

# A Study of Menstrual Hygiene Practices and its Impact on Academic Performance among Adolescent Girls

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Received: 27-April-2022, Manuscript No. IPHSJ-23-12758; Editor assigned: 30-April-2022, PreQC No. IPHSJ-23-12758 (PQ); Reviewed: 14-May-2022, QC No. IPHSJ-23-12758; Revised: 18-August-2023, Manuscript No. IPHSJ-23-12758 (R); Published: 15-September-2023, DOI: 10.36648/1791-809X.17.9.1059

Citation: Sihag J, Yadav P, Sunita (2023) A Study of Menstrual Hygiene Practices and Its Impact on Academic Performance among Adolescent Girls. Health Sci J Vol. 17 No. 9: 1059.

## Abstract

Menarche is the most important event in the life of an adolescent girl. During this transition, girls will experience menarche and significant changes in lifestyle, behavior, growth and development. The purpose of this study was to better understand the challenges girls face due to menstrual hygiene practices and its impact on academic performance and present recommendations to create a supportive school and home environment for adolescent girls in Haryana state. The study was conducted on 240 adolescent girls in the age group of 10-14 years and 15-19 years belonging to rural and urban areas of Hisar district. Self-developed schedules were used to delineate personal, socio-personal variables and facilities at home and school in terms of menstrual hygiene management. For the present study academic performance was measured by self-developed interview schedule. Frequency, percentages, means, standard deviation, Z- test, ANOVA and *chi-square* tests were used to analyse the data as per objectives. The study found that facilities at school in terms of menstrual hygiene management, girls reported lack of proper disposal system for sanitary materials and lack of availability of changing rooms. Nearly half of respondents reported lack of open discussion from family on menstrual hygiene management issues. Majority of respondents of rural background were unsatisfied with the family communication and guidance on menstrual hygiene management they received at homes. Present research has found that a substantial portion of girls' of menstrual hygiene impact on academic achievement. Rural respondent's academic performance had more effected as comparison to urban respondents.

**Keywords:** Adolescents; Academic performance; Menstrual hygiene management; Home and school environment

## Introduction

Onset of menstruation is one of the vital changes happening in all females during their period of adolescence. Menarche is not just a physiological process but it is a psychological, social, and behavioral transition from adolescence to womanhood.

Menstrual hygiene has been an issue of concern worldwide especially in developing nations. Insufficient opportunities to practice healthy menstrual hygiene recently received attention as a barrier to education for girls in low- and middle-income countries [1].

Globally, at least 500 million women and girls lack adequate facilities for menstrual hygiene management. Lack of WASH (water, sanitation, and hygiene) facilities, particularly in public places, such as in schools and workplaces, can pose a major obstacle to women's and girl's menstrual hygiene. Menstruation and poor MHM can also lead to school dropout, absenteeism and other psychological concerns that have substantial long term health and socio-economic ramifications for adolescent girls. In school settings, lack of clean, functional, private and gender-specific WASH facilities, fear of blood leaking, poor access to sanitary materials and inappropriate responses by male students and teachers are commonly reported to be associated with poor MHM and absenteeism due to menstruation. The present investigation is planned with the following objectives [2,3].

- Comparison the menstrual hygiene practice among adolescent girls across residential area.
- To study the effect of menstrual hygiene practice on academic performance.

## Material and Methods

Behera, et al. found that more than two-thirds (68.4%) of rural households use improved sanitation facilities. Around 30% of families have inadequate sanitation infrastructure, which means at least one household member defecates in the open space. Nearly 64.6% disposed of their menstrual absorbents in the bush or field, while 29.1% disposed in the river and 24.1% in the waste bin. Still, 40.6% of women were using clothes as menstrual absorbents, and 54.9% of the respondents reported washing their menstrual materials for re-use. About 91% of the respondents reported that the place where they changed their menstrual absorbents was safe, clean, and private. Only 22.5% of women responded to having water and soap at their menstruation management area [4].

Garg, et al. stated that prevalence of school absenteeism during menstruation among adolescent girls of resettlement colony was 43.1%. Out of 307 girls who had school absenteeism, 285 (92.8%) had missed for 1-3 days. The most prevalent self-reported reasons for school absenteeism during menstruation were pain during menstruation 75.6% followed by staining of cloths 43.6% and uncomfortable feeling 39.4%. School absenteeism was significantly associated with studying in government school, suffering from menstruation related problems, and pads being provided from schools [5].

Bulto found that 72.5 percent of school adolescents had adequate MHM practice and just 34.7 percent had acceptable overall knowledge about menstruation. Urban adolescents were getting information about menstruation from mothers and teachers. School toilets with inside lock, not missing school during menstruation, any whitish or grey discharge per-vagina and having good general awareness of menstruation were all significantly linked with adequate MHM practice [6].

Yaliwal, et al. stated that 70.5 percent of the girls reached between the ages of 12 and 14.9 years, 37.2 percent of the girls had 28-34 day cycles and 12.2 percent of the girls had heavy periods. Dysmenorrhea affected 61.95 percent of the girls, and 9.7 percent of the girls indicated they needed pain medication. 70.7 percent of the girls used disposable sanitary napkins, 12.7 percent used cloth and 15.3 percent used both 55.5 percent of the girls who used cloth as an absorbent did not allow the material to dry in the sun. More than two times a day, 57.1 percent of the girls washed their genitals [7].

The study was conducted purposively in Hisar district of Haryana state as the study required frequent visits to each selected school for data collection. One district was selected randomly. From selected district, to draw rural sample two villages was selected randomly and from selected villages two schools was randomly selected. For urban sample similar procedure was adopted to draw the sample from schools located in city area. From the selected schools of rural locations, a total of 120 adolescent girls which comprise 60 early adolescents and 60 late adolescents were selected randomly. Similar procedure was adopted for selection of urban sample. Hence, a total of 240 adolescent girls (120 rural and 120 urban)

constituted the sample for the study. Self-developed questionnaire was used to obtain information on personal and socio-economic variables. Information on facilities at school and home in terms of MHM was collected with the help of self-developed interview schedule. For the present study was academic performance measured by self-developed interview schedule [8].

### Statistical analysis of the data

To draw the inferences as per different objectives data analyzed using appropriate statistical tests-frequency and percentage, mean, Standard Deviation. *chi-square* test, *z* test and Anova [9]

## Results

Data of presents on the availability and quality of facilities at the schools as per reports given by rural and urban adolescents. Results revealed that nearly 3/4<sup>th</sup> of total adolescents (72.1%) agreed that there were separate and clean latrines with doors. Further 68.7% respondents were agreed on availability of running water supply inside the toilets, availability of soap and wash material available 60.4% at washing area. Regarding facilities of disposal system for pads, sanitary materials slightly more than half of girls (54.6%) reported their availability [10]. More than half of the girls (51.3%) reported lack of changing room to manage periods at school. Positive signs of government initiatives with regard to MHM facilities in schools were observed as 83.3% and 88.3% adolescent girls confirmed by availability of pharmacy kit and sanitary protection material respectively. Moving towards the facilities related to emergency uniform, 75.4% reported unavailability in the school. Regarding education and guidance on MHM both urban (67.5%) and rural (62.5%) girls reported that various activities were conducted in the school. (24.6%) were agreed with emergency uniform provided and (66.7%) permission to leave class if leaking (65%) with education and guidance provided on MHM (Table 1).

**Table 1.** Facilities at school in term of menstrual hygiene management (MHM).

Sr. no	Area/Facilities		Rural (n=120) f (%)	Urban (n=120) f (%)	Total (n=240) f (%)
1.	Separate and clean latrines with doors only for girls	Yes	71 (59.2)	102 (85)	173 (72.1)
		No	49 (40.8)	18 (15)	67 (27.9)
2.	Running water supply inside the toilet	Yes	67 (55.8)	98 (81.7)	165 (68.7)
		No	53 (44.2)	22 (18.3)	75 (31.3)
3.	Soap/wash material available at washing area	Yes	58 (48.3)	87 (72.5)	145 (60.4)
		No	62 (51.7)	33 (27.5)	95 (39.6)

4.	Disposal system for pads/sanitary material	Yes	57 (47.5)	74 (61.7)	131 (54.6)
		No	63 (52.5)	46 (38.3)	109 (45.4)
5.	Changing room to manage period at school	Yes	28 (23.3)	89 (74.2)	117 (48.7)
		No	92 (76.7)	31 (25.8)	123 (51.3)
6.	Pharmacy kit and medicines available at school	Yes	98 (81.7)	102 (85)	200 (83.3)
		No	22 (18.3)	18 (15)	40 (16.7)
7.	Sanitary protection materials available at school	Yes	102 (85)	110 (91.7)	212 (88.3)
		No	18 (15)	10 (8.3)	28 (11.7)
8.	Emergency uniform provided	Yes	24 (20)	35 (29.2)	59 (24.6)
		No	96 (80)	85 (70.8)	181 (75.4)
9.	Permission to leave class if leaking	Yes	65 (54.2)	95 (79.2)	160 (66.7)
		No	55 (45.8)	25 (20.8)	80 (33.3)
10.	Education and guidance provided regarding MHM	Yes	75 (62.5)	81 (67.5)	156 (65)
		No	45 (37.5)	39 (32.5)	84 (35)

This study showed data on assessment area wise facilities at home in term of menstrual hygiene management. Majority of the respondents (93.8%) had clean and hygiene toilet and bathroom facilities at home followed by 91.3% respondents reported proper privacy in toilet and bathroom. Majority of rural (91.7%) and urban (97.5%) homes had adequate supply of clean water facilities. Similar trend was observed for availability of soap and hand wash materials [11]. More than half of the respondents (67.1%) had proper disposal facility for MHM material, approximately three fourth (71.7%) had availability of adequate and hygiene sanitary material for periods, 57.5% respondents received proper health care facilities during menstruation, and 52.9% had proper dietary care during

menstruation. Regarding behavioral practices by family member's nearly one third (30.8%) rural respondents and 20.8 % urban girls reported various social and cultural restrictions used by their families. Regarding family communication and guidance on MHM issues more than half of the rural adolescents (66.7%) reported lack of such activities, whereas, their counter parts were at better position as 74.2% respondents agreed on the fact that their families were providing guidance and healthy communication on MHM issues (Table 2).

**Table 2.** Facilities at home in term of menstrual hygiene management (MHM).

Sr. no	Facilities/Area		Rural (n=120) f (%)	Urban (n=120) f (%)	Total (n=240) f (%)
1.	Clean and hygienic toilet and bathroom facilities	Yes	107 (89.2)	118 (98.3)	225 (93.8)
		No	13 (10.8)	02 (1.7)	15 (6.2)
2.	Proper privacy in toilet and bathroom	Yes	101 (84.2)	118 (98.3)	219 (91.3)
		No	19 (15.8)	02 (1.7)	21 (8.7)
3.	Adequate supply of clean water facilities	Yes	110(91.7)	117 (97.5)	227 (94.6)
		No	10 (8.3)	03 (2.5)	13 (5.4)
4.	Availability of soap and hand wash materials	Yes	103(85.8)	118 (98.3)	221 (92.1)

		No	17 (14.2)	02 (1.7)	19 (7.9)
5.	Proper disposal facility for MHM material	Yes	74 (61.7)	87 (72.5)	161 (67.1)
		No	46 (38.3)	33 (27.5)	79 (32.9)
6.	Availability of adequate and hygiene sanitary material for periods	Yes	74 (61.7)	98 (81.7)	172 (71.7)
		No	46 (38.3)	22 (18.3)	68 (28.3)
7.	Proper health care during menstruation	Yes	63 (52.5)	75 (62.5)	138 (57.5)
		No	57 (47.5)	45 (37.5)	102 (42.5)
8.	Proper dietary care during menstruation	Yes	59 (49.2)	68 (56.7)	127 (52.9)
		No	61 (50.8)	52 (43.3)	113 (47.1)
9	Normal behavioral practices by family member	Yes	83 (69.2)	95 (78.2)	178 (74.2)
		No	37 (30.8)	25 (20.8)	62 (25.8)
10	Open discussion and guidance from family on menstrual issues	Yes	40 (33.3)	89 (74.2)	129 (53.7)
		No	80 (66.7)	31 (25.8)	111 (46.3)

### Distribution of adolescents on academic achievement

This study presents data on distribution of adolescents on academic achievement. Clearly envisages that 30.8%, 53.4%, 15.8% respondents of rural area had poor, average and excellent academic performance respectively, whereas, in urban area

20.8% had poor, 50% adolescents had average performance and 29.2% had excellent performance with regard to menstrual distress effects on academic achievement (Table 3).

**Table 3.** Distribution of adolescents on academic achievement

Academic achievement/Area		Rural (n=120) f (%)	Urban (n=120) f (%)	Total (n=240) f (%)
Academic achievement	Poor (33%-50%)	37 (30.8)	25 (20.8)	62 (25.8)
	Average (51%-70%)	64 (53.4)	60 (50)	124 (51.7)
	Excellent (71%)	19 (15.8)	35 (29.2)	54 (22.5)

### Discussion

Appropriate facilities at school and home in term of MHM help to reduce the menstrual distress among the adolescent girls. Results revealed that more than half of the respondents irrespective with the area were satisfied with school and home facilities. The results revealed that rural adolescents reported lack of school and home facilities in terms of MHM in comparison to urban adolescent girls. Ha and Alam study observed significant urban-rural differences in terms of menstrual hygiene management practices. Like the residents of urban areas have better menstrual hygiene management practices than rural areas. As a result, the percentage of respondents who did not participate in social activities, school or work due to their last menstruation was significantly higher in

rural areas than urban. Study finding Guya, et al. that lack of soap, hand wash facilities, emergency pads and privacy are important determinant for proper practice of menstrual hygiene and school attendance and have been identified as main problems in many schools in developing countries. Kapoor and Khari, finding that 85% girls had toilet facility at home; still many had poor menstrual hygienic practices, thus emphasizing the need of health education to them [12,13].

Overall more than half of the respondent satisfaction with facilities at school related with MHM. As per academic achievement of adolescents in context of menstrual distress 25.8% respondents had poor performance followed by 51.6% respondents who had average rest of the 22.5% had excellent academic achievement. Vayeda, et al. findings the availability of

WASH facilities at school is essential to reduce school absenteeism. There was a taboo against taking any tablets for treating menstrual disorders, so girls suffer and may remain absent from school, but after the intervention, the use of painkiller tablets increased from 10% to 26% and taking any treatment increased from 25% to 52%. Results were consistent with finding of study among Gulf University medical students Manama, Kingdom of Bahrain reported that academic performance was affected by menstruation in several ways mainly study time 76%, concentration 65.8%, participation in group activities 58.1% and examination performance 51.8% and class attendance 40.8%.

## Conclusion

The study found that facilities at school in terms of menstrual hygiene management, girls reported lack of proper disposal system for sanitary materials and lack of availability of changing rooms. Study revealed that academic performance of rural adolescent girls was more affected as comparisons to urban adolescent girls. The present study clearly stated the majority of students were having more difficulty to cope up with the class room performance during menstruation.

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