Effect of Health Education on Awareness and Practices Related to Menstruation among Rural Adolescent School Girls in Bengaluru, Karnataka

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ABSTRACT

Background: Due to restrictions imposed during menstruation along with the negative attitude of parents in discussing menstruation-related issues with girls has led to poor awareness regarding menstruation and menstrual hygiene among adolescent girls. Studies have shown that less than half of adolescent girls were aware of menstruation before attaining menarche and had satisfactory menstrual hygiene practices.

Aims and Objectives: The study was conducted to assess the effect of health education on knowledge, attitude, and practices regarding menstruation and menstrual hygiene among adolescent girls in rural areas.

Methodology: An interventional study was conducted among the adolescent girls studying in four high schools (8th, 9th, and 10th standard) in the rural field practice area. A pre-tested, multiple choice type of questionnaire was administered to students to assess their knowledge, attitude, and practices (KAP) regarding menstruation and menstrual hygiene. This was followed by health education sessions, and the same questionnaire was used after 3 months to assess improvement in KAP. Descriptive statistics was used to tabulate general information regarding menstruation, and McNemar’s test was used to assess the effect of health education on KAP.

Results: It was observed that only 91 (29.93%) subjects were aware of menstruation before menarche, and mother was prime source of information in most of the study subjects. Statistically significant improvement (P < 0.05) in KAP regarding menstruation and hygiene practices was observed following health education.

Conclusion: The current study highlights the significance of health education on improving awareness and practices related to menstruation and menstrual hygiene.

Key words: Adolescents, Health education, Hygiene, Knowledge, Menstruation

INTRODUCTION

Adolescence phase is gaining recognition as a distinct phase of life with its own special needs. This phase is characterized by accelerated physical growth, psychological, and behavioral changes thus brining transformation from childhood to adulthood. Adolescents have varied reproductive and sexual needs including information needs and services.¹

The onset of menstruation and appearance of secondary sexual characters are important changes that occur in adolescent girls. During this phase, adolescent girls face undue anxiety and tension due to lack of awareness regarding these changes.¹

During adolescence phase, girls require emotional support from their mothers and need to be educated regarding sexual development and hygienic practices. On contrary, in India, menstruation is culturally linked to several taboos, myths, and restrictions.²-⁴ Due to restrictions imposed during menstruation along with the negative attitude of parents in discussing menstruation-related issues with girls has led to poor awareness regarding menstruation and menstrual hygiene among adolescent girls.⁵ Hence, girls grow up with limited knowledge of menstruation.

Studies have shown that less than half of adolescent girls were aware of menstruation before attaining menarche.⁵,⁶

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Several researchers had observed that satisfactory hygiene practices were followed by less than half of adolescent girls.\textsuperscript{2,5,6} Awareness regarding proper menstrual hygiene practices is essential to prevent Reproductive Tract Infections (RTI). Poor hygiene and menstruation-related practices increase vulnerability to RTI.\textsuperscript{4} Studies have shown that incidence of RTIs is significantly associated with poor menstrual hygiene.\textsuperscript{6,8}

It is essential to develop and operate a sustained public health awareness program in the community to create better awareness about menstruation among adolescent girls and women.\textsuperscript{9} Such health education is essential to make adolescent girls and women self-sufficient to manage menstrual issues confidently. With this background, the present study was conducted to assess the effect of health education on knowledge, attitude, and practices regarding menstruation and menstrual hygiene among adolescent girls in rural areas.

**METHODOLOGY**

An interventional study was conducted among the adolescent girls studying in high schools (8\textsuperscript{th}, 9\textsuperscript{th}, and 10\textsuperscript{th} standard) in the rural field practice area of Kempegowda Institute of Medical Sciences, Bangalore, Karnataka. There are four Government high schools in this area, and all four schools were taken for study. Ethical clearance was obtained from the Institutional Ethical Committee of Kempegowda Institute of Medical Sciences, Bangalore, before conducting the study.

Permission was obtained from principals and respective class teachers. The study was conducted from June 2012 to January 2013. Privacy and confidentiality of the study participants were maintained throughout the study period.

**Inclusion Criteria**

1. Girls who had attained menarche
2. Girls who had experienced minimum of six menstrual cycles
3. Girls who were willing to participate and whose parents gave written consent for their daughters to participate in the study.

**Exclusion Criteria**

1. Girls who were absent during study period or absent during health education or/and for post-test.

Totally, 464 students were studying in high schools during the study period, and 304 students met the inclusion-exclusion criteria. All 304 students were included in this study. A pre-tested, multiple choice type of questionnaire in Kannada was administered to students to assess their knowledge, attitude, and practices (KAP) regarding menstruation and menstrual hygiene. The questionnaire had multiple choice questions for knowledge and practice components, and attitude was assessed using 5 point Likert Scale.

This was followed by health education sessions for batches of 20 students in every session. Audio-visual aids such as power point projection (with portable LCD) and flip charts were used for health education. The contents of health education included physiology of menstruation, common health problems related to menstruation such as dysmenorrhea and premenstrual syndrome, menstrual hygiene practices, and myths related to menstruation. Health education sessions were followed by clarification of their doubts. Lady teachers in schools were also encouraged to participate in the health education sessions. A flip chart was also provided to lady teachers in each school. The same questionnaire was administered after 3 months to assess the effect of health education.

Descriptive statistics was used tabulate general information regarding menstruation, and McNemar’s test was used to assess the effect of health education on KAP.

**RESULTS**

The age of study subjects ranged from 12 to 19 years with the mean age of 14.27 years (standard deviation [SD] ± 0.98). The mean age at menarche was 12.35 years (SD ± 1.174). In the present study, it was observed that only 91 (29.93%) subjects were aware of menstruation before menarche (Table 1). Mother was the prime source of information for the majority of study subjects, i.e., 47.03% (Table 1). It was observed that majority of the study subjects, i.e. 124 (40.80%) subjects used cloth as absorbent for menstrual discharge. Moreover, 100 (32.9%) study participants used either sanitary pads or cloth depending on its availability at home. Only 80 (26.3%) subjects used sanitary pads (Table 2).

Improvement in awareness regarding menstruation following health education was found to be statistically significant (Table 3). In the pre-test, only 104 (34.2%) subjects were aware that menstruation is a physiological process. This response increased to 245 (60.5%) in post-test. Following health education, 153 (50.3%) subjects correctly identified uterus as the source of menstrual blood. Whereas in the pre-test, only 114 (37.5%) had given the correct response. It was also observed that health education positively influenced the attitude of the study subjects. The number of subjects who strongly disagreed that menstruation is the curse of God increased from 33.22\% to 47.7\% (Table 3).

Number of subjects who practiced cleaning genitalia with soap and water rose from 49\% to 80.6\% in post-test. In the

### Table 1: Distribution of study subjects according to awareness regarding menstruation before menarche and source of information

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness before menarche (N=304)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>213 (70.06)</td>
</tr>
<tr>
<td>Yes</td>
<td>91 (29.93)</td>
</tr>
<tr>
<td>Source of information (N=304)</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>143 (47.03)</td>
</tr>
<tr>
<td>Sister</td>
<td>78 (25.65)</td>
</tr>
<tr>
<td>Friends</td>
<td>47 (15.46)</td>
</tr>
<tr>
<td>Teachers</td>
<td>26 (8.55)</td>
</tr>
<tr>
<td>Magazines/books</td>
<td>10 (3.28)</td>
</tr>
</tbody>
</table>

### Table 2: Distribution of study subjects according to type of absorbent used during menstruation (N=304)

<table>
<thead>
<tr>
<th>Type of absorbent</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton cloth</td>
<td>124 (40.08)</td>
</tr>
<tr>
<td>Sanitary pads</td>
<td>80 (26.30)</td>
</tr>
<tr>
<td>Either cloth or sanitary pads*</td>
<td>100 (32.90)</td>
</tr>
<tr>
<td>Total</td>
<td>304 (100.00)</td>
</tr>
</tbody>
</table>

*Subjects used sanitary pads or cloth depending on their availability at home.
pre-test, only 116 (38.15%) subjects changed sanitary pads at least thrice daily during heavy flow days. This practice increased to 232 (76.3%) subjects in post-test. In the pre-test, only 23.35% subjects dried the cloth under direct sunlight. In post-test, this number increased to 89.47% (Table 3).

**DISCUSSION**

In the present study, the mean age of menarche was observed to be 12.35 years which is similar to results obtained in a study conducted by Amita Singh in Rewa (12.5 years ± 1.52). In the present study, only 26.3% of study subjects were using sanitary pads. Thakre et al. also observed low prevalence (30.8%) of usage of sanitary pads in their study conducted among adolescent girls in a rural area of Nagpur District. On the contrary, in a study done by Jogdand among adolescent girls in the urban area of Guntur (Andhra Pradesh), it was observed that sanitary pads were used by 53.3% of subjects. This difference may be because of better awareness and availability of sanitary pads in urban areas as compared to rural areas. In the present study, only 30% were aware of menstruation before menarche. Similarly, in the study conducted by Jogdand,
it was observed that only 36.2% were aware. Mother being close to children, she is the prime source of information regarding menstruation among adolescent girls. Mother was the source of information 47.03% of study subjects in the present study. Similarly, mother was the prime source of information in studies conducted by Thakre et al. (71.3%) and Nemade (43.3%) among adolescent girls.3,12

It was observed that knowledge about cause of menstruation rose from 34.2% in pre-test to 80.6% in post-test. The awareness about the source of menstrual discharge increased from 37.5% to 50.3% following health education. Similar improvement in awareness was also observed in a study conducted by Arora among rural adolescent girls of Haryana.6

In the present study, improvement in the menstrual hygiene practices such as washing external genitalia, washing cloth with water and soap, and then drying it under direct sunlight improved following health education. Similar improvement in menstrual hygiene practices following health education was also observed in studies conducted by Arora and Nemade.5,12

Thus, health education significantly improved knowledge, attitude, and practices regarding menstruation and its related hygiene practices. A study conducted by El-Lassy among adolescent girls of Damanhour City of Egypt also showed that health education significantly improved knowledge and practices.13

Limitations
Out of school adolescent girls could not be involved in the study. In addition, very few mothers participated during health education.

RECOMMENDATIONS
Health education plays a key role in improving awareness and practices related to menstruation so that girls can manage menstruation with confidence and dignity. Comprehensive and sustained health education needs to be provided to all adolescent girls by health care providers. All mothers need to be educated regarding menstruation and menstruation-related hygiene practices so that they can break the social inhibitions and empower young adolescent girls with proper knowledge. It is also essential to involve lady teachers in schools for sustained health awareness programs in schools.

CONCLUSION
Creating awareness regarding menstruation through health education is very essential to help the adolescent girls to handle menstruation-related issues confidently. Even though mother is a prime source of information, probably due to social inhibitions and lack of awareness among mothers, very few girls were aware of menstruation. The current study has highlighted the significance of health education in improving awareness and practices related to menstruation and menstrual hygiene.

REFERENCES
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