

# Menstrual Hygiene in Young Girls – A Survey from Rural Area of Basti, Uttar Pradesh, India

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## Abstract

### ➤ *Background:*

Menarche is an important milestone in a women's life. The level of hygiene maintained during menstruation is crucial for a healthy life. This survey was done to access the level of hygiene in young girls in a rural area.

### ➤ *Methods:*

The survey was carried out in a rural area and the data was collected using a questionnaire during the period of 15<sup>th</sup> June 2019 to 15<sup>th</sup> August 2019.

### ➤ *Results:*

Among 127 girls, 61.4% were between 16 & 19 years of age. A 57.5% of girls were having secondary or higher education. 70.9% of girls had regular cycles. About 50% had no knowledge of menses before menarche. About 42% girls used sanitary pad and the rest used either mix of sanitary pad and cloth or only cloth.

### ➤ *Conclusion:*

This survey demonstrated that the hygiene levels of young girls during menstruation were less than adequate. Therefore, young girls and their families needed to be educated about the importance of cleanliness and safe practices, and also to do away with superstitions related to menstruation.

**Keywords:-** Hygiene; Menarche; Menstruation; Rural .

## I. INTRODUCTION

Menstruation is surrounded by various psychological and religious barriers due to lack of knowledge. Girls residing in rural areas are unaware about the biology of menstrual cycle. Though menstruation is a natural process, it is linked with many superstitions leading to unhealthy practices. Hygiene during menstruation is important for the wellbeing of women and thus directly influences morbidity and mortality of female population.<sup>1</sup>

Menstrual hygiene management as defined by United Nations is “women and adolescent girls using a clean menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials.”<sup>2</sup>

During the menstrual period women, are more prone to infections of the reproductive system and the urinary tract. Thus proper menstrual hygiene becomes a preventive measure for women in reproductive age group.<sup>3</sup>

Several studies indicated that the girls of adolescent age, do not have proper knowledge about menarche and menstruation.<sup>4,5</sup> Several taboos associated with menarche and also with menstruation. These coupled with social mindset against discussing about these issues results in a much bigger problem, more so in a rural setting.

In order to improve the hygiene in the future, a working knowledge of the current practices is imperative.<sup>6,7</sup>

With above information in background, a survey was designed and conducted among young girls in the rural area near Rajkiya Medical College, Basti, Uttar Pradesh, to assess the level of hygiene maintained during menstruation.

## II. METHODS

### A. *Study Protocol*

A cross-sectional study was carried out in Department of Obstetrics and Gynecology, Rajkiya Medical College, Basti, Uttar Pradesh.

### B. *Materials*

The study was undertaken among the adolescent girls between age of 10 to 19 years in the surrounding rural area of Rampur. The study was carried out in a period of 2 months from 15<sup>th</sup> June 2019 to 15<sup>th</sup> August 2019. The sample size of 127 was calculated using the formula  $n = P \times (100 - P) \times z^2 / d^2$ , where P is the anticipated prevalence d is

the desired precision,  $z$  is the standard normal distribution of desired confidence level

### C. Methodology

Data were collected by house-to-house survey in the community, and girls were asked questions using a pretested questionnaire specially designed for this purpose. The questionnaire consisted of sociodemographic details, knowledge about menstruation, menstrual patterns and practices, hygiene followed, and reproductive morbidities etc. Before the interview, an informed consent was obtained from the parent or guardian of the adolescent girl on the prescribed format and ascent was taken from adolescent girl. All the respondents were assured that the information collected would be confidential throughout the study. At the end of the interview, the girls were educated about facts of menstruation and explained about cleanliness during menses. In addition, all their queries were answered satisfactorily.

### D. Statistical Analysis

Data were fed to Microsoft Excel 2013. Simple percentages, proportions, mean and standard deviation were used to describe the results of the study and chi-square test was used to find the association. Data were analyzed using SPSS VER. 17 and Microsoft Excel 2013.

## III. RESULTS

Young girls aged 12 to 19 years were included in the study. As shown in Table 1, more number of girls (75.6%) was between 15 to 19 years. Most of the girls (81.9%) were living in joint family. Maximum number of girls were educated till secondary (39.4%), followed by those having primary education (34.6%). Majority of girls belonged to lower class (59.8%) followed by middle class (37.8%) as per modified B G Prasad Scale 2015. As per the education of parents, mothers of most of the girls had primary education (50.4%), whereas fathers of girls had better education with equal numbers having primary education (40.9%) and secondary and above education (40.9%).

Table 2 refers to the menarche and menstrual history of the girls attending the study. It shows that most of the girls had regular menses (70.9%). As per the amount of flow, most of the girls had moderate flow (64.6%), whereas the duration of flow was 3-5 days for maximum number of girls (78.0%).

Table 3 demonstrates the knowledge level and practices regarding menstruation. It shows that almost half the participating girls had no knowledge of menstruation before menarche (50.4%). Most of the girls knew the cause of bleeding as natural (80.3%). Most of the girls used both sanitary pads and cloth as absorbent (48.0%), whereas only sanitary pads were used by lesser number of girls (41.73%). Maximum number (74.0%) of girls disposed the absorbent material wrapped in paper. Most of the girls washed their genitalia sometimes before putting new absorbent (41.7%), whereas 34.6% girls always washed their genitalia. Most of the girls (52.8) used only water to wash their genitalia.

Table 4 shows the perception of advantages and disadvantages of sanitary pads among the subjects. Most of the girls considered sanitary pads to be better than cloth in absorption (65.4%), with maximum number of respondents found it more comfortable (56.7%). Major disadvantages of sanitary pads were reported to its being expensive (72.44%) and embarrassment face in buying it (61.42%).

Table 5 shows morbidity of reproductive tract and treatment received, if any. Most of the girls reported having some problem (74%), with pain in lower abdomen being the most common, followed by discharge from genitalia. Out of these girls having some symptom, (26%) received no treatment. Home remedy was the most common form of treatment (30.7%), with very few getting proper medical attention (8.6%) by either private or government doctor.

Fig 1 shows a bar chart demonstrating that an association between menstrual hygiene and reproductive morbidity. The girls, who never washed their genitalia, were having higher morbidity as compared to those who used to maintain high levels of hygiene by frequent washing. Values of chi square tests demonstrated a linear by linear association between the two, with a likelihood ratio of .060. (Table 6)

Most of the girls reported associated symptoms with pain in abdomen being the most common problem (81.1%) followed by weakness (40.16%).

## IV. DISCUSSION

This study being community-based in a rural area, unhygienic and environmental conditions were observed. Poverty, illiteracy and ignorance were major factors which lead to poor sanitation. Improper sanitation of the surroundings also contributed to poor hygiene. Lack of water supply and privacy issues were found in the community.

In our study we found that most of the girls were from family (81.9%), whereas, Deshpande et al. in a study of menstrual hygiene of girls from urban slum area reported most of the girls were from nuclear family (77%).<sup>8</sup> Most of the girls in our study were studying in school varying from primary to higher secondary and above and only a few girls (7.9%) were illiterate. Education of mother plays an important role in the bringing up of adolescent girl in the family. In this study most of the mothers had received some form of formal education, however, quite a few of them were illiterate (22.8%). This is in contrast with a study done in Varanasi by Kansal S et al, who reported very few illiterate mothers in their study (13%).<sup>9</sup> Most of the girls participating in our study had regular menses (70.9%) and most of them had bleeding for 3 - 5 days (78.0%) and some girls had bleeding for more than 5 days (19.7%). In a study done by Kanotra et al the duration of flow was less than 5 days for maximum number of participants with just a few girls reporting more than 5 days of flow (3.7%).<sup>10</sup> Less than half of respondents in our study used sanitary napkin as absorbent during menstruation (41.7%). This is

considerably less than the study of Kamath R et al who reported more than half of girls from rural background (65%) using sanitary pads.<sup>11</sup>

The knowledge of young girls from rural background in the district of Basti, regarding menstruation was poor as almost half of them had no knowledge of menstruation before menarche (50.4%). In a study done in urban and rural population, Kamath R et al, it was reported that less than half of rural (35.8%) respondents knew about menstruation before menarche<sup>11</sup>. In another study, Dutta A et al reported only 39.1% of rural participants had this knowledge.<sup>12</sup> Most of the girls in this study had access to sanitary pads (89.7%), with almost half of them using sanitary pads only (41.7%). This is in contrast with the study by Prajapati J et al, who in a study of urban adolescent girls reported only 26.1% of them used sanitary

pads.<sup>13</sup> The results of this study show that most of the girls are aware of advantages of using sanitary pads over cloth, with better absorption and comfort being the main benefits. The main hinderance in the use of sanitary pads in this study was the cost (72.4%) followed by the embarrassment in buying the sanitary pads (61.4%). Hence education may play an important role in making the society aware about the scientific facts about menstruation.

In this study we found that the girls washing their genitalia in between while changing the pad had better reproductive health as compared to those who never washed it. Hence menstrual hygiene may play an important role in the health of adolescent girl. We also found that in rural area, the girls had very poor access to proper health facilities. It may be due to the social stigma attached to menstruation.

Question Asked	n (%)
<b>Age of Patient</b>	
12 yrs	1 (0.8%)
13 yrs	10 (7.9%)
14 yrs	20 (15.7%)
15 yrs	18 (14.2%)
16 yrs	15(11.8%)
17 yrs	24 (18.9%)
18 yrs	28 (22.0%)
19 yrs	11 (8.7%)
<b>Type of Family</b>	
Joint	104 (81.9%)
Nuclear	23 (18.1%)
<b>Education</b>	
Illiterate	10 (7.9%)
Primary	44 (34.6%)
Secondary	50 (39.4%)
Higher Secondary & Above	23 (18.1%)
<b>Socio-economic Status</b>	
Upper Class	3 (2.4%)
Middle Class	48 (37.8%)
Lower Class	76 (59.8%)
<b>Education of Mother</b>	
Illiterate	29 (22.8%)
Primary	64 (50.4%)
Secondary	19 (15.0%)
Higher Secondary or above	8 (6.3%)
Don't Know	7 (5.5%)
<b>Education of Father</b>	
Illiterate	20 (15.7%)
Primary	52 (40.9%)
Secondary	40 (31.5%)
Higher Secondary & Above	12 (9.4%)
Don't Know	3 (2.4%)

Table 1:- Social and economic profile of Participants

Menarche & Menstruation		n (%)
Regularity of Menses		
	Regular	90 (70.9%)
	Irregular	37 (29.1%)
Amount of Flow		
	Scanty	40 (31.5%)
	Moderate	82 (64.6%)
	Heavy	5 (3.9%)
Duration of Flow (in days)		
	<3	3 (2.4%)
	3 – 5	99 (78.0%)
	>5	25 (19.7%)

Table 2:- Distribution of study population according to Menarche and Menstrual History

Knowledge About Menses		n (%)
Knowledge of Menstruation before Menarche		
	Yes	63 (49.6)
	No	64 (50.4)
Knowledge of cause of bleeding		
	Natural	102 (80.3)
	Punishment from God	11 (8.7)
	Disease	3 (2.4)
	Don't Know	11 (8.7)
Material used as Absorbent during bleeding		
	Sanitary Pads only	53 (41.7)
	Sanitary Pads and Cloth mix	61 (48.0)
	New Cloth only	4 (3.2)
	Old Cloth only	9 (7.1)
Disposal of Cloth/Pad		
	Open	24 (18.9)
	Wrapped in paper	94 (74.0)
	Washed and Reused	9 (7.1)
Frequency of washing genitalia before putting new absorbent		
	Everytime	44 (34.6)
	Sometimes	53 (41.7)
	Never	30 (23.6)
Agents used for cleaning of genitalia:		
	NA	30 (23.6)
	Water	67 (52.8)
	Soap and water	30 (23.6)

Table 3:- Knowledge level and practices regarding menstruation

Advantages		
	Comfortable	72 (56.7)
	Better than cloth in absorption	83 (65.4)
	No itching	38 (29.9)
	Less chance of leakage	67 (52.8)
	Don't Know	17 (13.4)
Disadvantages		
	Expensive	92 (72.4)
	Not easily available	26 (20.5)
	Embarrassing to buy	78 (61.4)
	Don't know	13 (10.2)

Table 4:- Perception and acceptability of sanitary pads

Symptoms		
	Any Symptoms	94 (74.0%)
	No Symptoms	33 (26.0%)
	Discharge from genitalia	48 (37.8)
	Itching in genital area	32 (25.2)
	Pustules in genital area	21 (16.5)
	Pain in lower abdomen	84 (66.1)
	Difficulty in passing urine	28 (22.1)
Treatment received		
	Not applicable	33 (26.0%)
	None	33 (26.0%)
	Medicine from Local drug shop	11 (8.7%)
	Home remedy	39 (30.7%)
	Private Doctor	6 (4.7%)
	Government hospital	5 (3.9%)

Table 5:- Reproductive Morbidity and treatment received if any:

		Frequency of washing genitalia before putting new absorbent			Total
		Never	Sometimes	Every time	
No of symptoms in assessing Reproductive morbidity	0	4	17	12	33
	1	5	12	15	32
	2	7	16	9	32
	3	2	5	4	11
	4	8	5	2	15
	5	2	0	2	4
	Total	28	55	44	127

Table 6:- Participant wise comparative of symptoms in assessing Reproductive morbidity and frequency of washing genitalia before putting new absorbent

Bar Chart

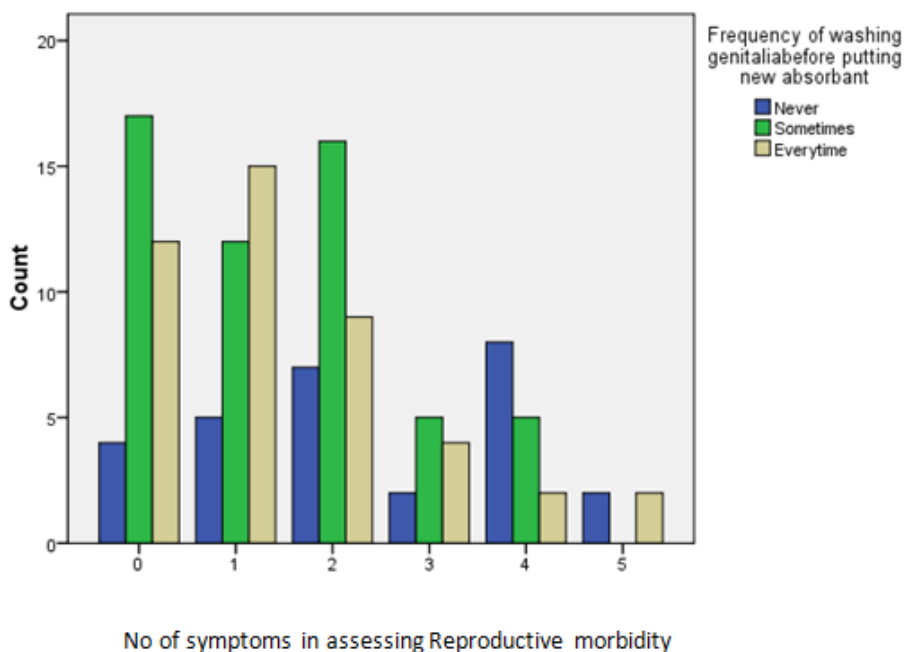


Fig 1:- No of symptoms in assessing Reproductive morbidity \* Agent used for cleaning genitalia

## V. CONCLUSION

The results of this survey demonstrated that the hygiene levels of young girls during menstruation were less than adequate resulting in reproductive tract morbidity. The families and the young girls need to be educated about importance of personal hygiene and also about proper waste management, cleanliness and safe practices.

An educated society will play an important role in doing away with the superstitions related to menstruation leading to a healthy girl and a healthy mother of future, resulting in a healthier society.

## ACKNOWLEDGMENT

The authors are extremely grateful to all the respondents for their support.

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