Impact of health education on knowledge and practices about menstruation among college going adolescent girls

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Abstract

Background: In developing countries like India there are various taboos, misbelieves, faulty family practices. These social practices about menstruation make girl child feel subnormal and may hamper her development. The current study had been conducted to know the baseline knowledge and practices about menstruation and to provide education about healthy menstrual practices to the adolescent girls and to see change in the level of their knowledge.

Methodology: Before and after comparison study without control was conducted among 115 adolescent girls of Women's college in urban field practice area of Bagalkot. It was an educational interventional study. Students were given a pre-designed, pre-tested, and structured questionnaire and all their queries were explained. After the health education intervention the same questionnaire was administered at the end of third month to assess the impact of health education on their knowledge and practice. Z test and chi square test was used to see the change in knowledge after health education, p value <0.05 were considered significant.

Results: Health education intervention among the participants made a significant improvement in the level of their knowledge and practice about menstruation. Pre intervention 2.7% of participants had good, 51.8% had satisfactory and 45.5% had poor knowledge about menstruation which increased to 69.1% good and 30.9% satisfactory knowledge about menstruation. Similarly, good practices about menstruation increased from 33.6% pre interventional to 90% post intervention.

Conclusion: There is a definitive role of health education intervention in improving the knowledge and practice of adolescent girls regarding menstruation.

Keywords: Menstruation, hygiene, adolescents, health education

Introduction

Chronic Adolescence is a crucial period and is a period of transition from childhood to adulthood with significant physical, sexual and psychological changes in the body[1].

WHO has defined adolescence as the age group of 10-19 years[2]. 243 million adolescents are there in India-about 21% of country's population comprise of young people in the age group of 10-19 years (Census, 2011)[3]. It is again classified into early adolescent (10-13yrs), mid adolescent (14-16 yrs), and late adolescents (17-19yrs). Menstruation is a part of female reproductive cycle when girls become sexually mature at the time of puberty.

Girls are unable to discuss about it as it is still regarded as dirty in Indian society[4]. Lack of proper knowledge about menstruation makes them to follow unhygienic menstrual practices, which may cause various health problems, like Reproductive tract infections and Pelvic inflammatory diseases[1].

In developing countries like India there are various taboos, misbelieves, faulty family practices. These social practices about menstruation make girl child feel subnormal and may hamper her development[5].

Health education sessions in the school and colleges will help in building the confidence of adolescent girls and women and will also help them to manage menstrual health issues confidently[1].

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So the current study had been conducted to know the baseline knowledge and practices about menstruation and to provide education about healthy menstrual practices to the adolescent girls and to see change in the level of their knowledge.

Objectives of the study

1. To study the baseline knowledge and practice of college adolescent girls regarding menstrual hygiene.
2. To know the impact of health education with regards to knowledge and practice about menstrual hygiene among adolescent girls.

Materials and methods

Before and after comparison study without control was conducted among 115 adolescent girls of Women's college in urban field practice area of Bagalkot. Sample size calculation was done using open Epi software, Total- 103 sample was calculated by taking two proportions P1= 2, P2=12 about knowledge of girls regarding menstruation from a study by Arora A et al[6]. Taking 10% of sample loss, sample proportion comes to 113, rounded up to 115. So in pre intervention 115 girls were taken and in post intervention there was loss to follow up of 5 girls which came up to 110. During analysis 110 samples were taken.

Out of 6 women's college, one degree college was selected by simple random sampling method. Adolescent girls of age group 17-19 were selected by simple random sampling method till the sample size of 115 was met.

For analysis total of eight knowledge based questions were there, for each correct answer 1 marks was given and the participants total marks for knowledge was calculated and they were grouped into having -1) good knowledge- those who have got more than 6 marks 2) Satisfactory knowledge = 4-6 marks 3). Poor knowledge = less than or equal to 3 marks.

Similarly total of 10 practices questions were there and total marks of the participants were calculated and they were grouped into having 1). Good practice= those who have got 7-10 marks 2). Satisfactory practice= those who have got 4-6 marks, 3). Poor practice= those who have got less than or equal to 3 marks.

Method of data collection: It was an educational interventional study conducted for a period of 3 months among adolescent girls attending the Women's college in Urban field practice area of Bagalkot.

Before conducting the study permission was taken from the college authority and informed consent was taken from the girls, also guardian consent was taken for minor girl's and also the benefits of the study was explained to them. The girls who were willing to participate in the study and for those whose parents have given consent were included in the study and those who could not be traced for two consecutive visits during health education were excluded from the study. A pilot study was conducted for the validation of the questionnaire by taking 10% of sample size and the necessary changes were made in the questionnaire.

Students were given a pre-designed, pre-tested, and structured questionnaire and all their queries were explained. All precautionary measures were taken to avoid any discussion among them and were asked to mark the answer of their choice. Then pre test data was collected by the medico social worker. Three health education sessions were conducted. For giving health education interns were also trained regarding Menstruation by the authors, Flipbook for menstrual hygiene by National rural Health Mission[7] was used for showing pictures during health education for the participants. The education was followed by an interactive session with the students to clarify doubts. Each session of health education included, health education regarding menstruation, causes of menstruation, healthy and unhealthy practices followed during menstruation were explained to them with the help of lecture and audio visual aids. After the health education intervention the same questionnaire was administered at the end of third month to assess the impact of health education on their knowledge and practice.

Statistical analysis: The pre test and post test data were entered in the MS Office Excel sheet data was analyzed using SPSS 20 software and percentage, proportions, Z test for two proportion, and chi square test was used to see the change in knowledge after health education, p value <0.05 were considered significant.

Results

Out of 110 participants majority of the participants 43.68% were of 19 years, almost all i.e, 99.1% were unmarried, 76.4% belonged to nuclear family and majority of them (42.7%) belonged to middle class family according to modified B.G Prasad classification 2017 (Table 1).

The source of information about menstruation for almost 90% of the participants were mothers and for remaining were sisters(7.5%), and friends (2.5%).

Table 1: Socio demographic characteristics of study subjects

Variables	Frequency	Percentage
Age in years		
17	30	27.27
18	32	29.09
19	48	43.63
Marital status		
Married	1	0.9
Unmarried	109	99.1
Type of family		
Nuclear	84	76.4
Joint	25	22.7
Three generation	1	0.9
Socioeconomic status		
Class I	6	5.5
Class II	16	14.5
Class III	47	42.7
Class IV	36	32.7
Class V	5	4.5

Table 2: Distribution of study subjects according to their knowledge about menstruation

Questions	Pre intervention N (%)	Post Intervention N (%)	Z value test for two proportion	P value
Is it a normal phenomenon (yes)	70(63.6)	108(98.2)	6.6	<.0001
From which organ does the menstrual blood come(uterus)	16(14.5)	106(96.4)	12.2	<.0001
Do you think menstrual blood is impure? (NO)	19(17.3)	103(93.6)	13.1	<.0001
Does excessive bleeding leads to anemia?(yes)	29(26.4)	107(97.3)	10.8	<.0001
One should not know about menstruation before menarche? (no)	101(91.8)	109(99.1)	2.7	<.0065
Does a women have menses during pregnancy?(no)	53(48.2)	109(99.1)	8.6	<.0001
A girl should take more nutritious diet during menstruation? (yes)	43(39.1)	110(100)	9.8	<.0001
Menstruation is a curse of God on girls? (no)	79(71.8)	99(90)	5.8	<.0001

Table.3: Distribution of study subjects according to restrictions and practices followed during menstruation

Questions	Pre intervention N (%)	Post intervention N (%)	Z value test for two proportion	P value
Do you visit holy place during menstruation? (yes)	5(4.5)	72(65.5)	9.4	<.0001
Do you do kitchen work during menses? (yes)	63(57.3)	93(84.5)	4.4	<.0001
Do you bath daily during menses? (yes)	83(75.5)	105(95.5)	4.2	<.0001
Do you wash your genitalia with soap and water during menses? (yes)	77(70)	110(100)	6.2	<.0001
Which of these you use during menses? (sanitary pads)	68(61.8)	99(90)	5	<.0001
Do you practice isolation during menses? (No)	42(38.2)	108(98.2)	9.5	<.0001
What do you prefer wrapping the pad with while disposing? (paper)	110(100)	110(100)	-	-
Where do you dispose off the sanitary pads? (house dustbin)	102(92.7)	110(100)	3	.0025
How do you wash your cloth? (with soap and water)	72(65.5)	108(98.2)	6.3	<.0001
Where do you dry the cloth? (sundry)	33(30)	94(85.5)	8.3	<.0001

Table 4: Change in the knowledge of study subjects about menstrual hygiene and practices after educational intervention.

	Pre intervention	Post intervention	Chi square	Comment
Knowledge				
Good	3 (2.7)	76 (69.1)	Chi square= 123.3	Highly significant
Satisfactory	57 (51.8)	34 (30.9)	Degrees of freedom= 2	
Poor	50 (45.5)	0%	P value= <.0000001	
Practices	37 (33.6)	99 (90)	Chi square= 71.66	
Good satisfactory	73 (66.4)	11 (10)	Degree of freedom= 1	Highly significant
Poor	0%	0%	P value=<.0000001	

There was significant improvement in knowledge about menstruation following health education as shown in the table 2, pre test only 63.7% were aware as menstruation as normal phenomenon, this response increased to 98.2 following post test. Following health education the 97.3% knew that excessive bleeding leads to anemia, while in pre test only 26.45 were aware about it. 99.1% got the knowledge that women have no menses during pregnancy which was known only to 48.25% of the participants in the pretest. Similarly there was increase in the knowledge regarding importance of taking more nutritious diet during menstruation increased from 39.1% to 100%. 90% of the participants did not mention menstruation as a curse of God on girls after health education. 100% of the participants started disposing sanitary pads in dustbin separately after health education (Table 3). Initially 65.5% of the participants had the habit of washing the used cloth during menstruation with soap and water which increased to 98.25% in the post test.

Health education intervention among the participants made a significant improvement in the level of their knowledge and practice about menstruation as shown in table 4. Pre intervention 2.7% of participants had good, 51.8% had satisfactory and 45.5% had poor knowledge about menstruation which increased to 69.1% have good and 30.9% have satisfactory knowledge about menstruation and no poor knowledge after health education. Similarly good practices about menstruation increased from 33.6% pre interventional to 90% post intervention.

Discussion

In present study 63.6% of adolescent knew that menstruation is a normal process, similar findings were found in Studies conducted in Dube S[8] and Bobhate P S[9] which showed that 60.0% and 63.9% of the girls respectively knew that menstruation is a natural process.

In the present study 14.5% girls correctly answered uterus as the organ for menstrual blood in the pre test, this shows low level of knowledge about female anatomy among girls, which improved after health education to 96.4%. While 33.64% girls correctly answered in the pre test as per the study conducted by Nemade D et al[4] which improved to 99.54% in post test.

It is seen in the current study that 17.3% of the girls felt menstrual blood is not impure after giving health education the percentage of correct knowledge improved to 93.6%. Similar finding are also seen in the study conducted by Nemade D et al[4] where 72.3% of girls felt menstrual blood is impure in the pretest which reduced to 100% after giving health education.

Only 38.2% of the girls in the current study did not used to practice isolation during menstruation which improved to 98.2% after giving health education. Also in the study conducted by Dipali et al[4], 48.23 did not practice isolation in the pretest which improves to 52.28 in the post test.

In our study 75.5% of the girls used to take bath daily during menstruation before giving health education which improved to 95.5% after giving health education.

61.8% of participants used sanitary pads during menstruation which is higher when compared to study done by Jogdand[10] in Guntur Andhra Pradesh which shown 53.3% used sanitary pads during menstruation. After giving health education the number increased to 90%. In the study conducted by Arora A[6] the pretest sanitary pad users were 35% which improved to 55% in the post test.

Hygiene practices during menstruation showed that 70% of them wash their genitals with soap and water during menses which becomes 100% in the post test, While in study conducted by Dipali et al[4] at Navi Mumbai showed only 29.95% girls used to wash their genitals with soap and water during menses which improves to 90% after giving health education.

In current study the method of drying used cloth

during menstruation under direct sunlight improved from 30% to 85.5% which is also observed in the study done by Nagaraj C[1] where percentage of participants drying the used cloth under the sunlight. Increased from 23.35% to 89.5% in the post test. Jyothi B in her study also found 95.5% used to dry used cloth during menstruation in pretest which became 98.5% in post test[11].

Limitations:

i. Study could have been better if boys were also included in the study as their knowledge is also important as boys are also the part of the family member they should also have correct knowledge about menstruation so that they can guide correctly their female members of the family.

ii. Only 17-19 years were targeted, study would have been more useful for the girls if the younger age group girls were included, as problem more persist in the younger age group due to lack of knowledge about menstruation.

Conclusion: There was a significant improvement in the level of good and satisfactory knowledge and practice about menstruation following health education intervention which shows that there is a definitive role of health education intervention in improving the knowledge and practice of adolescent girls regarding menstruation.

Recommendations:

i. As education about menstrual hygiene is most essential for a female, which should be started from school curriculum so we recommend the topic of menstruation should start from middle school.

ii. There is a need to develop and operate public health awareness program in the community for better awareness about menstruation among adolescent girls and women.

iii. Regular IEC activities through proper education should be a part of communication education which can be done for adolescent by health professionals and teachers.

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