

Original Article

## Practices of menstrual hygiene among adolescent girls in a District of Uttarakhand

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### Abstract:

**Context:** Adolescence in girls signifies the transition from girlhood to womanhood. Good menstrual hygiene is crucial for the health, education, and dignity of girls and women. This is an important sanitation issue which has long been in the closet and still there is a long standing need to openly discuss it.

### Aims:

1. To elicit the knowledge and source of information regarding menstruation among the adolescent girl students.
2. To find out the practices of menstrual hygiene among them.

**Settings and Design:** Cross-Sectional study conducted in two randomly selected Inter colleges (one rural and one urban) of district Dehradun of Uttarakhand state.

**Methods and Material:** 453 girls studying in 9th to 12th grades were interviewed by using a prestructured and pretested questionnaire.

**Statistical analysis used:** percentages and Chi-square test

**Results:** 64.5 % girls (71.1% Rural and 57% Urban) were aware about menstruation prior to the attainment of menarche. Awareness among rural girls was significantly more as compared to urban girls. Friends were the first informant in about 31.8 % girls. But the correct reason and source of bleeding during menstruation was not known to most of the respondents. Overall 38.4 % adolescent girls (48.1% Rural and 27.6% Urban) were using sanitary napkins as menstrual absorbent, while 30 % were using a new cloth/rag every time.

**Conclusions:** There is a need to educate the girls about menstruation, its importance and hygiene maintenance; so as to enable them to lead a healthy reproductive life in future.

**Key-words:** Adolescent girls, awareness, hygiene, menstruation, practices,

### Introduction:

Menstrual hygiene is an issue that every girl and woman has to deal with in her life, but there is lack of awareness on the process of menstruation, the physical and psychological changes associated with puberty and proper requirements for managing menstruation. The taboos surrounding this issue in the Indian society prevent girls and women from articulating their menstrual needs. The problems of poor menstrual hygiene management have been ignored or misunderstood by the society as well the policy makers till now.

Issues associated with menstruation are never discussed openly and this burdens young girls by keeping them ignorant of this biological function. Even after the attainment of menarche, very little information is given to young girls about the physiological processes involved and the hygienic practices to be followed. Also, the interplay of

menstrual hygiene practices, socio-economic status and Reproductive Tract Infection (RTI) are noticeable.

Most of the time adolescent girls are unprepared – in terms of knowledge, skills and attitudes - for managing the menstrual cycle. In a study among adolescents, only about 60% girls had partial awareness about adolescent physical changes and menarche. They may also have unsaid anxieties and apprehensions and are subjected to social taboos and restraint during their periods<sup>1</sup>.

People in India are still living in a conservative society and menstruation is still regarded as something unclean or dirty specially in rural settings. Although menstruation is a natural process, it is linked with several misconceptions and practices, which sometimes result into adverse health outcomes<sup>2</sup>.

Uttarakhand state in India was carved out from its parent state Uttar Pradesh in the year 2000. It is a small state with variable geographical terrains ranging from plain area to

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difficult hilly regions. Till date very few studies from this state have been published on the level of Knowledge, Attitude and Practices of adolescent girls regarding menstruation and related hygiene. This study attempts to throw some light on the magnitude of the problem in the area, so that interventions can be planned in near future.

### Objectives:

This study was planned with the following objectives:

1. To elicit the knowledge and source of information regarding menstruation among the adolescent girl students.
2. To find out the practices of menstrual hygiene among them.

### Subjects and Methods:

The present study was an observational cross-sectional study which was conducted in two randomly selected (one rural and one urban) inter-colleges of district Dehradun. For this, a list of Girls' Inter colleges in the district Dehradun was prepared separately for rural and urban areas, and then one inter college was selected randomly from both the lists. After that, permission to carry out the study was sought from the school authorities. The sample size was calculated as 400, based on the probability that the knowledge of the girls may be 50% as no previous data was available from the state or local level. To achieve this sample size, all the girls studying in 9<sup>th</sup> to 12<sup>th</sup> standards in both the schools were oriented about the need of the study and anonymous nature of data collection as well as the process of filling the schedules. Personal one to one interview sessions were conducted after taking consent to collect data regarding awareness about menstruation, sources of information, hygiene practiced during menstruation etc. by using a pre-designed, pretested and structured questionnaire. After the process of data collection, educational session related to the subject was conducted for all the girls. The data collected was analysed through SPSS package.

### Results:

A total of 485 girl students studying in classes 9th to 12th were approached in this study, out of which 32 (6.6 %) girls had not attained menarche, so they were excluded from the study. Finally responses of 453 participants were evaluated. Most of the girls were in the age group 15-16 years (53.6 %) followed by 17-18 years (27.8 %). Most of the girls were Hindu (92.1 %), while 7.1 % were Muslims. About 85% students were from nuclear families and this pattern was same for rural and urban area.

It was seen that 292 (64.5 %) girls were aware about menstruation prior to the attainment of menarche (Table -1). Awareness among rural girls was higher (71.1 %) as compared to urban girls (57.0%) and this difference was found to be statistically significant ( $p < 0.001$ ).

There were varied sources from which the girls derived information about the menstruation process. Out of 292 respondents, who were having previous information about menarche, friends were the first informant in about 93 (31.8 %) girls and mothers in 91 (31.2%) girls. Other sources of information were sister, teacher and relatives etc (Table -2). In the present study, the mean age of menarche of the respondents was 12.9 years.

Only 29.1% girls were having knowledge about the reproductive system as the source of bleeding during menstruation; while 21.9 % of the students thought the urinary system as its source. It was seen that 70.9 % of the girls were either not aware or had wrong information. The girls with correct information were significantly higher in urban (34.1%) than rural area (24.7%).

During menstruation, 38.4 % and 34.9 % girls were using sanitary napkins and cloth absorbents respectively (Table-3). Among sanitary napkin users, the use was significantly higher among the rural girls (66.1 %) as compared to the urban girls (33.9%). However, the use of both sanitary napkins as well as cloth pads was more among urban girls. It is clear from Table- 4 that among the 279 girls who were using cloth pads during menstruation, approximately half of them (51.3%) were reusing it after washing; although this practice was significantly more among rural girls ( $p < 0.001$ ). Out of 143 girls who were reusing the old cloth after washing, majority (88.1 %) were drying it in the sunshine. Only 11.9 % girls accepted drying it in the shade or some hidden place.

Approximately two out of every three girls were taking daily bath during their menstrual periods. The practice of daily bathing was significantly more in urban girls ( $p < 0.05$ ). Majority of the girls were washing their genitalia with water daily.

**Table – 1: Previous Awareness about Menstruation before attaining Menarche:**

Knowledge	Rural	Urban	Total
Yes	170 (71.1)	122 (57.0)	292 (64.5)
No	69 (28.9)	92 (43.0)	161 (35.5)
Total	239 (100.0)	214 (100.0)	453 (100.0)

(Figures in parentheses denote percentages)

( $\chi^2 = 9.826$ , df=1,  $p < 0.001$ )

**Table 2: Source of Previous Knowledge about Menarche:**

Primary Source of Information	Rural (N= 170)	Urban (N= 122)	Total (N = 292)
Mother	51 (30.0)	40 (32.8)	91 (31.2)
Sister	46 (27.1)	36 (29.5)	82 (28.1)
Friend	58 (34.1)	35 (28.7)	93 (31.8)
Relative	2 (1.2)	4 (3.3)	6 (2.1)
Neighbour	4 (2.4)	1 (0.8)	5 (1.7)
Teacher	4 (2.4)	6 (4.9)	10 (3.4)
Others	5 (2.9)	0 (0.0)	5 (1.7)

(Figures in parentheses denote percentages)

**Table 3: Types of Menstrual Absorbents Used during Menstruation-**

Material Used	Rural (239)	Urban (214)	Total (453)
Sanitary Napkin	115 (48.1)	59 (27.6)	174 (38.4)
Cloth	104 (43.5)	54 (25.2)	158 (34.9)
Both	20 (8.4)	101 (47.2)	121 (26.7)

( $\chi^2 = 86.95$ , df=2,  $p < 0.001$ )

**Table - 4: Reuse of Menstrual Absorbent Cloth after Washing:**

Reuse	Rural (124)	Urban (155)	Total (279)
Yes	87 (70.2)	56 (36.1)	143 (51.3)
No	37 (29.8)	99 (63.9)	136 (48.7)

( $\chi^2 = 31.94$ , df=1,  $p < 0.001$ )

### Discussion:

Menstrual hygiene is a taboo; a topic that most women in India are uncomfortable discussing in public. This is compounded by gender inequality, which excludes women and girls from decision-making processes. This study was planned to know the knowledge and practices of adolescent girls in Dehradun district of Uttarakhand; so that results can further be used for some intervention according to needs. In the present study, overall 64.5 % girls (71% Rural and 57% Urban) were aware about the menstrual process prior to the attainment of menarche. Awareness among rural girls was significantly higher as compared to urban girls. This is in accordance with Dasgupta and Sarkar<sup>2</sup>, who found that 67.5 % of the adolescent girls in their study population were aware about menstruation prior to menarche. In Nepal, 92 % of adolescent girls surveyed had heard about menstruation, but the majority of respondents reported that they were not prepared in any way for their first menstrual period<sup>3</sup>. In a study conducted among college-going girls in Thiruvananthapuram<sup>4</sup>, around one-third of the girls had no knowledge of menstruation. Students of post- graduate courses had better knowledge as compared to students studying in professional courses. One-fourth of the girls did not get any information at all regarding menstruation. Another study conducted by Deo et al<sup>5</sup> reported that 42.5% urban and 55.4% rural girls were aware about menstruation prior to attainment of menarche.

Friends were the first informant in about 31.8 % girls in present study. Other sources of information were mother, sister and other relatives etc. In Nepal<sup>3</sup>, mothers (51%) were the main informants followed by sisters and friends. In a study conducted among schoolgirls in Mansoura, Egypt by El-Gilany et al<sup>6</sup> mass media were the main source of information about menstrual hygiene, followed by mothers. According to Deo<sup>5</sup>, mother was the main source of information about menstruation (27.5%) in urban girls, whereas it was teacher in the rural counterparts (27.0%). Other sources of information were

friends, relatives and books.

In the present study, the mean age of menarche of the respondents was 12.9 years, which is in accordance to the findings by Dasgupta and Sarkar<sup>2</sup>. Various researchers<sup>7,8,9</sup> have revealed that the mean menarcheal age was 13-14 years in various communities (Urban, rural and tribal) across various parts of India. In Nepal also, the mean age of menarche was found to be 13.3 years<sup>3</sup>.

Only 11.5% of the respondents in our study could express the correct reasons related to the menstrual process. Only 29.1% girls were having adequate knowledge about the reproductive system as the source of bleeding during menstruation, whereas 21.9% of the students thought the urinary system as its source. Similarly in South India<sup>10</sup>, One third of the surveyed girls identified uterus as source of menstrual bleeding while as many as 28 % girls identified the urinary bladder as its source. In West Bengal<sup>2</sup>, 97.5 % girls did not know the source of menstrual bleeding.

It was seen in present study that overall 38.4 % adolescent girls (48.1% Rural and 27.6% Urban) were using sanitary napkins as menstrual absorbent, while 30 % were using a new cloth/rag every time. 27.8 % of the girls dried the washed cloth/rag (for reuse) in direct sun. So, it may be concluded that overall 96.2% of the girls were somehow managing their menstrual hygiene. The use of sanitary napkins was significantly higher amongst rural girls as compared to urban girls. ( It may be a reason that in the rural school, one lady teacher was acting as a depot of menstrual pads on voluntary basis. Girls who wanted to use sanitary napkins could purchase it from her). Apparently poverty, high cost of disposable sanitary pads and to some extent ignorance, dissuaded the study population from using the menstrual absorbents available in the market.

In Nepal, use of sanitary pads was higher among girls in urban schools (50 %) in contrast to rural schools (19 %)<sup>3</sup>. Present study showed lack of awareness about sanitary napkins, high cost, not being easily available and lack of dis-

positional facilities. In contrast, three-fourths of the girls in Rajasthan<sup>11</sup> were using old cloth during periods and one-fifth (19.5%) reported using readymade sanitary pads. The practice of using cloth during menstruation was higher among rural (89.0%) adolescent girls and large proportion of the girls re-used the old cloth after washing during subsequent periods. In West Bengal<sup>2</sup>, majority of the girls preferred cloth pieces rather than sanitary pads as menstrual absorbent. Only 11.25% girls used sanitary pads during menstruation, availability and affordability being stated as the key obstacles to more widespread use.

Overall the personal hygiene during menstruation was variable among surveyed adolescent girls. Only 64 % of the girls were bathing daily while 94 % were washing their genitalia with water during menstrual period. In a similar study conducted among schoolgirls in Egypt<sup>6</sup>, the different aspects of personal hygiene were generally found to be poor; such as not changing pads regularly or at night, and not bathing during menstruation with lack of privacy being an important problem.

### Conclusion and Recommendations:

The current study has highlighted the needs of the adolescent girls to have accurate and adequate information about menstruation and its appropriate management. Mothers and peers need to be equipped with the correct information as well as communication skills, so that adolescent girl is ready for this important physiological event in her life. Studies have shown that prior correct information helps the girls to manage their menarche as well as menstrual hygiene well. Reproductive Tract Infections that devastate women's life are closely interrelated with poor menstrual hygiene. Therefore, proper menstrual hygiene and correct perceptions and beliefs can protect the womenfolk from this suffering. This can be achieved through special educational programmes in school curriculum, along with the involvement of parents, particularly mothers, so as to wipe away the age-old misconceptions.

If adolescent girls are made aware of menstrual hygiene and reproductive health right from the early adolescent period, the menarche will not be a shock for them and they will also be better equipped to cope up with the situation.

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