

Original Research Article

Assessment of knowledge and practice of menstrual hygiene among school going adolescent girls in an urban area of Odisha: a cross sectional study

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ABSTRACT

Background: In the life of a female, menarche denotes the beginning of her reproductive capacity. Menstrual hygiene is an issue that every girl has to deal with in her life, but there is lack of awareness on the process of menstruation, the physical and psychological changes associated with puberty and proper requirement for managing menstruation.

Methods: A cross-sectional study was conducted from October 2016 to December 2016 in the urban field practice area of SCB Medical College. One government high school and one private high school were selected purposively. A purposeful convenience sampling was done to select the girls who were studying in 8th, 9th and 10th standard. Data collected from 165 adolescent school girls using a predesigned, pretested and structured questionnaire. The objective of the present study is to assess the knowledge and practices regarding menstrual hygiene among school going adolescent girls and to know about the restrictions imposed upon them during menstruation.

Results: Most of the adolescent girls (61.82%) had attained menarche between 13-15 years of age. 59.39% girls were aware about menstruation before menarche. The source of information about menstruation was the mother or elder sister in most of the girls (81.21 %), followed by teachers/friends in case of 18.79 % girls. 84.85% of the girls used only sanitary pad, 4.24% used only cloth and the rest 10.91% used both sanitary pad and cloth during menstruation.

Conclusions: Maintenance of menstrual hygiene was better in private school girls as compared to government school girls. Health education sessions about menstrual hygiene should be conducted in the schools for spreading awareness regarding menstruation and menstrual hygiene.

Keywords: Adolescent girls, Knowledge, Practice, Menstrual hygiene

INTRODUCTION

Females have always been in a position to take a lead role in the health of a family. They play several roles like as a daughter, a sister, a wife, a mother and a grandmother in their lives. As a mother, being a pivot in the family, she is considered to be the first teacher of the offspring. Such an

important person in the society always needs to be stress free and to have a right to enjoy a good status of health.¹

In the life of a female, the transition from childhood to adulthood occurs during period of adolescence which according to WHO extends from 10-19 years of age.² It starts with the onset of menarche, a milestone in a woman's life and denotes the beginning of her

reproductive capacity of woman.^{3,4} For most girls, menarche is a negative, frightening experience, or, at the best, a nuisance, or is something to fear or to be ashamed of. Restrictions in daily activities such as not being allowed to take bath, change clothes, comb hair, entering holy places and even dietary restrictions are also imposed during the menstrual period.⁵

Menstrual hygiene is an issue that every girl has to deal with in her life, but there is lack of awareness on the process of menstruation, the physical and psychological changes associated with puberty and proper requirement for managing menstruation. The taboos surrounding this issue in the Indian society prevent girls and women from articulating their menstrual needs. The problems of poor menstrual hygiene management have been ignored or misunderstood by the society as well the policy makers till now.⁶

The present study was done to assess knowledge, status of hygiene and practices regarding menstruation among adolescent girls and study various factors affecting it.

Objectives

The objective of the present study is to assess and compare the knowledge and practices of menstrual hygiene among adolescent girls studying in government and private schools and to assess the restrictions imposed upon them during menstruation.

METHODS

Study design

A cross-sectional study.

Study period

The study was conducted from October 2016 to December 2016.

Study population

Adolescent girls reading in the schools, situated in the urban field practice area of the department of Community Medicine of SCB Medical College, Cuttack.

Written permission for conducting the research work was taken from the District Education Officer, Cuttack and a list of schools, located in the urban field practice area was prepared. There were 3 government high schools and 2 private high schools. The study was conducted in 1 government high school and 1 private high school that were selected purposively. A purposeful convenience sampling was done to select the girls who were studying in 8th, 9th and 10th standard. A total of 165 girls studying in the selected schools constitute the study sample.

After taking permission from the school authorities, the aim of study was explained to the students. They were assured that all the data obtained would be kept confidential and used for only statistical purposes. A pre-designed, pre-tested and structured questionnaire was used to collect data regarding awareness about menstruation, the sources of information regarding menstruation, the hygienic practices during menstruation, queries about the type of absorbent used, the frequencies of changing and cleaning them and how it is affecting their day-to-day activity. Then a session on educating the girls about the normal physiology of menstruation, the importance of maintaining hygiene and safe hygienic practices during menstruation was conducted.

Exclusion criteria

Students with chronic illnesses and/or on long term medications. Those students who were unwilling to participate in the study and who had not attained menarche were excluded from the study.

Data analysis

Data thus collected were entered and analyzed by using the software SPSS 21 version in the Department of Community Medicine, S.C.B Medical College and appropriate statistical measures i.e., percentages and Chi-square test were applied in this study.

RESULTS

Table 1 shows that the age of study subjects ranged between 13-15 years, mean age was 14.06 years. Majority of students (57.57%) belonged to nuclear families.

Table 1: Demographic profile of adolescent girls in government vs. private schools.

Demographic characteristics	Private school (n=80)	Government school (n=85)	Total (n=165)	χ^2 value	P value
Age in years					
13	24 (30)	29 (34.12)	53 (32.12)	1.634	0.44
14	27 (33.75)	21 (24.71)	48 (29.1)		
15	29 (36.25)	35 (41.17)	64 (38.78)		
Type of family					
Nuclear	53 (66.25)	42 (49.41)	95 (57.57)	8.76	0.01
Joint	21 (26.25)	23 (27.06)	44 (26.67)		

Continued.

Demographic characteristics	Private school (n=80)	Government school (n=85)	Total (n=165)	χ^2 value	P value
3 generation	6 (7.5)	20 (23.53)	26 (15.76)		
Occupation of mother					
Housewife	71 (88.75)	81 (95.29)	152 (92.12)	2.43	0.11
Working	9 (11.25)	4 (4.71)	13 (7.88)		
Education of mother					
Illiterate	1 (1.25)	6 (7.05)	7 (4.25)	9.98	0.04
Primary school certificate	4 (5.0)	7 (8.24)	11 (6.66)		
Middle school certificate	20 (25)	28 (32.95)	48 (29.1)		
High school certificate	29 (36.25)	31 (36.47)	60 (36.36)		
Graduate and above	26 (32.5)	13 (15.29)	39 (23.63)		

*Numbers in parenthesis indicate percentage.

23.53% students from government school belonged to 3 generation families in comparison with only 7.5% in private school. This difference in both the schools was statistically significant ($p=0.01$). Mother's educational status of students studying in private school was better than government school. More number of (32.5%) mothers of students of private school was graduate as compared to 15.29% in government school. Statistically significant difference ($P=0.04$) was there in the educational status of mothers in both type of schools.

Table 2 shows that most of the study subjects (61.82) had attained menarche between 13-15 years of age. While 98 (59.39%) girls were aware about menstruation before menarche, the remaining 67 (40.61%) were not. The source of information about menstruation was the mother or elder sister in most of the girls (81.21%) while teachers/friends were the source of information in case of 18.79% girls.

Personal hygiene plays a very important role during menstruation. Table 3 shows 84.85% of the girls used only sanitary pad, 4.24% used only cloth and the rest 10.91% used both sanitary pad and cloth during menstruation. Most of the female students of private

school used sanitary pad in comparison to 83.53% of government school. Statistically significant difference is there that more number of girls in private school clean their external genitalia during menstruation than government school girls. 44.89% of the girls used to change the pad 3 times or more in a day during menstruation. Pad disposal by wrapping with paper was practiced by 57.14% of girl students. Proper disposal of used sanitary pad found in more proportion female students of private school (58.91%).

Table 2: Age of menarche, knowledge of adolescent school girls about menstruation (n=165).

Variables	N	%
Age of menarche (in years)		
10-12	63	38.18
13-15	102	61.82
Awareness about menstruation before menarche		
Yes	98	59.39
No	67	40.61
Source of information before menarche		
Mother/elder sister	134	81.21
School teacher	4	2.42
Friends	27	16.37

Table 3: Maintenance of menstrual hygiene by the adolescent girls of government vs. private school (n=165).

Variables	Private school (n=80)	Government school (n=85)	Total (n=165)	χ^2 value	P value
Type of absorbent used					
Sanitary napkin	69 (86.25)	71 (83.53)	140 (84.85)	0.91	0.63
Cloth	4 (5.0)	3 (3.53)	7 (4.24)		
Both	7 (8.75)	11 (12.94)	18 (10.91)		
Type of cloth used					
Washed and cleaned	10 (90.9)	14 (100)	24	1.32	0.24
New cloth	1 (9.1)	0	1		
Cleaning of external genitalia					
Yes	74 (92.5)	69 (81.17)	143 (86.67)	4.57	0.03
No	6 (7.5)	16 (18.83)	22 (13.33)		
Sanitary napkin changing frequency in a day					
2	38 (52.05)	43 (58.11)	81 (55.11)		

Continued.

Variables	Private school	Government school	Total	χ^2 value	P value
≥ 3	35 (47.95)	31 (41.89)	66 (44.89)	0.54	0.46
Method of disposal					
a. Cloth	n=11	n=14	n=25		
Washing and reusing	10 (90.9)	14 (100)	24 (96)	1.32	0.24
Wrapping and dumping	1 (9.1)	0	1 (4)		
b. Sanitary napkin	n=73	n=74	n=147		
Wrapping and dumping	43 (58.91)	41 (55.4)	84 (57.14)	1.14	0.56
Dumping without wrapping	26 (35.62)	31 (41.89)	57 (38.77)		
Flusing out	4 (5.47)	2 (2.71)	6 (4.09)		

*Numbers in parenthesis indicate percentage.

Table 4: Type of restriction followed during menses.

Restriction imposed during menstruation	Private school	Government school	Total	χ^2 value	P value
Restriction imposed	n=80	n=85	n=165		
Yes	47 (58.75)	64 (75.29)	111 (67.27)	5.12	0.02
No	33 (41.25)	21 (24.71)	54 (32.73)		
Type of restriction (multiple responses)	n=47	n=64	n=111		
Don't attend religious function	34 (72.34)	47 (73.43)	81 (72.97)	0.91	0.82
Don't do household work	16 (34.04)	18 (28.12)	34 (30.63)		
Don't play	17 (36.17)	19 (29.68)	36 (32.43)		
Sleep separately	08 (17.02)	14 (21.87)	22 (19.81)		

*Numbers in parenthesis indicate percentage.

Table 5: Distribution of adolescent girls according to school absenteeism during menses.

	Private school (n=80)	Government school (n=85)	Total (n=165)	χ^2 value	P value
Absent from school during menses	Yes 12 (15)	27 (31.76)	39 (23.64)	6.41	0.01
	No 68 (85)	58 (68.24)	126 (76.36)		

*Numbers in parenthesis indicate percentage.

Table 6: Distribution of adolescent girls according to the reason for not attending school during menses (n=39).

Reason	Private school (n=80)	Government school (n=85)	Total (n=165)	χ^2 value	p-value
Lack of provision for disposal of soiled pads/cloth	02 (16.67)	08 (29.63)	10 (25.64)	1.03	0.59
Pain or discomfort	03 (25)	04 (14.81)	07 (17.95)		
Fear of getting stain on clothes	07 (58.33)	15 (55.56)	22 (56.41)		

*Numbers in parenthesis indicate percentage.

Table 4 shows that 75.29% of girls in government school and 58.75% of girls in private school have certain restriction during menstruation, the difference is statistically significant. Among all restriction imposed most common was that they didn't attend religious function.

More number of girls of government school (31.76%) were absent in school during their menstruation than that of private school. The difference was statistically significant. Most common reason for absenteeism in school was fear of getting stain on clothes (56.41%)

followed by lack of provision for disposal of soiled pads/clothes.

DISCUSSION

In Indian society menstruation is considered as very personal and private matter of discussion. In the present study most of the girls (61.82%) had attained menarche between 13-15 years of age. Comparative results were shown by other study done by Sharma, Mohali, Punjab where 57.35% of girls had menarche between 13-15 years of age.¹ In present study, more girls from private school belong to nuclear family than those studying in

government school and the difference is significant statistically. In the present study it was found that 59.39% girls were aware about menstruation before puberty. Nearly similar results were found in the study by Ray et al.³

The main source of information of menstruation before menarche in present study was mothers or elder sisters of the girls (81.21%). This is similar to the study done by Thakre et al in which mothers were the main informant followed by sisters in 71.33% and 23.78% girls respectively.⁴ It was found that during menstruation 84.85% of the study subjects used only sanitary pad in the present study than that of 44.1% in the study by Shanbhag D et al and 11.25% in the study conducted by Dasgupta et al.^{7,8}

In the present study, majority of the girls (67.27%) had certain type of restriction imposed during menstruation. Most of them were restricted not to attend the religious functions during menstruation. Similar results were reported by the studies conducted by Ray et al and Dasgupta et al where 75% and 70 % respectively were restricted to attend religious places.^{3,8} 30.63% adolescent school girls in the present study were not allowed to perform house hold works but the study by Dasgupta et al and Lal where 16 % & 15% girls were not allowed to perform house hold works respectively.^{1,8}

In the present study 39 (23.64%) of the adolescent girls were found to be absent from school during their menses in comparison to a study done by Kumar et al where 42.8% adolescent girls were absent from school during menses.⁹

CONCLUSION

Maintenance of menstrual hygiene was better in private school girls as compared to government school girls, this may be due to better education status of the mothers of the private school girls. Health education sessions about menstrual hygiene should be conducted in the schools for spreading awareness regarding menstruation and menstrual hygiene.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee of S.C.B Medical College

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