Knowledge and Practice of Menstrual Hygiene among School Going Adolescent Girls

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Abstract

Background: Menstruation, generally considered as unclean in the Indian society and have reinforced a negative attitude towards this phenomenon. Good hygienic practices such as the use of sanitary pads and adequate washing of the genital area are essential during menstruation. Aim and Objectives: To assess the knowledge and the practice of menstrual hygiene among school going adolescent girls. Materials and Methods: A descriptive cross sectional study was conducted in 2012 among 435 school going girls of 8th - 12th standards. A pre-designed, pretested and structured questionnaire was used in the study. Descriptive statistics, Pearson Chi-square test and Kruskal Wallis test were applied in data analysis. Results: The mean age of menarche in the study group was 12.9 ± 1.2 years. Only 28.2% girls were aware of menstruation before menarche. More than three fourth of the girls were not aware of the cause and the source of bleeding. Only 49.5% girls knew that practicing good hygiene during menstruation would prevent reproductive tract infections. Sanitary pads were used by 90.5% of the study population. Nine percent girls used old clothes as the absorbents. Satisfactory cleaning of the external genitalia with soap was practised by only 14.5% girls. Conclusion: Awareness regarding the need for information about healthy menstrual practices is very important. It is essential to design a mechanism to address and gain the access of hygienic menstrual practices for adolescent girls.

Key words: Menstruation, Awareness, Healthy practices

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Introduction

Adolescence is a period of transition from childhood to adulthood. They are the formative years when maximum amount of physical, psychological and behavioral changes take place. The World Health Organization (WHO) defines adolescents as individuals between 10 & 19 years of age¹. Adolescent girls constitute about one fifth of the female population in the world. Adolescence in girls has been recognized as a special period in their life cycle that requires specific and special attention. This period is marked with onset of menarche². The girl experiences several problems during adolescence, and menarche is one among them. Menstruation is generally considered as unclean in the Indian society³,⁴. The silence of menstruation does not allow an open discussion on the subject even today, resulting in adolescent girls remaining ignorant of the scientific facts and hygienic health practices necessary for positive reproductive health⁴. Menstrual hygiene deals with the special health care needs and requirements of women during monthly menstruation or menstrual cycle. Menstruation Hygiene Management (MHM) focuses on practical strategies for coping with monthly periods. MHM refers to ways women themselves keep clean and healthy during menstruation and how they acquire, use and dispose of blood-absorbing materials. Poor menstrual hygiene is a risk factor for reproductive tract infection and cervical
Learning about hygiene during menstruation is a vital aspect of health education for adolescent girls as patterns that are developed in adolescence are likely to persist into adult life. It was against this background that this study was planned to evaluate adolescent school girls’ knowledge of menstruation and menstrual hygiene, as well as their practices of menstrual hygiene.

Materials and Methods

A cross-sectional study was conducted on a study population of 435 school going adolescent girls studying in the grades of 8th to 12th standards. The sample was derived from a Government Girls Higher Secondary School which is located in the service area of Urban Health Training Centre, Rajah Muthiah Medical College & Hospital, Chidambaram. Using a prevalence rate of 40% deficiency of knowledge about menstruation from previous studies amongst Indian school girls. Sample size was determined using a standard formula: \( Z^2 \frac{pq}{d^2} \) with absolute precision of 5% (d). Applying the above formula, the minimum sample size required was 369. However, a sample of 435 students was selected to accommodate the refusals or non-response. Only those girls who have attained menarche were eligible and participated in the study.

The study was carried out between June and September 2012. After obtaining permission from the school authority, the class teachers and physical education teachers were explained about the objectives of the study. A good rapport was built up with the girls and their verbal consent was obtained. They were also informed about the confidentiality of the information collected so as to get more reliable answers from them.

A pre-designed, pretested and structured questionnaire was designed by the investigator and the questionnaire was translated to the local language Tamil, which included the demographic information like parent’s education, occupation, family monthly income, latrine facility and water facility. Personal information like chronological age, age at menarche, menstrual pattern, awareness before menarche and source of information about menstruation were also documented. Questions on awareness and physiology of menstruation were asked to assess the knowledge about menstruation. To assess the menstrual practices, the questions were about the use of sanitary pads, number of pads per day and genital hygiene during menstruation. A pilot study was conducted on 40 students for content validation. Minor changes were made in the questionnaire after pretesting. The results of pretesting were not included in the main study Adequate time was given to the students to fill up the questionnaire.

Data was entered in Microsoft excel 2007 and Statistical analysis was done using descriptive statistics, Pearson Chi-square test and Kruskal Wallis test by using SPSS 18 package.

Results

The mean age of the girls was 14.9 ± 1.1 years and the mean age at menarche was 12.9 ± 1.2 years. Out of 435 individuals surveyed, only 123 girls (28.2%) were aware about menstruation before menarche. Nearly 45.7% girls were frightened and 30.5% were worried on seeing the first menstruation (Table 1). The main source of information about menstruation and menstrual hygiene were their mothers and elder sisters among 38.2% girls. About 61.3% girls reported that menstruation refers to bleeding from stomach. Only 30.5% girls answered that it is cyclical uterine bleeding. Nearly 62.7% girls did not know the reason for menstruation but 68.1% of girls responded correctly the duration of the menstrual cycle. (Table 2).
Table 1: Various reactions during menarche

<table>
<thead>
<tr>
<th>Reaction to first menstruation</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frightened</td>
<td>199 (45.7)</td>
</tr>
<tr>
<td>Worried</td>
<td>132 (30.5)</td>
</tr>
<tr>
<td>Casual</td>
<td>73 (16.7)</td>
</tr>
<tr>
<td>Happy</td>
<td>11 (2.5)</td>
</tr>
<tr>
<td>Felt ashamed</td>
<td>20 (4.6)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>435 (100)</td>
</tr>
</tbody>
</table>

Table 2: Knowledge about menstruation among Adolescent girls (n=435)

<table>
<thead>
<tr>
<th>What is menstruation?</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White discharge</td>
<td>23 (5.5)</td>
</tr>
<tr>
<td>Cyclical uterine bleeding</td>
<td>133 (30.5)</td>
</tr>
<tr>
<td>Urethral bleeding</td>
<td>12 (2.7)</td>
</tr>
<tr>
<td>Bleeding from stomach</td>
<td>267 (61.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for menstruation</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hormonal change</td>
<td>148 (34.1)</td>
</tr>
<tr>
<td>Social change</td>
<td>14 (3.2)</td>
</tr>
<tr>
<td>Don’t know</td>
<td>273 (62.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Normal Menstrual cycle duration</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20 days</td>
<td>72 (16.5)</td>
</tr>
<tr>
<td>28-30 days</td>
<td>296 (68.1)</td>
</tr>
<tr>
<td>&gt;45 days</td>
<td>67 (15.4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nutrient lost during periods</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamins</td>
<td>13 (2.8)</td>
</tr>
<tr>
<td>Iron</td>
<td>50 (11.8)</td>
</tr>
<tr>
<td>Fat</td>
<td>25 (5.7)</td>
</tr>
<tr>
<td>Don’t know</td>
<td>347 (79.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect of Hygienic practices</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive misfortune from the house</td>
<td>220 (50.5)</td>
</tr>
<tr>
<td>Prevent Reproductive tract infections</td>
<td>215 (49.5)</td>
</tr>
</tbody>
</table>

Most of the girls (90.5%) were using disposable sanitary pads as absorbents. Only 37.7% were following good practices for maintaining menstrual hygiene. About 46.2% girls were using only three pads in a day (Table 3). Regarding storage place of the unused absorbents, 54.4% girls stored inside bathroom itself, while 40% girls stored in dress cabinet.

Table 3: Practice of menstrual hygiene among Adolescent girls using Sanitary pads (n=394)

<table>
<thead>
<tr>
<th>No of pads used in a day</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>7 (1.6)</td>
</tr>
<tr>
<td>Two</td>
<td>138 (31.7)</td>
</tr>
<tr>
<td>Three</td>
<td>201 (46.2)</td>
</tr>
<tr>
<td>Four and more</td>
<td>48 (11.5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Habit of changing absorbent in night</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before going to sleep</td>
<td>382 (97.5)</td>
</tr>
<tr>
<td>In midnight</td>
<td>12 (2.5)</td>
</tr>
</tbody>
</table>

Table 4: Storage place and mode of disposal of the absorbents (cloth/pad). (n=435)

<table>
<thead>
<tr>
<th>Storage place</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathroom</td>
<td>237 (54.4)</td>
</tr>
<tr>
<td>Dress cabinet</td>
<td>174 (40.0)</td>
</tr>
<tr>
<td>Open shelves</td>
<td>24 (5.6)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode of disposal of absorbents</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>With domestic wastes</td>
<td>140 (32.0)</td>
</tr>
<tr>
<td>Burn</td>
<td>85 (19.5)</td>
</tr>
<tr>
<td>Burry</td>
<td>148 (34.0)</td>
</tr>
<tr>
<td>Throw in open places</td>
<td>62 (14.5)</td>
</tr>
</tbody>
</table>

Thirty four percent girls disposed the used absorbents by burying while 32.0% girls disposed along with domestic wastes (Table 4). Only 14.5% girls were using soap or antiseptics to maintain the genital hygiene. There is significant association between mother’s educational status and knowledge of the adolescent girls about menstruation. Practice of menstrual hygiene becomes relatively poor as the age advances. About 98.6% of the girls were not allowed to go to temple during menstruation. Ninety seven percent girls were not allowed to enter the pooja room at home. Eighty percent girls were not allowed to touch grains and other members of the family before taking bath. Ninety three percent girls were not allowed to take rest in daytime during menstruation. Eighty one percent girls...
experienced leg cramps and 75.6% girls had lower abdominal pain during menstruation.

Discussion

Though menstruation is a natural and normal physiological process for all healthy women, it has been surrounded by secrecy and myths in many societies. Very few mothers are ready to share the information which is of paramount significance to their daughters. Only 28.2% girls were aware of menstruation before menarche. Mothers were the commonest source (38.2%) of information on menstruation as reported by the girls which is in concordance with findings of similar studies done in other parts of India. This is expected as mothers are usually the closest confidant teacher of most of the growing adolescent girls in our environment.

In the present study, 45.7% respondents expressed fear and 30.5% girls expressed worry on seeing first menstruation. Similarly studies conducted in India and Nigeria, the adolescent girls have expressed fear at the first experience of Menstruation. Social prohibitions and negative attitude of family members in discussing the related issues openly has blocked the access of adolescent girls to right kind of information which reflected on their reaction to first menstruation. The reason for fear and anxiety may be attributed to inadequate or wrong knowledge about menstruation among girls and low levels of education among the mothers.

In the present study only 30.5% girls knew that menstruation is due to cyclical uterine bleeding and 34.0% girls knew that hormonal changes are responsible for it. Similar low level of knowledge was recorded by the studies carried out in different areas among the adolescent girls. It was distressing to observe that in the present study most of the girls (65.9%) did not know the cause of the menstrual bleeding. The type of absorbent used during menstruation is of paramount importance since reusable materials could be a cause of infection if improperly cleaned and poorly stored. In the present study 90.5% of the respondents used disposable sanitary pads and only 9.5% girls used old piece of cloth as absorbents. This finding is in contrast with the study conducted in Maharashtra, where only 15.6% girls used sanitary napkins. The increased use of sanitary pads might be due to publicity through mass media and hence most of the girls have started using disposable sanitary pads as absorbent right from their menarche.

Only 14.5% girls in the present study practiced good genital hygiene during menstruation. Other similar studies by Dasgupta (28%); Omidvar (22%) had recorded that less than one third of the study participants practicing good genital hygiene. This shows that personal hygiene practices were unsatisfactory in the study population. Poor menstrual hygiene is a risk factor for reproductive tract infection and cervical dysplasia. The practices like burning and burying of the used could be attributed to the cultural taboo that blood stained pads will attract witches and other persons who would use the blood for rituals.

Restrictions of various forms have been placed on the menstruating girl in different societies. In the present study, majority 98.6% of the girls reported that they were not allowed to pray or enter the pooja room during menstruation. This practice is in concordance with findings of the similar studies conducted in India. Different restrictions were practiced by most of the girls due to the different rituals in their communities; the same were practiced by their mothers or other elderly female in the family due to their ignorance and false perceptions about menstruation. At the end of the session, health education regarding physiology of menstruation and the menstrual hygiene was given to the adolescent girls.

Limitations of the study were that the accuracy of respondent’s answers on menstrual practice cannot be independently verified as it was assessed by using self administered...
questionnaire. Due to wide social and cultural diversity it must be admitted that generalization of the outcome of this study may be limited.

**Conclusion:** The present study has highlighted the need of adolescent girls to have accurate and adequate information about menstruation. Personal hygiene practices were also found to be unsatisfactory. It is important to educate adolescents about the issues related to menstruation, so that they could safeguard themselves against various infections and diseases.

**References**