



Original Research Article

EFFECT OF KNOWLEDGE, PRACTICE OF MENSTRUAL, REPRODUCTIVE HYGIENE AND AVAILABILITY OF SANITARY FACILITIES ON SCHOOL ABSENTEEISM IN URBAN AND RURAL AREAS OF DEHRADUN: A COMPARATIVE STUDY

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ABSTRACT

Background: Proper education and menstrual hygiene management facilities form a pathway for the overall growth and development of an adolescent girl. Poor availability of menstrual hygiene facilities in school can have a negative impact on the reproductive health of a girl as well as contribute to school absenteeism, sometimes resulting in school dropout. This study evaluates the various factors associated with school absenteeism during menstruation, and to assess knowledge of reproductive health. **Objectives:** 1. To assess the various factors affecting school absenteeism among adolescent girls. 2. To assess the availability and quality of sanitation facilities available in school washrooms 3. To evaluate the knowledge and practice of reproductive health in adolescent school going girls.

Materials and Methods: A school based cross sectional study was conducted among 505 school girls urban and rural areas (Government and Private schools) in Dehradun, Uttarakhand. A semi-structured, pretested close and open-ended questionnaire was prepared in both Hindi and English language to obtain maximum results. Data Entry was done in MS excel and was analysed in SPSS software.

Results: 51.56% girls in urban areas and 31.33% girls in rural areas remained absent from school during menstruation. Despite good level of knowledge of RTI/STIs 21, 48% girls in urban areas and 24.10% girls in rural areas said that they have had infection during or around menstruation. The sanitary facility in rural schools was less than that available in urban areas. Only 34.94% girls in rural areas reported of having soaps available in their school washrooms.

Conclusion: Adolescent girls should be given appropriate knowledge regarding menstruation and reproductive health. This study is able to identify the lack of knowledge and hygiene facilities which can be improved in bringing them out of misconceptions and promote menstrual health and hygiene and increase the education among girls. Separate functioning sanitary facilities are necessities that should be in school at all girls empowerment and improvement in reproductive health is to be achieved.

Keywords: Adolescent girls, Menstrual hygiene, Practices, School sanitation, School absenteeism, RTI, STI.

INTRODUCTION

Adolescence is a decisive age for girls around the world. What transpires during a girl's teenage years

shapes the direction of her life and that of her family; one such factor being menstrual hygiene and reproductive health. In developing countries good menstrual hygiene is crucial for both physical and mental health, education, and dignity of adolescent schoolgirls.^[1] Maintenance of adequate menstrual hygiene is a problem for adolescent girls attending schools, especially in rural areas. For young girls in poor, rural settings who often receive minimal instruction on what menstruation is and how it can be managed, the experience has been described as frightening, confusing and shame-inducing.^[2] Poor menstrual hygiene has been associated with serious ill-health, including reproductive tract and urinary tract infections.^[3,4]

Inadequate water and sanitation facilities is a major impediment to school attendance for girls during menstruation, compromising their ability to maintain proper hygiene and privacy.^[5] Many girls drop out of school altogether once they begin menstruating. More than half the schools in low-income countries either lack sufficient toilets for girls or they are frequently not very clean.^[6] According to the World Health Organization, the availability of adequate clean water and hygiene in schools is essential in the achievement of universal primary education, reduction of child mortality, and the promotion of gender equality.^[7] During this period, they are prone to develop reproductive health related problems which are generally neglected leading to further disease burden. A large variety of morbidities prevail among adolescents. Reproductive Tract Infections (RTI), Sexually Transmitted Infections, Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) have already appeared as serious problems.

Poor sanitation facility at schools creates a negative impact on the physiological and psychological development of menstruating girls and creates an unfriendly environment for them at school. These challenges if left unresolved will continue to undermine the potential of girls and pushing the country behind in attainment of sustainable development goals 3, 4, 5 and 6.

Good knowledge of menstrual hygiene management and awareness about reproductive health is needed to boost the overall health of women in reproductive age. This can be achieved if sanitation facilities are improved in schools and education is provided to girls about standard hygiene.

Objectives

1. To assess the various factors affecting school absenteeism among adolescent girls.
2. To assess the availability and quality of sanitation facilities available in school washrooms
3. To evaluate the knowledge and practice of reproductive health in adolescent school going girls.

MATERIAL AND METHODS

Study Design: A school based cross sectional study was done among 505 school going girls in urban (256) and rural areas (249), (Government and Private schools) in Dehradun city of Uttarakhand.

Consent: School going girls of Government and private schools under the urban and rural field practice area of Dehradun and who had given the consent for filling the questionnaire on menstrual health and hygiene were included in the study. Before commencing the study, all class teachers of the schools were explained about the purpose of the study and with the help of them, briefing of the objectives was done to the students and then questionnaires were filled by the study population.

Participants: 505 respondents studying in class 9th to class 12th in Government and Private schools of Dehradun were selected using simple random sampling.

Study Tool: A semi-structured and pretested close and open ended questionnaire was prepared and given to the study population. The questionnaires were constructed in both Hindi and English language to obtain maximum results.

Statistical Methods: After data collection, each questionnaire was given a unique code and entered into MS-Excel. This data was then exported to SPSS and analysis was done. Frequencies of variables were used to check for missed values and outliers. Descriptive analysis was used, among others, for the socio-demographic characterization of the respondents. Descriptive statistics (means, proportions, percentages) and appropriate statistical test were applied with 5% level of significance.

RESULTS

During this study 505 girls were assessed to study about the knowledge, attitude and practices of menstrual hygiene. [Table 1] gives information about the demographic profile of the study candidates.

It is seen in Table 1, that the mean age of the study subjects was 13.90 ± 1.156 years, while their age range was 12-18 years. 249 candidates (49.30%) belonged to rural residences and 256 (50.69%) resided in the urban areas. The mean age at menarche was calculated to be 12.95 ± 1.730 years. A majority of the mothers of the study candidates were housewives 418 (82.77%), followed by service done by 58 mothers (11.48%). a large number of candidates reported that the source of information on menstruation were their mothers. [Table 2]

Table 2/ Fig 2 depicts the various factors influencing school absenteeism. Out of all the candidates 132 girls (51.56%) in urban areas and 78 girls (31.33) in rural areas said that they missed school during menstruation. The most common reason stated for it was excessive pain during menstruation (87 girls in urban and 31 girls in rural areas). Even though 107

girls (41.80%) in urban areas and 143 girls (57.43%) in rural areas believed that it is harmful to attend sports/physical activities in school during menstruation only 12 girls missed school because of it in urban areas and 20 girls in rural areas. 46.88% girls in urban areas and 33.73% girls in rural areas also believed that PMS/Menstruation creates hindrance in their daily school routine; and most of the girls did nothing to resolve it (161 in urban and 186 girls in rural areas), followed by using home remedies and visiting a doctor.

Table 3/ Fig 3 depicts that only 69.92% girls in urban areas and 53.01% girls in rural areas use the school washrooms during menstruation. The various reasons for not using washroom are fear of contracting infection reported by 34 urban girls and 63 rural girls, followed by washrooms being dirty reported by 39 urban and 36 rural girls. Most of the girls in both the regions use washrooms only once during school hours. [Table 3]

Figure 4 compares the availability of various sanitary facilities in school washrooms in urban and rural areas. It is seen that 231 girls (90.23%) reported of having clean water in their school washrooms in urban areas while 217 girls (87.15%) reported the same in rural areas. While 200 girls (78.13%) reported of having soap in their school washrooms in urban areas, only 87 girls (34.94%) reported the same in rural areas. In urban areas 246 girls (96.09%) reported of having dustbins in their school washrooms, while 218 girls (87.55%) reported of same in rural areas.

Table 5 tells us about the knowledge and practice of reproductive hygiene among adolescent girls in rural and urban areas. 202 girls (78.91%) in urban areas and 161 girls (64.66%) in rural areas were aware of RTI/STIs while only 48.19% of girls in rural areas believed that HIV and other STIs are related in comparison to 75% of urban area girls. 55 girls (21.48) in urban and 60 girls (24.10%) in rural areas agreed that they have contracted an RTI/STI during or around the time menstruation. Among these girls most of the urban area girls (70.91%) visited a doctor to get it relieved while most of the girls in rural areas (41.67%) took home remedies. Although a large proportion of girls in both urban and rural areas (98.83% and 73.49% respectively) believed that a healthy is essential during menstruation especially in providing immunity against infections; 102 girls (39.84) in urban areas and 131 girls (52.61) in rural areas said that they skipped meals during menstruation. [Table 5]

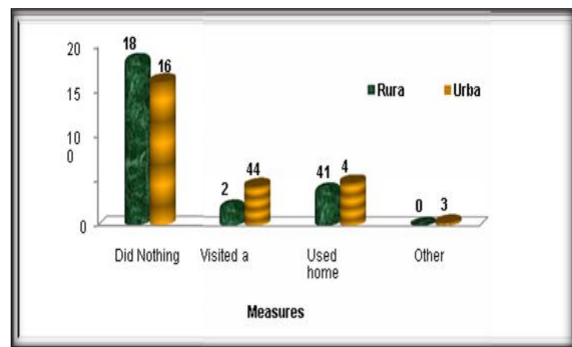


Figure 1: Assessment of Various Factors Influence School Absenteeism

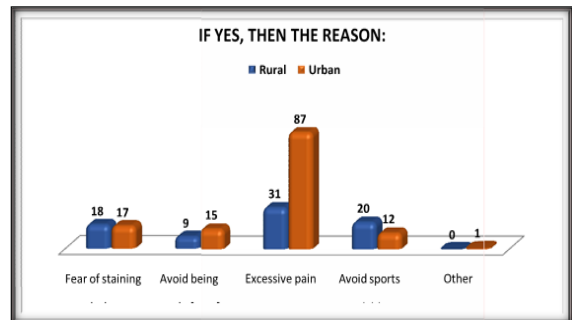


Figure 2: Have you ever missed school due to menstruation

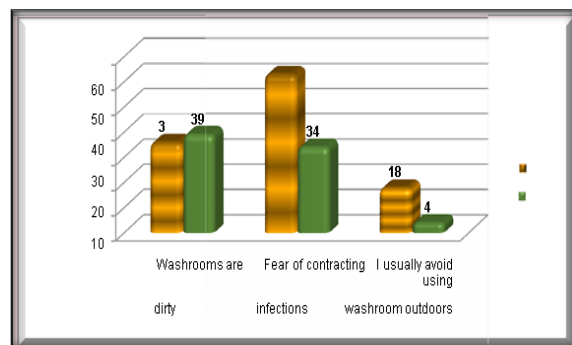


Figure 3: Assessment of quality of school sanitation facilities and their effect

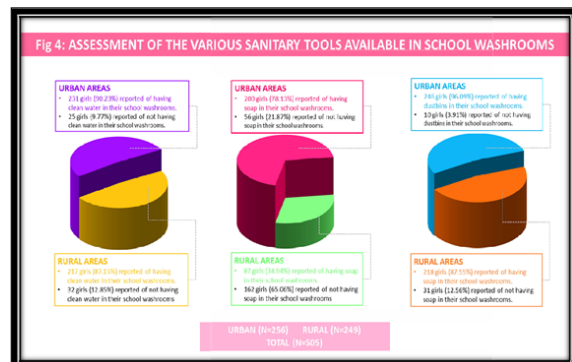


Figure 4: Assessment of the various sanitary tools available in school washrooms

Table 1: DEMOGRAPHIC DETAILS OF THE STUDY PARTICIPANTS

CHARACTERISTIC	NUMBER OF PARTICIPANTS (N=505)	NUMBER OF PARTICIPANTS (in %)
AGE IN YEARS:		
12	65	12.87
13	126	24.95
14	154	30.49
15	115	22.77
≥16	45	8.91
AGE AT MENARCHE:		
9-11	88	17.43
12-14	337	66.73
≥15	80	15.84
RESIDENTIAL STATUS:		
RURAL	249	49.30
URBAN	256	50.69
MOTHER'S OCCUPATION:		
Agriculture	2	0.39
Business	24	4.75
Labour	03	0.59
Housewife	418	82.77
Service	58	11.48
SOURCE OF INFORMATION ON MENSTRUATION:		
	URBAN	RURAL
Teacher	32	40
Mother	148	144
Sister	24	28
Friends	49	37
Doctor	03	00
Others	0	00

Table 2: Have you ever missed school due to menstruation

CATEGORY	URBAN (N= 256) Number, (%)		RURAL (N=249) Number, (%)		PERCENT OF GIRLS (N=505) Number, (%)	
HAS PMS/MENSTRUATION EVER CREATED A HINDRANCE IN YOUR DAILY SCHOOLROUTINE						
YES	120	(46.88)	84	(33.73)	20	(40.40)
NO	136	(53.12)	165	(66.27)	30	(59.60)
Do you think engaging in physical activity/sports harmful during menstruation:						
YES	107	(41.80)	143	(57.43)	25	(49.50)
NO	149	(58.20)	106	(42.57)	25	(50.50)

Table 3: Have you ever missed school due to menstruation

YES	1 2	(51.56)	78	(31.33)	210	(41.58)
NO	1 4	(48.44)	171	((68.67)	295	(58.42)

IF YES, Then the Reason

Table 4: Assesment of quality of school sanitation facilities and their effect

CATEGORY	URBAN (N= 256) Number, (%)		RURAL (N=249) Number, (%)		PERC NT OF GIRLS (N=505) Number, (%)	
DO YOU USE SCHOOL WASHROOM DURING MENSTRUATION:						
YES	179	(69.92)	132	(53.01)	311	(61.58)
NO	77	(30.08)	117	(46.99)	194	(38.42)
IF YES, THEN HOW OFTEN IN A DAY:						
	<i>N = 179</i>		<i>N = 132</i>		<i>N = 311</i>	
ONCE	91	(50.84)	95	(71.95)	186	(59.81)
TWICE	64	(35.75)	30	(22.73)	94	(30.23)
THRICE	11	(6.15)	07	(5.30)	18	(5.79)
>3 TIMES	13	(7.26)	00	(00.00)	13	(4.18)
<i>IF NO, Then Why Not</i>						

Table 5: Knowledge and practice of reproductive hygiene

CATEGORY	URBAN (N= 256) Number, (%)		RURAL (N=249) Number, (%)		PERCENT OF GIRLS (N=505) Number, (%)	
ARE YOU AWARE OF RTI/STIs:						
YES	202	(78.91)	161	(64.66)	363	(71.88)
NO	54	(21.09)	88	(35.34)	142	(28.12)
DOU YOU THINK HIV AND OTHER STIs ARE RELATED:						
YES	192	(75.00)	120	(48.19)	312	(61.78)
NO	64	(25.00)	129	(51.81)	193	(38.22)
HAVE YOU EVER CONTRACTED RTI/STI DURING OR AROUND YOUR MENSTRUAL DAYS:						
YES	55	(21.48)	60	(24.10)	115	(22.77)
NO	201	(78.52)	189	(75.90)	390	(77.23)
IF YES, THEN WHAT DID YOU DO TO RELIEVE IT:						
	N = 55		N = 60		N = 115	
VISITED A LOCAL DOCTOR	39	(70.91)	5	(8.33)	44	(38.26)
TOOK MEDICINES FROM A CHEMIST	11	(20.00)	13	(21.67)	24	(20.87)
USED HOME REMEDIES	2	(3.64)	25	(41.67)	27	(23.48)
DID NOTHING	3	(5.45)	17	(28.33)	20	(17.39)
IS A HEALTHY DIET ESSENTIAL DURING MENSTRUATION, ESPECIALLY IN PROVIDING? IMMUNITY AGAINSTS SUCH INFECTIONS:						
YES	253	(98.83)	183	(73.49)	436	(86.34)
NO	3	(1.17)	66	(26.51)	69	(13.66)
DO YOU SKIP MEALS DURING MENSTRUATION:						
YES	102	(39.84)	131	(52.61)	233	(46.14)
NO	154	(60.16)	118	(47.39)	272	(53.86)

DISCUSSION

Menstruation is an important landmark in the life of every woman. Taboos and misconceptions associated with it often lead to inadequate knowledge and substandard practice of hygiene, especially in adolescent girls. Our study was conducted in government and private schools of Dehradun in both urban and rural areas and it was found that the mean age of menarche is 12.95 ± 1.730 years which is consistent with other studies like Patavegar et al (12.7 + 1 years),^[7] and Khanna et al in Rajasthan (13.2 years).^[8] Although the topic of menstruation is less spoken about especially in rural areas, prior knowledge of it was significantly good among study candidates in both the areas with majority of girls being informed by their mother, followed by teachers and friends.

This study concluded that nearly 42% of the study candidates have at any time skipped school during menstruation which is similar to the findings of other studies like Bodat et al (43.2%)m,^[9] and Vashishtet al (~40%).^[10] However the no of girls being absent was more in the urban areas as compared to the rural areas. This might be due to the fact that the taboo associated with menstruation in urban areas is declining over time and girls can reason out their being absent from school with their parents, however in rural areas where the topic is still not discussed often girls have no choice than to attend school in order to avoid permanent drop out. Excessive pain was the most common reason stated by girls in both the regions, followed by fear of staining clothes and to avoid sports activities. Similar findings were reported by Tegegne and Sisay,^[11] and Agarwal et al.^[12]

The availability of hygienic toilet facilities also affects the school attendance of menstruating girls, absence of which results in school absenteeism. In this study it was seen 46.99% of girls in rural areas avoided using school washroom in comparison to only 30.08% girls in urban areas. The most common reason stated by them for this was because of fear of contracting infection; however the most common reason among girls in urban areas was because of dirty washrooms. While assessing the availability of various sanitary schools in school washrooms, most of the schools in rural areas were behind those in urban areas. While 78.13% girls studying in urban schools reported that they had soaps in their school toilets only 34.94% agreed to the same in rural areas. This lack of basic facilities further creates a problem in managing routine school life during menstruation. These findings were similar to other studies like that of Vashishtet al.^[10]

Adolescence is that period of growth in one's life when she acquires maturity both physically and sexually. Thus it becomes essential to start practicing good reproductive hygiene from this very age, and it can be done only when a girl has knowledge of the same. In our study it was seen that even though a significant portion of girls in both urban and rural backdrop were aware of RTI/STIs very few girls in rural areas (48.19%) believed that HIV and other STIs are related. These findings were consistent with other studies. The health seeking behaviour among the girls in urban areas was better than those in rural area girls as nearly 70% of girls who acquired infection in urban areas visited a doctor in comparison to nearly 8% girls in rural areas. However in a different study it was seen that health behaviour in a different city in rural areas was as high as 44.6%.^[13] This study also concluded that

even though the knowledge of having a proper diet in boosting health and immunity during menstruation was good in both urban and rural areas, nearly 52% of girls in rural areas skipped meals during menstruation. This could be a cause of increased rate of infection in girls in rural areas than in urban areas.

The findings in this study are subject to some limitations. It is a cross-sectional study and thus may limit causal conclusion. In addition, the study relied on self-reported information on menstruation and menstrual hygiene, which is subject to bias

CONCLUSION

This study concludes that menstruation plays a significant role in school absenteeism. Even though the rate was nearly 50% in urban areas, it was substantial in rural areas as well. The lack of basic toilet facilities in school, like clean water, soap and dustbins also contribute towards a negative school attendance during menstruation. Steps should be taken to improve these facilities to in turn boost the school attendance of menstruating girls. Since mothers are the chief source of information to girls regarding menstruation and reproductive hygiene and health, an initiative must be taken to encourage them to educate their daughters about it. The schools should be advised to conduct seminars and discussion sessions to promote good menstrual and reproductive health practises among girls. Attention should also be given to regular cleaning of already existing washrooms in schools and construction of toilets with better facilities should be promoted.

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Conflict of Interest: None

Full Forms:

RTI: Reproductive Tract Infections

STI: Sexually Transmitted Infections PMS: Pre Menstrual Syndrome

HIV: Human Immunodeficiency Virus.

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