

Original Research Article

A cross sectional study on school absenteeism among female adolescents during menstruation in the rural Jharkhand

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ABSTRACT

Background: Girls especially during menstruation are likely to be affected in different ways by inadequate water, sanitation and hygiene conditions in schools, and this may contribute to unequal learning opportunities. For example, lack of adequate, separate private and secure toilets and washing facilities may discourage parents from sending girls to school. The objective of the study was to find the relation between wash facility and school absenteeism among the girls from a rural community of Jharkhand.

Methods: Community based cross sectional study at the rural area among the school girls of classes 8 to 10. Pre tested semi structured questionnaire was used. Data entry at MS Excel and data analysis was done using Statistical Package for Social Sciences (SPSS) software, version 20.0.

Results: The mean age at menarche was 12.13 years. At school, separate WASH area for girls was present in most of the cases 228 (61.1%). About 39 (9.9%) participants did not attend school during the menstrual days. Of this 29 (74%) believed that lack of separate wash at schools was a reason.

Conclusions: Presence of separate wash area for girls at school was significantly (p value<0.001) associated with good attendance during menstruations (96%).

Keywords: School absenteeism, Female adolescents, Menstruation

INTRODUCTION

Adolescence is a period between childhood and adulthood, a transition phase marked by development in secondary sexual characteristics and reproductive maturity. According to World Health Organization (WHO) 'adolescence' is a period between 10 and 19 years.¹ Menarche refers to the first menstruation and it is one of the noticeable events of puberty occurring between 10 and 16 years. Average age of menarche is 12.5 years.²

Issues and challenges related to menstrual hygiene management (MHM) in low and middle-income countries are gaining increased recognition in the water, sanitation, and hygiene (WASH) sector globally. WHO and

UNICEF (2014) have defined MHM as "Women and girls are using clean menstrual hygiene management material to absorb or collect blood, that can be changed in privacy as and when necessary for the duration of the menstrual period, using soap and water for washing the body as required and having access to facilities to dispose of used menstrual management materials."³ Girls especially during menstruation, are likely to be affected in different ways by inadequate water, sanitation and hygiene conditions in schools, and this may contribute to unequal learning opportunities. For example, lack of adequate, separate private and secure toilets and washing facilities may discourage parents from sending girls to school. In addition, lack of adequate facilities for menstrual hygiene can contribute to girls missing days at

school; this can even lead girls to drop out of education altogether at puberty.⁴ In Jharkhand only about 40% of rural aged 15-24 years use hygienic methods of protection during their menstrual period.⁵ It is therefore the responsibility of those with influence- including government officials and teachers, to find appropriate ways to talk about the issue and take necessary actions.

Unfortunately, many rural schools have inadequate water, sanitation and hygiene facilities (WASH) for girls. Many schools lack clean and private changing rooms. Many girls cannot access or afford appropriate absorbent materials and often resort to crude methods. Unable to cope with this physiologic process and to avoid suffering shame, girls adopt diverse coping strategies that vary across regions, based on personal preferences, resources available, knowledge and cultural beliefs.⁶ This affects their rights, social and mental well-being, resulting in sub-optimal school performance, school absenteeism, and drop outs. On average, adolescent girls miss at least 6 weeks of school per year due to menses. This has worsened existing gender disparities observed across regions on access, retention, transition and achievements on education.⁷

Thus, a study was done to find the relation between WASH facility and school absenteeism among the girls from a rural community of Jharkhand.

METHODS

Three health sub centers namely Irba, Chakla, and Anandi under the RHTC of department of Preventive and Social Medicine of RIMS, Ranchi was our place of study. It was a community based cross sectional study. The school going female adolescents of classes 8 to 10 was involved in present study. Study was conducted from November 2017 to October 2019, and data was collected for a period of 6 months.

According to NFHS-4 (2015-16), in Jharkhand, only about 40% of rural females, aged 15-24 years, used any hygienic methods of protection during their menstrual period.⁵

Thus taking prevalence (p) as 40, and q (1-prevalence) as 60 and absolute precision of study (d) 5% the sample size was calculated using the formula:

$$n = \frac{4pq}{d^2}$$

$$\text{Final sample size} = \frac{4 \times 40 \times 60}{5^2}$$

$$= 384$$

Sample size came out to 384. Taking 5% of non-response rate the sample size came out to be around 400.

The sampling technique used in this study was a multi stage random sampling. Rural field practice area of RIMS, Ranchi has 3 sub-centers- Irba, Chakla and Anandi. Out of these, 10 AWCs were randomly selected by lottery method, to be included in the study.

Final sample size obtained was 400, and this had to be taken from 10 villages, so,

$$\frac{400}{10} = 40 \text{ cases per village.}$$

A pretested, semi-structured questionnaire which included questions pertaining to the variables was used for data collection. From the list of all families available with the AWW, 40 families were randomly selected and the female adolescent interviewed after proper assent from the parents.

Study was conducted after approval by Institutional Ethical Committee of RIMS, Ranchi. Interview with study subjects were conducted after obtaining their written informed consent/assent in Hindi and appropriately explained.

Data were entered in MS excel spreadsheet after generation of proper template. Data entry was completed and data analysis was done using Statistical Package for Social Sciences (SPSS) software, version 20.0. Frequency table were generated to see the distribution of variable. At appropriate places data were clubbed for a meaningful analysis. Chi square test was applied to see the association between categorical variables. For all statistical analysis p value<0.05 was considered significant.

RESULTS

The study was conducted on 400 adolescent females of classes 6 to 10, residing in Ormanjhi block at sub centres Irba, Anandi and Chakla. Among them it was observed that four participants, all below 15 years of age had not attained menarche. Thus the observations have been made on 396 menstruating participants for a meaningful result. The mean age at menarche was 12.13 years (SD±0.848), minimum age being 10 years and maximum being 15 years. Approximately half, of study participants 186 (47%) had their menarche by 12 years of age followed by 111 (28%) who attained menarche by 13 years.

Table 1 shows that among the participants, 251 (63.4%) were non-tribal, 219 (55.3%) were Hindu. Many participants resided in kutchra houses (41.9%) while 243 (61.4%) were living in a nuclear family. Most adolescents were unmarried (88.4%). The socio economic status was taken according to B. G. Prasad classification 2018 and it was clubbed into upper, middle and lower class. Class IV and V, were clubbed as lower class which included 326 (82.3%) participants.

Table 1: Socio demographic profile of the participants (n=396).

Socio demographic profile		Frequency	%	
Ethnicity	Tribal	145	36.6	
	Non-tribal	251	63.4	
Religion	Hindu	219	55.3	
	Muslim	118	29.8	
	Christian	8	2	
	Sarna*	51	12.9	
Type of house	Kutchha	166	41.9	
	Semi pucca	123	31.1	
	Pucca	107	27	
Type of family	Nuclear	243	61.4	
	Joint	153	38.6	
Socio economic status#	Class I	Upper class	23	5.8
	Class II	Middle	47	11.9
	Class III	Lower	326	82.3
	Class IV	class		
	Class V	class		

*Local religion of Jharkhand. #Acc to Modified B.G. Prasad classification 2018. Upper class includes class I and II, middle class include class III, and lower class includes class IV and V of the SES.

Table 2: WASH facility among the study subjects (n=396).

WASH facility	Frequency	Percentage
Bathe daily	227	57.3
Toilet in the house	315	79
Separate wash area for girls in school	242	61.1

Table 3: Association of school attendance and WASH facility (n=396).

WASH facility at school		Attendance during menses		χ^2	df	P value*
		Present	Absent			
		Frequency (%)	Frequency (%)			
Separate wash area for girls at school	Present	232 (96)	10 (4)	17.179	1	<0.001*
	Absent	125 (81.2)	29 (18.8)			

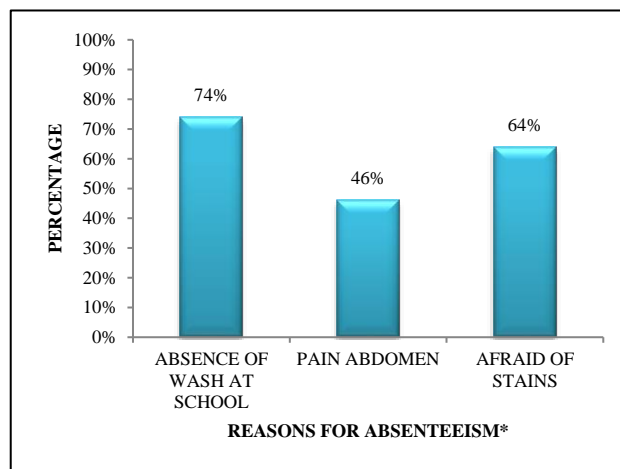
*P<0.05- significant.

Table 3 clearly shows that presence of separate wash area for girls at school was significantly (p value<0.001) associated with good attendance during menstruations (96%).

DISCUSSION

The above study shows that presence of separate wash area for girls at school was significantly (p value<0.001) associated with good attendance during menstruations. Similar study done by Tegegne et al. Menstrual hygiene management and school absenteeism among female adolescent students in Northeast Ethiopia suggested that girls in the study area were forced to abstain and drop out

Table 2 shows that most study participants had a toilet in the house 315 (79%). Taking bath daily during menstruation was found in 227 (57.3%) participants. At school, separate wash area for girls was present in most of the cases 228 (61.1%).



*Multiple answers.

Figure 1: Reasons for school absenteeism during menstruation (n=39).

It was found that 39 (9.9%) participants did not attend school during the menstrual days. Figure 1 shows that there were multiple reasons for not going to school during the menstruation. While 29 students (74%) accepted that absence of separate wash area in the school was a reason of absenteeism, 18 participants (46%) complained of pain abdomen and 25 (64%) were afraid of getting stains and feel ashamed.

of school because of lack of disposable sanitary napkins and sanitation facilities at school.⁸ In rural Peru, the beliefs and taboos associated with menstruation strongly encouraged girls to remain at home during their period, which contributes to the high rates of school absenteeism, repetition, and school dropout.⁹ It is also supported by other studies as most girls had dropped out their education due to menstruation related problems.^{10,11}

Limitations

Due to its cross-sectional nature of the study, it is difficult to establish causal relationship between the dependent and predicting variables. As the study subjects were selected purposively, there might be selection bias.

CONCLUSION

Lack of privacy at the school area is a significant cause for absenteeism of girls during the menstrual days. Thus, in order to realize girls' empowerment hence gender equality, emphasis should be given for the need of girls' preparedness for menarche and WASH facilities at school and at a community level. Policy makers should also give special attention towards making schools a comfortable place for girls.

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