

SHORT ARTICLE

Menstrual hygiene among adolescent girlsRakesh Sharma¹, Sandhya Negi², Deepika Kunj³, Varsha Sharma⁴, Vardha⁵¹Nursing Tutor, College of Nursing AIIMS Raipur, India, ²Clinical Instructor, Himalayan College of Nursing, Dehradun, ³Clinical Instructor, CMI College of Nursing, Dehradun, ⁴Clinical Instructor, Mata Padmawati College of Nursing, Nahan, Himachal Pradesh, ⁵Clinical Instructor, Haridwar

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Abstract

Background: Menstruation and menstrual practices are still clouded by taboos and socio-cultural restrictions resulting in adolescent girls remaining ignorant of the scientific facts and hygienic health practices, which sometimes result into adverse health outcomes. **Objective:** To assess knowledge and practice regarding menstrual hygiene before and after teaching program among adolescent girls. **Materials and Methods:** A true experimental study was conducted among 50 adolescent girls of a secondary school situated in the Bhaniyawala of Dehradun district, Uttarakhand, with the help of a pre-designed and pre-tested questionnaire. Participants were randomly assigned into control (n=25) and experimental group (n=25). Adolescent girls from both groups were assessed for knowledge and practice regarding menstrual hygiene on day 1 and on 15th day. Participants of experimental group were administered educational programme regarding menstrual hygiene on day 1 after assessment for knowledge and practice regarding menstrual hygiene. Data were analysed statistically by simple proportions. **Results:** The mean age of the adolescent girl was 13.88 ± 1.5 and age of menarche 12.74 ± 0.98 . Out of 50, 32 (64%) mothers' of adolescent girls were educated at graduate level. The mean pre-test knowledge and practice in experimental group 8.04 ± 1.54 , 3.52 ± 1.0 and control group 8.02 ± 2.0 , 3.24 ± 1.0 respectively. The level of knowledge and practice regarding menstrual hygiene of subjects who participated in educational program was significantly better than that of the control group. **Conclusions:** Menstrual hygiene, a very important risk factor for reproductive tract infections, is a vital aspect of health education for adolescent girls. Educational television programmes, trained school nurses/health personnel, motivated school teachers and knowledgeable parents can play a very important role in transmitting the vital message of correct menstrual hygiene to the adolescent girl of today.

Key Words

Adolescent; Knowledge; practice; Menstrual Hygiene

Introduction

Adolescence is considered a critical period in human evolution, although it is often not recognized as such by health care workers and parents as well as professionals in adult medicine and pediatric disciplines (1). Adolescence in girls is a vital period and is of greater significance, as it comprises of events like menarche (2). Menstruation is a

phenomenon unique to the females. The onset of menstruation is one of the most important changes occurring among the girls during the adolescent years. The first menstruation occurs between 11 and 15 years with a mean of 13 years. Adolescent girls are constitute a vulnerable group, particularly in India where female child is neglected one. Menstruation is still regarded as something unclean or dirty in Indian culture. The response to menstruation depends

upon awareness and knowledge about the issue. The manner in which a girl acquires about menstruation and its associated changes may have an influence on her response to the event of menarche. Though, menstruation is a natural process, it is associated with several misconceptions and practices, which sometimes end into adverse health outcomes.

Hygiene-related practices of women during menstruation are of considerable importance, as it has a health effect in terms of increased vulnerability to reproductive tract infections (RTI). The interplay of socio-economic status, menstrual hygiene practices and RTI are noticeable. Today millions of women are sufferers of RTI and its complications and often the infection is transmitted to the offspring of the pregnant mother. Women having better knowledge regarding menstrual hygiene and safe practices are less vulnerable to RTI and its consequences. Therefore, increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women.

In Indian society the blood spilled during war and violence is somehow acceptable but the blood spilled by woman during the process of childbirth and menstruation were considered as a taboo. In our society the issue of menstruation and its discussion is still met with mixture of eagerness, unease, confusion and denial of its significance

Aims & Objectives

To assess knowledge and practice regarding menstrual hygiene before and after teaching program among adolescent girls.

Material and Methods

This study was conducted to evaluate the effectiveness of educational programme on knowledge and practice of menstrual hygiene among adolescent girls.

Participants comprised of 50 adolescent girls studying in selected high school of Bhaniyawala Post, Dehradun District. There were total 250 female students in Govt. High school among them 25 were selected with simple random technique in experimental group and 25 in control groups from separate classes to prevent contamination of participants. Inclusion criteria were female student in govt. high school with the age group of 11 to 17 years old and had minimum one menstrual period in last 3 months.

Data was collected through a researcher made questionnaire which includes structure knowledge and structured practice questionnaire. The knowledge and practice questionnaire includes 15 and 8 one-score multiple choice questions respectively. A structured educational content was prepared after a thorough review and with the help of experts from nursing and medical profession. The validity of the knowledge and practice questionnaire was approved by expert from nursing and medical faculty.

Reliability of the both the questionnaire were computed with test-retest method which were $r = 0.93$ for knowledge and $r = 0.9$ for practice questionnaire.

On day one, questionnaire were administered to collect pre-test data from both the groups. Followed by experimental group underwent educational training programme on menstrual hygiene. After 15 days of gap, with the same questionnaires post-test data were collected.

Results

The mean age of the participants was 13.88 ± 1.5 which was ranged from 11 to 17 years, whereas the mean age of menarche 12.74 ± 0.98 . Out of 50, 32 (64%) mothers' of adolescent girls were educated at graduate level, 45 (90%) participants were Hindu, 4 (8%) Sikh and 1 (2%) Muslim. Among 30 (60%) participants reported that they had 3 to 5 days of menstrual period, while 11 (22%) had 5 to 7 days and 9 (18%) had 5 to 7 days.

Among 18 (36%) of adolescent, menstrual period started at the age of 12 years whereas 17 (34%) at the age of 13 years ([Table 1](#)). Regarding complaints during menstrual period, 18 (36%) had dysmenorrhoea, 13 (26%) presented with breast tenderness, 3 (6%) had both (dysmenorrhoea & breast tenderness) and 16 (32%) with no complaints. Majority, 39 (78%) adolescent girls received information regarding menstrual periods from their mothers, 7 (14%) from female friends and rest 4 (8%) from teaches.

As shown in [Table 2](#), the level of knowledge and practice regarding menstrual hygiene of subjects who participated in educational program was significantly better than that of the control group.

Among the most significant result was the impact of educational program on frequency of change of sanitary pads, reuses of cloths after wash and proper

cleanliness of genitalia during menstruation in the experimental group ($p=0.01$)

Discussion

This study shows that the age of menstruating girls ranged from 11 to 15 years with maximum number of girls between 12 and 13 years of age. Similar study conducted by Deo *et al* (2) reported that the age of menstruating girls ranged from 12 to 17 years with maximum number of girls between 13 and 15 years of age. In the present study, the mean age of menarche of the respondents was 12.8 years, whereas in a study conducted in Rajasthan by Khanna *et al.*(4), the mean age at menarche was found to be 13.2 years.

The results showed a statistically significant difference between menstrual hygiene of the experimental group compared with the control group, providing support for educational programme among adolescent girls (5,6,7). Menstrual hygiene is a vital element of adolescent girl and educational programme by health care professional in schools can play a major role in transmission of knowledge and practice related to good menstrual health. Poor menstrual hygiene is a great risk to develop reproductive tract infection (6). A study conducted by Chan *et al* (5) on primary school girls studying in grade 5 and 6 and showed that educational programs in schools for students and their parents were effective in improvement of menstrual health.

A study in Egypt (8) showed the effectiveness of a menstrual education program for first and second year girls at a secondary school and recommended expanding the program to elementary, preparatory and other secondary schools. According to our results and similar studies, adolescents get most of their information about menstruation from their mothers (1). Study conducted among 664 schoolgirls aged 14-18 in Mansoura, Egypt by El-Gilany *et al* (10), mass media were the key source of information about menstrual hygiene, followed by mothers. Another study conducted by Deo *et al* (2) stated that 40 (42.5%) urban and 41 (55.4%) rural girls were aware about menstruation prior to attainment of menarche. In urban girls, mother was the main source of information about menstruation (27.5%), whereas it was teacher in the rural counterparts (27.01%). Other sources of information were friends, relatives and books.

In a study conducted in Rajasthan by Khanna *et al* (4), nearly 92% of the girls were not aware about the

natural phenomenon of menstruation during menarche among women and most of the girls got first information about menstruation from their mothers with other major informants being sisters and friends. Salarilak S. *et al*(1) investigated studies on knowledge, attitudes and practices related to menstrual health of high school girls in the city of Urmia, Iran in 1999-2000 and urban area of Meerut in 2010. The results showed that 68.8%, 25.8% got menstruation information from their mothers and sisters, (1) and 64.1% reported a need for further knowledge.

This study shows that majority of the girls preferred cloth pieces rather than sanitary pads as menstrual absorbent. Apparently, poverty, high cost of disposable sanitary pads and to some extent ignorance discouraged the girls from using the menstrual absorbents available in the market. Studies displays (4), almost 75% of the girls used old cloth during their periods and only 20 reported using readymade sanitary pads. It was observed that the usual practice was to wash the cloth with soap after use and keep it at some secret place till the next menstrual period. To keep the cloth away from prying eyes, these are sometimes hidden in unhygienic places. Privacy for washing, changing or cleaning purpose is something very important for proper menstrual hygiene. Regarding the method of disposal of the used material, most of the girls (58%) disposed used pad / cloth in dustbin after wrapping in paper. In a similar study conducted among 664 schoolgirls aged 14-18 years in Mansoura, Egypt by El-Gilany *et al* (10), 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. Different restrictions were experienced by most of the girls in the present study, probably due to their ignorance and false perceptions regarding menstruation. Study conducted by Kakkar R. *et al.*(13) shows that there was no significant relation of anemia with duration of menstrual flow but there was significant ($P<0.05$) difference in number of anaemic cases with age at menarche i.e. with higher age at menarche.

Conclusion

A proper menstrual hygiene and correct perceptions and beliefs can protect the womenfolk from sufferings during child bearing age. Before bringing any change in menstrual practices, the girls should

be educated about the facts of menstruation, physiological implications, about the significance of menstruation and development of secondary sexual characteristics, and above all, about proper hygienic practices with selection of disposable sanitary menstrual absorbent. This can be achieved through educational television programmes, school nurses/health personnel, compulsory sex education in school curriculum and educating to parents, so that her received education would indirectly wipe away the age-old wrong practices and make her feel free to discuss menstrual matters including cleaner practices without any hesitation. All mothers regardless of their educational status should be educated to break their embarrassments about discussing with their daughters regarding menstruation much before the age of menarche.

The present study confirms that the educational program regarding menstrual hygiene among adolescent girls has been quite effective in enhancing in menstrual health. Similar studies and educational programs reported about gain in menstrual health among school girl. In addition, future studies to support the results of the present study regarding the benefits of direct education intervention are recommended.

Relevance of the study

This study has emphasized that adolescent girls should have correct and simple information regarding menstruation and its proper management. Girls should be explained before the age of menarche about the physiological changes during menstruation, the process involved and its importance etc. Education regarding reproductive health and sanitation should be a part of school curriculum. The primary and secondary educational institutions should have special sessions regarding reproductive health and its significances. Menstrual hygiene and social taboos follow during menstruation are issues needs to be addresses at all levels. A variety of factors are known to affect menstrual behaviour, the most influential one being economic status. It is essential to design a mechanism to address and for the access of healthy menstrual practices. Menstrual issues and problems can become a burden at later stages of life which can results in absenteeism from job, ill health and poor quality of life. Formal as well as informal channels of communication such as teacher, mothers, sisters and

friends, need to give more importance for the delivery of such information.

Authors Contribution

RS conceptualized the idea. RS, SN, DK, VS and V were involved in collection of data, analysis of data. RS prepared the manuscript.

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Tables

TABLE 1 INFORMATION ABOUT MENARCHE (N=50)

Age of menarche (in years)	No.	Percentage
11	4	8
12	18	36
13	17	34
14	9	18
15	2	4
Mean ±SD age	12.8±0.9	

TABLE 2 KNOWLEDGE AND PRACTICE SCORE OF ADOLESCENT GIRLS (N=50)

Variables	Group		Mean	Md	SD	Std. Error Mean	t value	p value
Knowledge	Experimental Group (n1=25)	Pre-test	8.04	4.56	1.32	0.26	17.2	0.001
		Post-test	12.6					
	Control Group (n2=25)	Pre-test	8.02	0.52	0.50	0.10	5.0	0.001
		Post-test	8.6					
Practice	Experimental Group (n1=25)	Pre-test	3.52	2.32	1.28	0.25	9.0	0.001
		Post-test	5.84					
	Control Group (n2=25)	Pre-test	3.24	0.2	1.15	0.23	0.8	0.395
		Post-test	3.4					