



MENSTRUAL RELATED PRACTICES AND HYGIENE AMONG ADOLESCENT GIRLS – A COMPARATIVE STUDY FROM PRIVATE, GOVERNMENT AND TRIBAL SCHOOLS OF AMRAVATI DISTRICT

Dr. Pravina V. Kale

Post Graduate Student, Department of Pathology, Dr. PDMMC, Amravati, Maharashtra, India

Dr. Priya A. Warbhe*

Associate Professor, Department of Community Medicine, Dr. PDMMC, Amravati, Maharashtra, India *Corresponding Author

Dr. Ajay K. Jawarkar

Professor and Head, Department of Community Medicine, Dr. PDMMC, Amravati, Maharashtra, India

ABSTRACT

Background: Adolescence in girls has been recognized as a special period which signifies the transition from girlhood to womanhood. Good hygienic practices such as the use of sanitary pads and adequate washing of the genital area are essential during menstruation. Hygiene-related practices of women during menstruation are of considerable importance, as it has a health impact in terms of increased vulnerability to reproductive tract infections. **Methods:** Cross sectional, descriptive and comparative study was carried out in randomly selected Private, Government and Tribal schools of Amravati district. **Results:** Total 450 adolescent girls from Government, Private and Tribal schools participated in the study. The mean age at menarche of government, private and Tribal school girls were 12.98 ± 0.79 years, 12.55 ± 0.81 years, and 13.07 ± 1.23 years respectively. Menstrual cycle was regular in majority of girls from government, private and tribal school girls. Menstrual flow lasted for 2-7 days in 86% and 82.7% of government and private school girls respectively while the flow was less than 2 days in 78.7% of tribal school girls. Adolescent girls from government, private and tribal schools (92.7%, 98% and 55.3% respectively) used sanitary pads during menstruation. **Conclusions:** Menstrual cycle was regular in majority of girls from government, private and tribal school girls. Nearly all girls from government and private schools knew about menstruation prior to menarche and the source of information were mothers or sisters and radio and television. Almost all girls from government, private school used sanitary pads during menstruation but girls from tribal school used reusable cloths mainly.

KEYWORDS : Menstrual related practices, Hygiene, Adolescent girls, Tribal schools

INTRODUCTION

WHO has defined Adolescence as the period between 10-19 years of life. Adolescent girls constitute about 1/5th total female population in the world. Adolescence in girls has been recognized as a special period which signifies the transition from girlhood to womanhood. Menstruation is a phenomenon unique to all females.¹ Menstruation is generally considered as unclean in the Indian society. Isolation of the menstruating girls and restrictions being imposed on them in the family, have reinforced a negative attitude towards this phenomenon.² The first menstruation is often horrifying and traumatic to an adolescent girl because it usually occurs without her knowing about it.³ There is a substantial lacuna in the knowledge about menstruation among adolescent girls. Several research studies have revealed this gap and they showed that there was a low level of awareness about menstruation among the girls when they first experienced it.⁴ Many studies have revealed that most of the adolescent girls had incomplete and inaccurate information about the menstrual physiology and hygiene. It also revealed that mothers, television, friends, teachers and relatives were the main sources which provided information on menstruation to the adolescent girls.⁵ Good hygienic practices such as the use of sanitary pads and adequate washing of the genital area are essential during menstruation. Women and girls of the reproductive age need access to clean and soft, absorbent sanitary products which can in the long run, protect their health.⁶ Hygiene-related practices of women during menstruation are of considerable importance, as it has a health impact in terms of increased vulnerability to reproductive tract infections (RTI). The interplay of socio-economic status, menstrual hygiene practices and RTI are noticeable. Today millions of women are sufferers of RTI and its complications and often the infection is transmitted to the offspring of the pregnant mother. Women having better knowledge regarding menstrual hygiene and safe practices are less vulnerable to RTI and its consequences.⁵

To assess and compare menstrual hygiene and practices amongst adolescent girls from selected schools

MATERIALS AND METHOD

Study Setting:- Study was carried out in randomly selected Private, Government and Tribal schools of Amravati district.

Study Design:- Cross sectional, descriptive and comparative study

Sample Size And Sampling Method:- Random Sampling to choose 2 schools from each cluster (Private, government and Tribal schools), then complete enumeration of sample based on inclusion criteria.

Study Period:- 6 months.

Inclusion Criteria

- Adolescent girls (10-19 years), Achieved Menarche
- Willing to participate after giving written informed consent

Research Tool

Pretested, Validated questionnaire in language best understood by girls was filled from each participant, written response to each question was collected back after stipulated time on same day in classroom setting.

Health Education regarding menstrual hygiene and related practices were provided to all girls in the form of power-point presentation and personal queries were answered.

Each school was provided with health education material in form of posters to be displayed in school premises.

Ethical consideration and confidentiality

This study was initiated only after approval from the institutional ethical committee and permissions from the school authorities. Written consent from the participant's guardian and assent from participants were obtained after explaining the objectives of the study.

OBJECTIVE

Statistical Analysis

Data was entered into MS excel. Based on the questionnaire, proportions and percentages were calculated for qualitative data.

RESULTS

Total 450 adolescent girls from Government, Private and Tribal schools participated in the study. The mean age of government, private and tribal school girls were 14.25±0.67 years, 14.09±0.43 years, and 14.73 ± 1.58years respectively.

The majority of girls were Hindu by religion, 70% girls from government, 78% from private and 98.7% from tribal schools. Nearly 72.7% girls from government and 98.7% girls from private schools were residing in urban area while 100% girls from tribal schools were from tribal area. The details of mean age, religion and place of residence are shown in Table 1.

Table 1 - Mean age, religion and Place of residence of study participants

Variables	Government School	Private School	Tribal School
Mean Age	14.25±0.67 years	14.09±0.43 years	14.73±1.58 years
Religion			
Hindu	105(70)	117(78)	148(98.7)
Muslim	0(0)	10(6.7)	0(0)
Jain	0(0)	4(2.7)	0(0)
Christian	0(0)	3(2)	0(0)
Buddhist	45(30)	12(8)	2(1.3)
ST	0(0)	1(0.7)	0(0)
Others	0(0)	3(2)	0(0)
Place of residence			
Urban	109(72.7)	148(98.7)	0(0)
Rural	41(27.3)	2(1.3)	0(0)
Tribal	0(0)	0(0)	150(100)

(Figures in parenthesis indicates percentages)

Table 2 - Socio demographic Details of study participants

Variables	Government School	Private School	Tribal School
Education of Father			
Illiterate	1(0.7)	2(1.3)	26(17.3)
Up to 10th standard	58(38.7)	10(6.7)	93(62)
12th standard	74(49.3)	25(16.7)	31(20.7)
Diploma or Above	17(11.3)	113(75.3)	0(0)
Education of Mother			
Illiterate	6(4)	1(0.7)	44(29.3)
Up to 10th standard	63(42)	14(9.3)	91(60.6)
12th standard	68(45.3)	29(19.3)	15(10)
Diploma or Above	13(8.7)	106(70.7)	0(0)
Occupation of Father			
Profession	17(11.3)	84(56)	0(0)
Semi Profession	73(48.7)	5(3.3)	53(35.3)
Clerical, shop owner, farmer	30(20)	55(36.7)	51(34)
Skilled worker	14(9.3)	5(3.3)	3(2)
Semi-Skilled/Unskilled	5(3.3)	0(0)	35(23.3)
Not Alive	11(7.3)	1(0.7)	8(5.3)
Occupation of Mother			
Profession	11(7.3)	33(22)	0(0)
Semi Profession	8(5.3)	0(0)	0(0)
Clerical, shop owner, farmer	17(11.3)	9(6)	40(26.7)
Skilled worker	2(1.3)	2(1.3)	12(8)
Homemaker	109(72.7)	105(70)	84(56)
Not Alive	3(2)	1(0.7)	14(9.3)

Family Type			
Nuclear	94(62.7)	108(72)	53(35.3)
Joint	56(37.3)	42(28)	97(64.7)

Parents education- 61%, 92 % and 21% girls fathers were educated above 12th class from government, private and tribal schools respectively and 54%, 90% and 10% girls mothers were educated above class 12th from government, private and tribal schools respectively. Parents occupation- Fathers of participating girls were employed as semi-professional in 48.7% government school girls and 35.3% tribal school girls while were employed as professional in 56% of private school girls. Majority of mothers of participating girls from government, private and tribal schools were homemakers (72.7%, 70% and 56% respectively). Majority of girls from government and private school lived in nuclear type of family (62.7% and 72% respectively) while 64.7% girls from tribal schools lived in joint family. The socio demographic details of the study participants are shown in Table 2.

Table 3 - Details of Menstrual Cycle among study participants

Variables	Government School	Private School	Tribal School
Mean Age at menarche	12.98 ± 0.79 years	12.55 ± 0.81 years	13.07 ± 1.23 years
Menstrual Cycle			
Regular	122(81.3)	123(82)	131(87.3)
Irregular	28(18.7)	27(18)	19(12.6)
Flow			
<2days	8(5.3)	6(4)	118(78.7)
2-7 days	129(86)	124(82.7)	12(8)
>7 days	13(8.7)	20(13.3)	20(13.3)
Bleeding			
Scanty	8(5.3)	7(4.7)	110(73.3)
Normal	124(82.7)	140(93.3)	29(19.3)
Excess	18(12)	3(2)	11(7.3)

(Figures in parenthesis indicates percentages)

The mean age at menarche of government, private and tribal school girls were 12.98± 0.79 years, 12.55±0.81 years, and 13.07 ± 1.23 years respectively. Menstrual cycle was regular in majority of girls from government, private and tribal school girls. Menstrual flow lasted for 2-7 days in 86% and 82.7% of government and private school girls respectively while the flow was less than 2 days in 78.7% of tribal school girls. Bleeding was normal in 82.7% and 93.3% of government and private school girls while it was scanty in 73.3% of tribal school girls. The details of menstrual cycle among the study participants are shown in Table 3.

Table 4 - Information about menstruation among study participants

Did you receive any information about menarche and menstrual hygiene prior to menarche?	Categories	Government School	Private School	Tribal School
Yes	Yes	107(71.3)	131(87.3)	70(46.7)
	No	43(28.7)	19(12.7)	80(53.3)
What was your source of information regarding menstruation?	Mother/Sister	116(77.3)	138(92)	14(9.3)
	Teacher	17(11.3)	3(2)	40(26.7)
	Friends	16(10.7)	9(6)	12(8)
	Radio/TV	1(0.7)	0(0)	84(56)

(Figures in parenthesis indicates percentages)

Majority of girls from government and private schools (71.3% and 87.3% respectively) knew about menstruation prior to menarche. Their source of information was mother/sister in 77.3% and 92% respectively while it was radio and television

for 56% of tribal school girls. The details of information about menstruation among study participants are shown in Table 4.

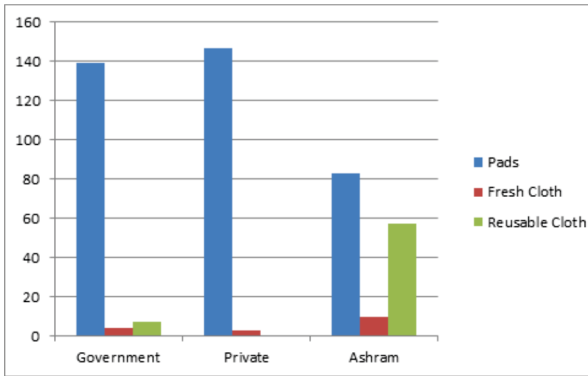


Figure 1: Types of absorbent used during menstruation

Above figure shows majority of girls from government, private and tribal schools (92.7%, 98% and 55.3% respectively) used sanitary pads during menstruation.

Table 5 - Menstrual Hygiene Practices among study participants

Types of absorbent used during menstruation	Categories	Government School	Private School	Tribal School
Types of absorbent used during menstruation	Sanitary Pads	139(92.7)	147(98)	83(55.3)
	Fresh Cloth	4(2.7)	3(2)	10(0.6)
	Reusable Cloth	7(4.7)	0(0)	57(38)
Number of times absorbent changed per day	2-5 times	22(14.7)	29(19.3)	21(14)
	> 5 times	5(3.3)	8(5.3)	72(48)
	As per need	123(82)	113(75.3)	57(38)
Disposal of used menstrual absorbent	Dust Bin	105(70)	129(86)	29(19.3)
	Wash and Reuse	9(6)	4(2.7)	81(54)
	Burn/ Bury	32(21.3)	14(9.3)	4(2.7)
	Flush in toilet	4(2.7)	3(2)	36(24)
Cleaning of Genital area per day	<3 times	58(38.7)	65(43.3)	87(58)
	>3 times	61(40.7)	45(30)	41(27.3)
	Only during bath	31(20.7)	40(26.6)	22(14.6)
Agent used for cleaning purpose	Only water	42(28)	66(44)	141(94)
	Soap and water	83(55.3)	65(43.3)	9(6)
	Antiseptic	25(16.7)	19(12.7)	0(0)

(Figures in parenthesis indicates percentages)

Majority of girls from government, private and tribal schools (92.7%, 98% and 55.3% respectively) used sanitary pads during menstruation. 82% from government and 75.3% from private schools changed their pads as per need while 48% of tribal school girls changed their pads more than 5 times in a day. 70% from government and 86% from private schools disposed pads in dust bin while 54% of tribal school girls washed and reused the cloth. 40.7% girls from government school cleaned their genitalia more than 3 times during menstruation while majority of girls from private and tribal school cleaned less than 3 times (43.3% and 58% respectively). Soap and water was the main agent used by government school girls (55.3%) while majority of the girls from private and tribal school used only water (44% and 94% respectively). The details of menstrual hygiene practices among study participants are shown in the Table 5.

DISCUSSION

In our study the mean age of government, private and tribal school girls were 14.25±0.67 years, 14.09±0.43 years, and

14.73 ±1.58years respectively. Mean age at menarche of government, private and tribal school girls were 12.98± 0.79 years, 12.55±0.81 years, and 13.07 ± 1.23 years respectively.

Study from rural area southern Haryana shows mean age (± standard deviation [SD]) of the study participants was 15.5 ± 1.09 years. The mean age (±SD) of menarche in the study population was 12.8 ± 1.73 years.⁷

In our study around 61%, 92% and 21% girl's fathers were educated above 12th class from government, private and tribal schools respectively and 54%, 90% and 10% girl's mothers were educated above class 12th from government, private and ashram schools respectively.

Father's occupation consisted of semi-professional in 48.7% government school girls and 35.3% in tribal school girls while they were employed as professionals in 56% of private school girls. Majority of mothers of government, private and tribal school girls were homemakers (72.7%, 70% and 56% respectively).

Study from North Karnataka showed 44.3% of the fathers of the girls had primary education or were lesser educated. Similarly, 49.7% of the mothers had primary education or were lesser educated. Most of the fathers of the girls were farmers (29.7%) or laborers (21.1%).³ Majority of the mothers were housewives (69.7%). also a study from rural area southern Haryana showed mothers of more than two-fifth of the participants (43.5%) were illiterate.⁷

In our study- Menstrual cycle was regular in majority of girls from government, private and tribal school girls. Menstrual flow lasted for 2-7 days in 86% and 82.7% of government and private school girls respectively while the flow was less than 2 days in 78.7% of tribal school girls. Bleeding was normal in 82.7% and 93.3% of government and private school girls while it was scanty in 73.3% of tribal school girls.

Study from North Karnataka showed majority of the girls had their periods every 28–34 days (37.2%). A significant number of girls (12.2%) said they have heavy periods. Most of the girls bled for 6 days or less, however 9% of the girls said that they bleed for 7 or more days.⁸

In our study majority of girls from government and private schools (71.3% and 87.3% respectively) knew about menstruation prior to menarche. Source of information was mother or sister for girls from government and private schools (77.3% and 92% respectively) while it was radio and television for 56% of tribal school girls.

A systematic review and analysis from India showed among 88 studies with available information, the pooled prevalence of pre-menarch awareness was 48%. Among girls aware prior to menarche, mothers were the most frequent source of information followed by friends. Other sources such as relatives (including sisters) and teachers were less commonly reported.⁹

In current study majority of girls from government, private and tribal schools (92.7%, 98% and 55.3% respectively) used sanitary pads during menstruation. Around 40.7% girls from government school cleaned their genitalia more than 3 times during menstruation while majority of girls from private and tribal school cleaned less than 3 times (43.3% and 58% respectively). Soap and water was the main agent used by government school girls (55.3%) while majority of the girls from private and tribal schools used only water (44% and 94% respectively).

In a study from Pondicherry, three-fourth of girls (77%) used

sanitary pads and 100% of girls took bath daily. Practice of washing genitalia by soap and water during menses was observed by only 43% in this study.¹⁰

In a study from Karnataka, around 46.06% of the girls preferred old cloth pieces rather than sanitary pads as menstrual absorbent. The reasons cited by the participants for not using sanitary pad was high cost, shyness to buy, lack of knowledge and disposal problems.¹¹

CONCLUSION

Menstrual cycle was regular in majority of girls from government, private and tribal school girls. Menstrual flow lasted for 2-7 days in most of girls from government and private school while it was less than 2 days in majority of tribal school girls. Menstrual bleeding flow was normal in almost all of government and private school girls while it was scanty in most of tribal school girls. Nearly all girls from government and private schools knew about menstruation prior to menarche and the source of information were mothers or sisters for government and private schools girls while it was radio and television for tribal school girls.

Almost all girls from government, private schools used sanitary pads during menstruation but girls from tribal school used reusable cloth. Most of the girls changed their pads as per need. Majority of government and private schools girls disposed sanitary pads in dust bin while 54% of tribal school girls washed and reused the cloth. Nearly 41% girls from government school cleaned their genitalia more than 3 times during menstruation while majority of girls from private and tribal school cleaned less than 3 times. Soap and water was the main agent used by government school girls (55.3%) while majority of the girls from private and tribal schools used only water (44% and 94% respectively).

RECOMMENDATIONS

Menstrual hygiene and use of sanitary disposable pads during menstruation needs to be emphasized and introducing it through familiar background such as school and through teachers encourages girls to adopt healthy habits. Further detail investigations needs to be carried out to assess reasons behind scanty menstrual flow and other menstruation related issues particularly in tribal girls.

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