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SCHOOL ABSENTEEISM DURING MENSTRUATION AMONG RURAL ADOLESCENT GIRLS IN PUNE

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ABSTRACT

Background: Menstrual related problems and inadequate school sanitation facilities have an adverse effect on adolescent girl's academic performance and school attendance especially in rural setting. The following study was undertaken to determine school absenteeism during menstruation period.

Objective: To assess the impact of menstruation on school attendance and factors affecting menstruation management.

Methods: This cross sectional study was conducted in rural field practice area of Rural Health Training Centre under Medical College, Pune among 740 adolescent girls in school by using pre-tested structured-questionnaires.

Results: It was noticed that 269 (43.2%) girls used to remain absent from school during menstruation period. School absenteeism was significantly associated with menstrual disorders, socio economic status, material used during menstruation and abdominal pain during menstruation. Nearly 339 (54.5%) of rural girls bring pads/cloths to schools during menstruation while 283 (45.5%) do not bring pads/cloths to schools due to inadequate sanitation facilities.

Conclusion: To prevent school absenteeism among these girls and intervention focusing on school menstrual management facilities and reproductive health education sessions is needed.

Keywords: Adolescent girls, Absenteeism, School sanitation facilities

INTRODUCTION

Today 1.2 billion adolescent stand at the crossroads between childhood and adult world. In India adolescent, young people between the ages of 10 to 19 accounts for nearly one quarter of total population.¹Developmentally it is a crucial period, particularly with reference to reproductive health especially among adolescent girls. The period of adolescence for a girls is a period of physical and psychological preparation for safe motherhood.² Menstrual cycle is a normal monthly function, but the menstrual related problems are one of the most common problems

among adolescent girls and might have an adverse effect on their performance in academic and other activities of daily life which may lead to school absenteeism during menstrual days. School absenteeism due to menstrual problems has been reported previously among adolescent.^{3,4}Menstrual management in school is a matter of concern. It is particularly important, when designing sanitation facilities in school such as toilets that do not accommodate menstrual management and that are unsafe to use, increase absenteeism among adolescent school girls (a first step toward dropping out of school).⁵ It is known fact that inadequate sanitation facilities at

school also result in poor menstrual hygiene. Keeping this in mind, this study was carried out with a following objective: 1) to assess the impact of menstruation on school attendance and factors affecting menstruation management.

METHODOLOGY

This study was conducted in rural field practice area of RHTC (Rural Health Training Centre) under Department of Community Medicine of Bharati Vidyapeeth Medical College, Pune, and Maharashtra. There are eleven villages under RHTC. Out of them one village viz. Pirangut was randomly selected. (by using random sampling method). Pirangut is a village in Mulshi taluka in Pune district in Maharashtra State. Pirangut is 18.3 km far from its District main city Pune. The study population included all adolescent girls in age group of 10-19 year studying in senior secondary school. A verbal consent of the adolescent girls was taken before administering the questionnaires and assured of confidentiality. School records were used for getting accurate age information. Pre-designed, pre-tested questionnaires (in local Marathi language) were distributed.

Statistical Analysis

The data so collected was compiled in Ms Excel. The electronic record set as created above, was imported to SPSS 17.0 (Statistical Package for the Social Sciences) and saved in SPSS format (*.Sav) file for the scope of repeated analysis. Initially, the descriptive statistics were generated for all the variables under study to highlight the status of the cross-section of the rural school-going girls. In case of attributes (i.e. qualitative variables) the frequency along with percent-frequency distributions were generated. Statistical significance of any association may be prevalent between two qualitative variables was tested using the popular Chi-square test. While testing of various important hypothesis related to qualitative as well as quantitative variables, statistical significance (i.e. rejection of null hypothesis and acceptance of research hypothesis) was considered at ($p < .05$). The odd ratio was

calculated to measure the strength of association between risk factor (menstrual disorder) and outcome.

RESULTS

A cross sectional study was undertaken in the senior secondary school located at Pirangut village in the Mushi District Pune under Rural Health Training Centre (RHTC) Lavale. Total 740 girls studying in class 6th to 12th (10-19 age groups) in the senior secondary school were selected for the study. 355 (48%) of girls belong to early adolescent (10-14 years) phase and while majority of girls 385 (52%) belong to late adolescent phase (15-19 years). It was revealed that out of 740; most of the girls 622 (84.05%) had attained the menarche. In present study as many as 269 (43.2%) out of 622 girls who attained menarche used to remain absent from school during menstruation. The mean number of absent days was 1.2 ± 0.7 . It is noticed that majority 210 (78.06%) of girls normally absent for just one day. However, a considerable proportion 47 (21.6 or 17.48%) of girls absent for 2 days while 12 (4.46%) remain absent for three days.

The study also indicate that school absenteeism was higher in girls from joint families 111 (48.1%) than girls belonged from nuclear families 158 (40.8%). This probably due to fact that they may have to follow various restrictions during menstruation imposed by elder in the family. However there is no significant association found between ($p = .063$) type of family and absences from school during menstruation in this study. Studies correlating socio economic status with absenteeism due to menstruation are very few. It was found that absenteeism during menstruation was higher among girls belonged to higher socio economic group (I, II) than those who belonged to lower socio economic group (III, IV, V). Probable reasons was the more fastidiousness in this group coupled with paucity of menstrual maintenance services in school. However, statistically significant association was found ($p < .0001$) between socio-economic groups and absences from school during menstruation.

Table 1: Menstrual disorder and absence from school during menstruation (n=622)

Menstrual disorders	Absent in school (%)	Present in school (%)	Odd Ratio	95%CI	P value
Yes (260)	198 (76.2)	62 (23.8)	13.089	8.901 - 19.247	<.0001
No (362)	71 (19.6)	291 (80.4)			
Total (622)	269 (43.2)	353 (56.8)			

Table 2: Type of menstrual management material and absence from school during menstruation (n=622)

Material used	Absent in school (%)	Present in school (%)	Odd Ratio	95%CI	P value
Sanitary pads(299)	143(47.8)	156(52.2)	1.433	1.042 - 1.971	<.0001
Clothes(Old+New)(323)	126(39.1)	197(60.9)			
Total(622)	269(43.2)	353(56.8)			

The prevalence of menstrual disorders among adolescent girls who had attained menarche (622) was 260 (41.8%). It was revealed that out of 622 (84.05%) girl who attained the menarche, 260 (41.8%) girls had one or more menstrual disorders. Nearly 2 out of 3 girls suffered from the commonly prevalent menstrual disorders like dysmenorrhoea (58.1%) together with many other major menstrual disorders.

Table 1 shows that high prevalence 198(76.2%) of school absence among rural school going girls who are suffering from menstrual disorders. The chi-square test for statistical association also supports the significant (p=.000) association of school-absence and menstrual-disorder. Like Chi-square test, the odd ratio =13.089 (p<.0001) CI 8.901 - 19.247 indicates that the absence from school is 13.089 higher among girls having menstrual disorder compared to girls with no menstrual disorder and the fact of such a very high association of school-absence with menstrual-disorder is statistically significant. Most of the girls reported varying degree of abdominal pain. Any abdominal pain which is not inhibiting daily activities is not included under dysmenorrhoea; however girls avoided going to school even when pain was mild. Total 416(66.8%) girls reported varying type of abdominal pain during menstruation, but 158(38.0%) girls also mentioned that the pain is not that severe that they have to miss their school. Abdominal pain during menstruation significantly associated $\chi^2=180.333$, df=1, (p<.0001) with absences from school during menstruation.

It has been found that 299 (48.0%) use sanitary pads while 323(51.9%) use clothes (new +old) which is not recommended as this may increase vulnerability to reproductive tract infections (RTIs) and other complication. In contrast to our expectations, we found that absenteeism from school is higher among sanitary pads users 143(47.8%) than clothes users 126(39.1%) (Old + new) as shown in **Table2**. Thus there is a statistically significant association between type of menstrual management material used and absence from school during menstruation ($\chi^2=197.091$, df=1, p<.0001). The odds ratio concerned to the odds (i.e. The outcome of school

absence while the use of sanitary pads for menstrual management during menstruation) is 1.433 (p<.0001) CI 1.042 - 1.971. It also indicates that uses of sanitary pads are significantly associated with higher odds of school absence during menstruation. This is probably due to fact that girls might find difficulty of disposing the used sanitary pads in the school .This study also showed a statistically significant association (p=.026) of type of menstrual management material and absence from school during menstruation. It is further verified in this study that nearly 339 (54.5%) of rural girls bring pads/cloths to schools during menstruation while 283(45.5%) do not bring pads/cloths to schools during menstruation. It is also observed in that absenteeism higher 129 (45.6%) among girls who do not bring pads/clothes during menstruation than who bring pads/ clothes to school 140 (41.3%). However there is statistically no significant association (p=.283) found between brings pad to school and absences from school due to menstruation. Among reasons highlighted by survey respondents for being absent in school during menstruation is due to inadequate sanitation facilities in their school. In our finding revealed that menstruation related absenteeism is likely to be combination of all the factors below. The reasons as shown in the in the descending order of percentages are listed below in Table 3.

Table 3 School sanitation facilities and Absence from school due to menstruation (n=283)

Reasons	Girls (%)
Common toilet entrance area for girls and boys	71 (25.08)
Water supply is outside the bathroom	66 (23.32)
Dirty toilets	67 (23.67)
No need to change	38 (13.45)
No. dustbin	12 (4.24)
No door locking system	26 (9.18)
Lack of privacy	3 (1.06)
Total	283 (100)

The most common reason reported by 71 (25.08%) girls are the common toilet entrance area for girls and boys. It appears that school

sanitation facilities are not adequate in the school.

DISCUSSIONS

In present study as many as 269 (43.2%) out of 622 girls who attained menarche used to remain absent from school during menstruation. The mean number of absent days was 1.2 ± 0.7 . The prevalence of menstrual disorders among adolescent girls who had attained menarche (622) was 260 (41.8%) in this present study. Similarly P.B. Verma et al⁷ (2011) have reported (151(50.6%) girls had dysmenorrhoea (50.6%), followed by irregular menstruation (22.9%) Anil k Agarwal and Anju Agrawal² (2010) also stated that a maximum numbers of girls that is 237 out of 698 girls (33.95%) experienced dysmenorrhoea every month and 118 (16.90%) experienced it is in most of the months and it was statistically highly significant ($P < 0.01$). This study also verified high prevalence 198(76.2%) of school absence among girls who are suffering from menstrual disorders was observed amongst the rural girls. The chi-square test for statistical association also supports the significant association of school-absence and menstrual-disorder. This is very similar to the descriptive, cross-sectional study conducted by Ray Sudeshna et al⁸ (2012) among 190 adolescent girls of a rural secondary school of West Bengal were 39% girls reported absenteeism due to menstruation. Avril M. Houston et al in their USA based study⁹ (2006) stated that 24 (15.3%) girls missed school for atleast 1-3 days while 6(3.8%) missed school for 3-7 days. Majority of girls remain absent for one days per month as severity of generalized symptoms related to menstrual problems are more severe on first few hours or day, the possible reason of this difference may be that the school they had studied may have had better infrastructure and sanitation facilities which act as major component for menstrual management at school level. Secondly the above study was conducted in developed country. Similar findings were reported by Suresh K. Kumbhar et al¹⁰(2011) clearly shows that Sickness absenteeism is significantly more among dysmenorrhic girls than non dysmenorrhic girls during menstrual period. ($\chi^2 = 13.41$ df = 1, $P < 0.001$). However Saadatu Talatu Sule and Josephine Egbunu Ukwanya¹¹ (2007) in a Nigeria study found no significant association between school absenteeism due to premenstrual symptoms. Further, it has been found that 299 (48.0%) use sanitary

pads while 323 (51.9%) use clothes (new + old) which is not recommendable as this may increase vulnerability to reproductive tract infections (RTIs) and other complication. Similarly majority of Bhavnagar (Gujarat) girls (87.3%) used old plain cloth during menstruation and only 10.6 % used commercially available sanitary napkin in a study conducted by Dr. P.B.verma et al⁷(2011).

Among other reasons highlighted by girls for being absent in school during menstruation is due to inadequate sanitation facilities in their school. The most common reason reported by 71(25.08%) girls is the common toilet entrance area for girls and boys. Anita Pradhan⁵(2009) highlighted various reasons for being absent in school during menstruation among senior secondary girls. Lack of privacy for cleaning/washing (41%) ranks high followed by lack of availability of disposal system (28%) and water supply (23%). It was noted that basic lock system was missing or not functioning. Many of these girls also reported that they usually go in pairs by taking turns to go to the toilet and wait on each other. A similar trends was observed in Ray Sudeshna⁸ (2012) in their cross sectional study among 190 adolescent girls of a rural secondary school of West Bengal. About 38% of the girls reported of being absent from school during their last menstrual period. The main reasons for their absence were lack of proper disposal facility of sanitary napkins (75%) and lack of continuous water supply for washing (67.5%) in their school.

Various Indian studies^{12, 13} point it out that there is inadequate sanitation facilities at school level. Therefore it should be mandatory to build separate toilet for girls with menstruation management facilities for in every senior secondary school.

CONCLUSION

43.2% out of 622 girls who attained menarche used to remain absent from school during menstruation. School absenteeism was found to be statistically significant with socio economic status, material used during menstruation, menstrual disorders and type of abdominal pain. However, it was not found statistically significant with type of family. Study finding revealed that menstruation related absenteeism is likely to be combination of various factors like type of school sanitation facilities. The most common

reason for being remain absent during menstruation was common toilet entrance area for girls and boys (25.08%). Thus, it is recommended that early reproductive health education and adequate school sanitation facilities should be implemented in order to achieve better reproductive health.

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