$  years.

**Table 1: Distribution of participants according to menstrual history**

Details		Frequency n (%)
Duration of Bleeding	< 3days	19 (10%)
	3-5 days	83 (46%)
	>5 days	78 (44%)
Duration of Cycle	<28days	35 (19%)
	28-30 days	90 (50%)
	>30 days	55 (31%)
Painful	Yes	107 (59%)
	No	73 (41%)
Regularity	Regular	130 (72%)
	Irregular	50 (22%)

As per table-1, 46% of the participants had duration of menstrual bleeding for 3-5 days followed by more than 5 days and less than 3 days i.e. 44% and 10% respectively. Duration of menstrual cycle for the period of 28-30 days was present in 50% of the participants, followed by 31% of the participants had more than 30 days cycle and 19% had less than 28 days cycle duration. 59% of the participants had painful menstruation and 72% had regular menstruation.

Out of 180 participants 137 (76%) were aware about menstruation before its onset. Maximum i.e. 85% of them had received the information from their mother followed by from elder sister (14%) and friend (1%).

78% of the participants used commercial sanitary pads as an absorbent during menstruation while 22 % used cloth. Most of the participants i.e. 44% changes absorbents twice per day followed by thrice and more than thrice among 32% and 13% respectively. 92% of the participants uses cloth repeatedly. Bathroom (72%) is the most preferred place for drying of cloth followed by under the sun (28%). Majority (77%) of the participants stored unused sanitary pads or cloth in bedroom followed by bathroom (18%) and schoolbag (05%). (Table-2)

Sanitary pads were disposed of in dustbins by 86% participants while 11 % burn it and 3% flushed it

into the toilet. Majority (95%) of the participants clean external genitalia. 53% clean external genitalia once per day followed by twice, thrice and more than three times among 36%, 08% and 03% respectively. Only water is the most preferred (56%) material used for cleaning, followed by soap and water (34%) and antiseptic solution (10%). Two third of the participants use separate underwear at the time of menses. (Table-2)

In last 6 months, 58% had history of pain in abdomen, 16% had burning micturition, 32% itching sensation near groin area and 59% had white or other coloured discharge per vaginum.

56% of the participants were restricted from attending religious places like temple, touching religious material (56%), sleep separately (30%), eat separately in separate utensils (22%), restricted from doing household works (48%), playing outside (39%). only 70% were allowed to go to school, 47% were restricted from eating food items like fish, chicken, etc. while 35% participants were not allowed to enter the kitchen.

Maternal education was not associated statistically with mother being the source of information or any religious restrictions at the time of menstruation. (Table-3). H/o cleaning of external genital region and h/o burning micturition was strongly associated statistically. (Table-4). H/o

Table 2: Distribution of participants according to menstrual hygiene practices

Details		Frequency n (%)
Use of absorbents	Commercial sanitary pad	141 (78%)
	Cloth	39 (22%)
Changing frequency of pads per day	Once	20 (11%)
	Twice	79 (44%)
	Thrice	57 (32%)
	More than three times	24 (13%)
Repeated use of same cloth	Yes	36 (92%)
	*No	03 (08%)
Drying of cloth	Under the sun	10 (28%)
	Inside the bathroom	26 (72%)
Storage of unused sanitary pads or cloth	Bedroom	139 (77%)
	Bathroom	32 (18%)
	Schoolbag	09 (05%)
Disposal of Sanitary pad	# Throw in dustbin	155 (86%)
	Burn it	21 (11%)
	Flush in toilet	4 (3%)
Cleaning of external genitalia	Yes	171 (95%)
	No	09 (05%)
Frequency of cleaning per day	Once	91 (53%)
	Twice	62 (36%)
	Thrice	13 (08%)
	More than three times	05 (03%)
Materials used for cleaning	Only water	100 (56%)
	Soap and water	62 (34%)
	Antiseptic solution	18 (10%)
Use of separate underwear at the times of menses	Yes	116 (64%)
	No	64 (36%)

\* 3 of them used new cloth every time during menstruation. # 39 of them had multiple response.

Cleaning external genital and complaints in last 6 months were not associated statistically. Since both the histories were subjective, we need to find out in depth reasons of above-mentioned complaints.

#### Discussion:

In the present study, the mean age of menarche of the study participants was  $12.5 \pm 2(0.85)$  years while

it was 15.5 years by K. V. Phani, Andhra Pradesh,<sup>[3]</sup> 11.95 years by Yasmin in west Bengal<sup>[10]</sup> and 13.2 years in Rajasthan in 2005 by Khanna et al.<sup>[11]</sup> Differences in geographical, environmental, nutritional, socio-economic factors and general health status of the study subjects causes differences in the findings. The age of menarche is determined by

**Table 3: Association of Maternal education with mother being the source of information and any religious restrictions**

Maternal Education	Source of Information as Mother	Source of Information as sister/ friend	Total	Test of significance
Primary	7	2	9	Chi Square value (X <sup>2</sup> )= 3.47 P Value= 0.17 Degree of freedom=2 Not Significant
Secondary, Higher Secondary	106	16	122	
Graduation, Post Graduation	37	12	49	
Maternal Education	Any Religious Restrictions during menstruation		Total	Test of significance
	Yes	No		
Primary	1	3	4	X <sup>2</sup> =1.73 P Value= 0.41 Df=2 Not Significant
Secondary, Higher Secondary	69	56	125	
Graduation, Post- Graduation	30	21	51	

**Table 4: Association of h/o cleaning of external genital region and h/o Burning Micturition**

H/o cleaning of external genital region	H/o Burning Micturition		Total	Test of significance
	Present	Absent		
Present	24	149	173	χ <sup>2</sup> =6.57 P Value= 0.0051 Df=1 <b>Significant</b>
Absent	04	03	7	
<b>Total</b>	<b>28</b>	<b>152</b>	<b>180</b>	

many factors such as general health, genetics, socioeconomic and nutritional status. Due to improvement in their nutritional status and general health, it has started appearing earlier in many populations.<sup>[7]</sup>

In the present study, almost three fourth of the participants were aware about menarche but study by K. V. Phani, et al,<sup>[3]</sup> Deo et al<sup>[12]</sup> reported only half of their participants knew about menstruation before menarche. Mother was the first informant among more than three fourth participants. 93% of mothers

were educated. Hence, mother as a primary source of information for more than three fourth of the participants. A. Dasgupta, West Bengal<sup>[2]</sup> found mother as a first informant only in case of 35% of the girls This show good awareness at the current rural community level regarding menstruation as it is the field practice area of the teaching institute.

More than 5 days duration of blood flow was found among 25% by K. V. Phani,<sup>[3]</sup> and Chinta K. et al, Andhra Pradesh<sup>[13]</sup> and it was 44% in present study. In the present study regular cycles were observed in

72% which was in agreement with that of rural Puducherry study by Priya HS<sup>[8]</sup> i.e. 68%. But 91% had regular cycles by Chinta K. et al, Andhra Pradesh.<sup>[13]</sup> This difference can be due to geographical and nutritional factors.

Half of the participant had duration of cycle of 28-30 days in the current study which is in concordance with Chinta K. et al, Andhra Pradesh,<sup>[13]</sup> and study by Priya HS in rural Puducherry.<sup>[8]</sup> The finding of nearly two-third of the participants had painful menses was similar to that of Chinta K. et al, Andhra Pradesh.<sup>[13]</sup>

In this study 78% of the participants used commercial sanitary pads as an absorbent while only 48% used in study by Nandini Gupta, Uttar Pradesh.<sup>[14]</sup> The increased use of sanitary pads in present study can be due to awareness by media, concession rate by state government. Half of the participants clean their genitalia with soap and water and or antiseptic solution in this study. Similar findings were found Nandini Gupta, Uttar Pradesh<sup>[14]</sup> and Parmaswari et al.<sup>[15]</sup> This shows good level of awareness.

Burning was used as the way of disposal of used sanitary pads by 11% in current study while it was 92% by Chinta K. et al, Andhra Pradesh.<sup>[13]</sup> This contrast can be due to more availability of incinerator by local or state authority. 86% throw used sanitary pads in dustbin, similarly 92% by study by Shantanu Sharma, Delhi.<sup>[16]</sup> Similar findings regarding frequency of cleaning external genitalia were found in current study with that of a study conducted by Vidya V. Patil, Karnataka.<sup>[17]</sup>

There was more than one restriction at the time of menstruation put by the family members in the current study among the study participants. These findings were in agreement with Vidya V. Patil, Karnataka<sup>[17]</sup> and Tanoja Bachloo, Haryana, 2016.<sup>[18]</sup> Half of the study participants were not allowed to attend religious places and touching religious materials. As found in Vidya V. Patil<sup>[17]</sup> study but almost all were not allowed in Tanoja Bachloo, study from Haryana.<sup>[18]</sup> Our findings on other restrictions on food consumption, entry in to kitchen and playing

were equivalent to study by Vidya V. Patil.<sup>[17]</sup> These findings suggest more awareness regarding positive attitude about menstruation in the study area. Majority of the girls followed one or the other restrictions during menstruation among which avoiding holy places and not to work/play outside was more.

### Conclusion:

Mean age of participants was  $13.90 \pm 2(0.97)$  years and mean age of menarche was  $12.5 \pm 2(0.85)$  years. Three fourth of the participants were using sanitary pads as an absorbent while more than three fourth were cleaning their external genitalia at least once or twice a day. History of cleaning of external genital region and history of burning micturition was strongly associated statistically. Still most of them were having more than one symptom in last 6 months which should be evaluated to rule out reproductive tract infections. Almost all participants responded that they maintain menstrual hygiene but more than half were suffering from white discharge per vagina or itching in groin region and burning micturition. In spite of all mothers of the participants being educated, all above mentioned symptoms were not addressed as the participants did not consult any health seeking facilities. In depth study need to be conducted to find out the reasons, factors affecting menstrual hygiene practices at the rural community level.

### Recommendation:

Vigorous awareness on correct menstrual hygiene practices and demystifying related myths can improve rural health. The school is a place where behaviours can be shaped, skills developed and correct information is provided. The trained school teacher can create awareness among rural adolescent girls in the school regarding maintenance of menstrual hygiene.

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**Declaration:**

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Conflict of Interest: Nil

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