

SHORT COMMUNICATION

Impact of health education on knowledge and practices about menstruation among adolescent school girls of rural part of district Ambala, Haryana

Arora A¹, Mittal A², Pathania D³, Singh J⁴, Mehta C⁵, Bungler R⁶

¹PG Final Year, ²Associate Professor, ^{3&6}Assistant Professor, ⁴Professor, ⁵Senior Resident, Department of Community Medicine, MMIMSR Mullana, Ambala Haryana

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Article Cycle

Address for Correspondence: 97 Ranjit Nagar, behind police lines, Jalandhar, Punjab
E Mail: dr.anjli.arora@gmail.com

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Abstract

Background: This study was undertaken to assess the impact of health education on knowledge regarding menstruation, misconceptions related to it as the prevalence of RTI is still very high in India. **Aims:** To study the existing level of status of hygiene, knowledge and practices regarding menstruation among adolescent school girls and to assess the change in their knowledge level and practices after health education. **Materials** A community-based pre and post interventional study was conducted among 200 adolescents' girls of class IX and X of rural part of district Ambala. Multistage random sampling technique was used to draw the representative sample. A pre-tested questionnaire was administered and later health education regarding menstruation and healthy menstrual practices was imparted to the girls. Post-test was done after 3 months to assess the impact of health education. Pre- and post-intervention, data were compared using the paired t test, z test for proportions, chi-squared test for paired proportions. Difference between Proportions of the pre-post data and its 95% confidence interval has been calculated of the findings. SPSS for Windows software version 20 (IBM, Chicago, USA) have been used for data analysis. The level of significance has been considered at p value < 0.05. **Results:** In the pre-test, menstrual perceptions amongst them were found to be poor and practices incorrect while in the post-test, there was a significant difference in the level of knowledge (P<0.05). There was no significant difference in pre and post-test with regard to restrictions followed during menses (P>0.05) while in the post-test preceding health education, significant improvements were observed in their practices. **Conclusion:** Overall significant improvement was found in knowledge and practices regarding menstruation among adolescent school girls.

Key Words

Menstruation; Health Education; Adolescents

Introduction

Adolescence is the period of transition from childhood to adulthood.(1) WHO has defined adolescence as the age group of 10-19 years.(2) Adolescents comprise 1/5 of the World's population of 1.2 billion.(3)

Adolescent girls constitute a vulnerable group not only with respect to their social status but also their health (4) that is why it is recognized as a period that requires specific and special attention. This is marked with onset of Menarche.(5) The onset of menstruation represents a landmark event in pubertal

development of the adolescent girl. Menstruation and the menstrual cycle are characterized by variability in volume, pattern and regularity, which at the earlier stages of the development of the adolescent can create emotional discomfort particularly to the poorly informed girl. (6) Moreover, the low social status of women in Indian society, culture of shame and silence associated with their reproductive health matters make this a taboo. (7) It is still considered as something unclean or dirty in Indian society and is linked with several perceptions and practices, which sometimes result in adverse health outcomes. 5 Hygiene-related practices during menstruation are of considerable importance, Unhygienic menstrual practices may affect their health such as increased vulnerability to RTIs (Reproductive Tract Infections) and PID's (Pelvic Inflammatory Diseases) and other complications. These complications are the result of inaccurate and incomplete information provided to the girls through limited sources. (8)

Therefore, increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the sufferings of millions of women.

Aims and Objectives

1. To study the existing status of hygiene, knowledge and practices regarding menstruation among adolescent school girls.
2. To assess the change in their knowledge and practices after health education

Methods

An interventional study was conducted among adolescent girls of classes IXth and Xth of government secondary schools in block Barara, Dist. Ambala, Haryana during the period July-December 2012. In total, there are 15 high schools in block Barara. Out of these, 5 schools were selected by simple random sampling

technique and all the girls who have attained menarche and who were willing to participate were included. Girls who had not attained menarche and were not willing to participate in the study due to any reason or those who were absent on study days were excluded. After taking permission from District Education Officer, Ambala, a pre-designed, pre-tested, structured questionnaire was given to the study participants in Hindi to study their existing level of awareness regarding Menstruation. After collection of the filled questionnaires, health education regarding the physiology of menstruation and the role of hygiene plus the myths prevailing in the society concerning the same was imparted to the girls through lectures with the help of audio visual aids. This was followed by question answers sessions to clarify their doubts. After two months of the first visit, the level of knowledge of the study participants was reassessed using the same questionnaire. Same process was adopted for each school and person delivering the lecture was the same for all the schools so as to maintain uniformity of content.

The responses in the questionnaire were entered in the MS Office Excel sheet and percentages, paired- t test, Z test for proportions and chi square test was used to calculate results. Ethical clearance was sought from the institutional ethical committee of M M University, Mullana. Informed consent was taken and the study did not pose any financial burden on the participants.

Result

In this study, 206 girls were enrolled. Amongst them, 6 were excluded due to incomplete responses in the questionnaire. Out of the total 200 girls included in the study, only 78 (39%) girls reported that they had their menarche before the age of 13 years while remaining 122 (61%) had their menarche in the 13th to 14th years of life. Only 32(16%) of girls were aware

of the menstruation before menarche and their main (72%) source of information was friends while 21% girls were being informed by their mothers. Maximum (54%) girls were from middle class of socioeconomic status, However 32% of them belonged to low socioeconomic class and mothers of most of the girls 102(51%) were educated till primary class.

Knowledge regarding menstruation among adolescent girls was less in pre-test responses. Only 10 (5%) girls knew the organ of menstrual flow. 98% of them believed that menstrual blood flow is influenced by hot and cold foods and menstrual blood is impure.

There was not much improvement in the attitude of girls in the post-test regarding restrictions like not visiting holy places or to do kitchen work during menstruation. In pre-test, 78 (39%) girls said they do not follow such restrictions and the number increased to 82 (41%) in post-test. In pre-test only 86 (43%) girls reported to wash their genitalia with soap and water and figure rose to 182 (91%) in post-test. 65% girls used cloth. No. of girls using sanitary pads were (70) 35% in pretest which improved to (110) 55% in post-test. On applying t – test on the pre and post-test scores of knowledge, attitude and practices results were found to be statistically significant. ([Table 1](#)) The relationship between Reproductive tract infections and hygiene practices during menstruation was found to be statistically significant. ([Table 2](#))

Discussion

In the present study maximum no. of girls 122 (61%) girls had attained menarche from 13-14 years of age. Dipali et al (9) in their study conducted among school going girls in Navi Mumbai have reported similar findings who stated that the mean age of menarche of the respondents was 13.32 years. Prior information about menstruation prepares the

girl child mentally to accept the change in a constructive way and help her to develop better attitude. Only 16% of the girls were aware about menstruation before menarche in our study and 21% of them were informed by their mothers. Maximum (72%) of girls reported friends to be their source of information. This shows lack of communication between mothers and daughters or it could be due to ignorance or low level of education among mothers. Garg et al (10) also reported in their study that at menarche, only 12% of their respondents had any prior knowledge about menstruation. Keerti Jogdand & Pravin Yerpude (5) in their study conducted in Guntur (AP) reported similar results. However they reported major source of information as mothers. In another study conducted by AJ Singh (7) in rural North India, only in one case mother was the source of information about menstruation. It was observed in present study that only 10 (5%) girls knew that the organ from which menstrual blood flows is uterus. However 197 (98%) of them believed it to be a physiological process. In a similar study conducted by A. Dasgupta & M. Sarkar (11) 86.25% girls believed it to a physiological process and 2.5% knew the organ of menstrual flow. Similarly in present study, in the pre-test, 98.5% felt that menstrual blood is impure. 98% of the participants felt that there was an influence of hot and cold food on menstrual flow and there was not much difference in their responses during post-test. This is in different from the findings of Raj Kumar Patil et al (12) who conducted study in rural Pondicherry where 72.5% responded that menstrual blood is dirty. This difference could be attributed to the difference in the socio economic background of the two regions where these studies were conducted.

Different restrictions were practiced by most of the girls in the present study. 122 (61%) girls reported that they do not visit holy places during menstruation and similar results were

reported by Rajni Dhingra et al (13) and also by Rekha Udgiri et al (14) in their study conducted in Bijapur. Moreover, much improvement in their attitudes was not observed during post-test as there is a strong web of social taboos in Indian society and much more effort is needed to change them.

Hygiene practices of girls during menstruation were not satisfactory. 86 (43%) washed their genitalia with soap and water during menses. A study conducted by Dipali et al (9) at Navi Mumbai also stated that only 29.95% girls reported that they wash their genitalia with soap and water.

Type of Menstrual absorbent used constitutes a foremost component of menstrual hygiene as unsanitary material may harbor infectious agents. It was seen in present study that only 35% girls used sanitary pads as absorbent material for menstrual blood and 65% of the girls were using cloth, out of which 77% reused the same cloth repeatedly after washing. Although most (88%) washed their cloth with soap and water but they were keeping their cloths in house corners for drying. These results come in agreement with Rajni Dhingra et al (13) who stated that majority of the subjects included in the study i.e. 127 (96.9%) had poor management of menstruation. (Poor management means use of dirty cloth, improper washing of used cloth and inadequate drying mechanisms). Only 4 (3.0%) of the subjects reported proper management (Proper management included use of fresh cloth). Similar results were also observed by some other authors (6, 9, 15) and there was significant improvement in their practices during post-test. In a similar study conducted among school girls in Egypt (16), the different aspects of personal hygiene were generally found to be poor. In the present study the pre-test phase, 46 (57%) girls reported that they changed the pad only twice a day while in the post-test this no decreased to (41%). During pre-test, only (70) girls were using sanitary

pads which increased to (110) girls in post-test thereby showing improved menstrual hygiene and practice following health education. On comparing rate of infections with hygiene practices of girls (Table 2) using chi square test, a significant association was seen between them.

Conclusion

Menstrual Hygiene matters discussed through Health education is an essential resource for improving menstrual hygiene in girls and women especially in lower and middle income countries. Poor menstrual hygiene is closely related with reproductive tract infections.

Young girls grow up with limited knowledge of menstruation because their mothers do not discuss these issues openly with them. The current study highlighted that there are many unhealthy menstrual practices and taboos among adolescent girls and their mothers which can be improved through health education.

Recommendation

The proposed forming of peer groups under Sabla scheme should be strengthened so that girls can discuss these issues openly and health education should be a part of their school curriculum.

References

1. Ganguli SK. Adolescent Health. Indian Journal of Public Health, 2003; 47 (3):5-15.
2. 10 facts on adolescent health. Accessed from http://www.who.int/features/factfiles/adolescent_health/en/index.html on 15,march, 2013.
3. Broadening the Horizon. Accessed from http://whqlibdoc.who.int/hq/2001/WHO_FCH_CAH_01.20.pdf on 15,march,2013.
4. Omidvar S, Begum K. Factors influencing hygienic practices during menses among girls from south India- A cross sectional study. International Journal of Collaborative Research on Internal Medicine & Public Health,2010;2(12):p.411-423.
5. Keerti Jogdand,Pravin Yerpude. A community based study on menstrual hygiene among

- adolescent girls. Indian Journal of Maternal and Child Health, 2011;july-sep;13(3).
6. Echendu Dolly Adinma, J.I.B.Adinma. Perceptions and practices on menstruation among Nigerian secondary school girls. African Journal of Reproductive Health,2008;12(1):74-83.
 7. AJ Singh. Place of Menstruation in the reproductive lives of women of rural North India. Indian Journal of Community Medicine, 2006;31(1).
 8. Eman shokry Abd Allah, Eman Elsayed Mohammed Elsabagh. Impact of Health Education Intervention on Knowledge and Practice about Menstruation among Female Secondary School Students in Zagazig City. Journal of American Science 2011; 7(9): 737-747.
 9. Dipali Nemade, Seema Anjenaya, Rupali Gujjar. Impact of health education on knowledge and practices about menstruation among adolescent school girls of Kalamboli, Navi Mumbai. Health and population:Perspectives and Issues,2009;32(4):167-175.
 10. Garg S, Sharma N, Sahay R. Socio-cultural aspects of menstruation in an urban slum in Delhi, India. Reproductive Health Matters, 2001; 9:15-25.
 11. A Dasgupta, M Sarkar. Menstrual Hygiene: How hygienic is the adolescent girl. Indian Journal of Community Medicine, 2008; 33(2).
 12. Rajkumar Patil et al. Beliefs about menstruation: a study from rural Pondicherry. Indian Journal of Medical Specialties, 2011; 2(1):23-26.
 13. Rajni Dhingra, Anil Kumar, Manpreet Kaur. Knowledge and practices related to menstruation among Tribal (Gujjar) adolescent girls. Ethno-Med, 2009; 3(1): 43-48
 14. Rekha Ud giri, M M Angadi, Shailaja Patil, (Mrs) Vijaya Sorganvi. Knowledge and practices regarding menstruation among adolescent girls in an urban slum, Bijapur. Journal of Indian Medical Association, 2010; 108: 514-16.
 15. Juyal R, Kandpal SD, Semwal J, Negi KS. Practices of menstrual hygiene among adolescent girls in a district of Uttarakhand. Indian Journal of Community Medicine, 2012; 24(2): 124-128.
 16. El –Gilany AH, Badawik. Menstrual hygiene among adolescent school girls in Mansoura, Egypt. Reproductive Health Matters, 2005; 13: 147-52.

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Tables

TABLE 1: KNOWLEDGE, PRACTICES AND ATTITUDE REGARDING MENSTRUATION

Variables	Pre-test	Post-test	p value
From which organ menstrual blood flows			
Uterus	10 (5%)	194 (97%)	<0.001
Other	5 (2.5%)	3 (1.5%)	
Don't know	185 (92.5%)	3 (1.5%)	
Cause of menstruation			
Physiological	197 (98.5%)	199 (99%)	0.314
Don't know	3 (1.5%)	1 (1%)	
Is there influence of hot or cold food on menses			
Yes	196 (98%)	175 (87.5%)	<0.001
No	4 (2%)	25 (12.5%)	
Do you notice any mood changes during menses			
Yes	8 (4%)	176 (88%)	<0.001
No	192 (96%)	24 (12%)	
Do you think menstrual blood is impure			
Yes	197 (98.5%)	182 (91%)	<0.001
No	3 (1.5%)	18 (9%)	
Does excessive bleeding leads to anemia			

Yes	180 (90%)	196 (98%)	<0.001
No	20 (10%)	4 (2%)	
Do you visit holy place during menses			
Yes	78 (39%)	82 (41%)	0.683
No	122 (61%)	118 (59%)	
Do you do kitchen work during menses			
Yes	168 (84%)	175 (87.5%)	0.317
No	32 (16%)	25 (12.5%)	
Do you bath daily during menses			
Yes	182 (91%)	196 (98%)	<0.005
No	18 (9%)	4 (2%)	
Do you wash your genitalia with soap and water during menses			
Yes	86 (43%)	182 (91%)	<0.001
No	114 (57%)	18 (9%)	
Which of these you use during menses			
Sanitary pads	70 (35%)	110 (55%)	<0.001
cloth	130 (65%)	90 (45%)	
How often do you change sanitary pad/cloth in a day			
2 times	80 (40%)	55 (27%)	0.008
3-4 times	120 (60%)	145 (72%)	
Knowledge scores	7.3 + 2.4	13.9 + 3.1	<0.001
Attitude & Practices scores	6.9 + 3.2	14.8 + 2.9	<0.001

TABLE 2: HEALTH PROBLEMS RELATED TO UNHYGIENIC PRACTICES

		Hygiene		Total
		+	-	
Infection	+	20	89	109
	-	50	41	91
		70	130	200

Chi square - 29.2 p < 0.001