# **Original Research Article**

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# A comparative study of knowledge and practice regarding menstrual hygiene among private and government schools of Jaipur city

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# **ABSTRACT**

**Background:** Menstruation is a normal physiological process to the females but sometimes it is considered as unclean phenomenon in the society. Hence this community based study was carried out with the objective to assess the difference in level of knowledge and practice regarding menstrual hygiene among school going adolescent girls of government and private school.

**Methods:** A community-based cross-sectional study was conducted from July 2017 to April 2018 to find out the difference in prevailing knowledge and practices regarding menstrual hygiene between private and government school going adolescent girls of Jaipur city. Data were collected by the predesigned and pretested structured questionnaire.

**Results:** 87.57% girls from private schools were aware of menstruation prior to attainment of menarche. The difference in knowledge regarding menstruation in students of private and government school was significant. More than three fourth of the participants (76.95%) were from private school use sanitary pad.

**Conclusions:** Knowledge and practice regarding menstruation was better in private school girls as compared to those of government school. Significantly more number of girls in the private schools was using sanitary pads as compared to government school girls.

Keywords: Adolescent girls, Menarche, Menstrual hygiene, School

#### **INTRODUCTION**

According to World Health Organization, a person aged 10–19 years is considered as an adolescent. The transition period between the childhood and adulthood is called adolescence which is marked with the growth and development of the child. During this period, physical, psychological, and biological development of the child occurs. Due to lack of knowledge on menstruation preparedness and management or due to shyness and embarrassment the situation becomes worse for school going girls. An additional source of infection may occur due to type of absorbent used during menstruation which is said to be of paramount importance since reusable materials could cause infections if improperly cleaned

and poorly stored.<sup>4</sup> Since 2014, May 28 is observed as the menstrual hygiene day worldwide to raise awareness regarding the challenges women and girls face to deal with menstrual cycles and highlight solutions implementable at global, national, and local levels to address these issues.<sup>5</sup>

In many schools, due to shyness or embarrassment both male and female teachers are not ready to discuss menstruation and menstrual hygiene management with students. The female teachers are also not available in many schools. Teachers often skip such topics in books as they do not want any open discussion in the class or to escape from the questions asked by students. Teachers also feel shy and embarrassed to discuss such topics in

class.<sup>6</sup> Therefore, targeting school girls at the time of adolescence is an appropriate strategy and it is important to know about their knowledge and practice regarding menstrual hygiene since it is the time when most of them are curious about their bodily changes and also active learning phase takes place. The present study is therefore conducted among adolescent school girls in a government and private school to study the level of awareness about menstruation and assess their menstrual hygiene practices in Jaipur city.

#### **METHODS**

This community based study was carried out to find out the difference in prevailing knowledge and practices regarding menstrual hygiene between private and government school going adolescent girls of Jaipur city. The study was conducted under Preventive and Social Medicine department of SMS Medical College, Jaipur (Rajasthan), India.

Study area: Senior secondary schools of Jaipur city.

*Study type:* This is a community based descriptive type of observational study which was conducted on adolescent female students (10-19 years) of Jaipur city.

Study design: Cross sectional study design.

#### Study period

After getting approval from the institutional research review board and Ethical committee, plan of study was executed. Data collection for this study was carried out from 1<sup>st</sup> July 2017 to 10<sup>th</sup> April, 2018.

# Study universe

Female students of age group 10-19 years studying in class 6<sup>th</sup> -12<sup>th</sup> of randomly selected schools of Jaipur city.

# Inclusion criteria

Inclusion criteria were female students of 10 to 19 years studying in government and private senior secondary schools having ≥500 students of Jaipur city; female students present on the day of study; female students who had attained menarche.

#### Exclusion criteria

Exclusion criteria were those whose principal/school authorities did not give consent; female students who had not attained menarche; female students who were absent on the day of study.

# Sample size

The sample size calculated was 793 at 95% confidence interval and 7% relative error to verify the expected

minimum 50.8% of prevalence of adolescent girls practicing the use of sanitary pads during menstruation. <sup>7</sup> It is enhanced to 1000, to cover the expected 20% nonresponse.

# Sampling technique

A complete list of senior secondary; government and private schools of Jaipur city; with ≥500 students was procured from Department of Education, Jaipur. All schools in each zone of the city (East, West, North and South) were categorized into government and private schools. One school each of government and private category from each zone (East, West, North and South zone) was selected by simple random sampling technique i.e. 8 schools in total. Permission to collect information was taken from District Education officer. Permission was taken from principals of the selected School. If permission from selected school authority was not granted then it was replaced by the next school in the list in same category. 126 female students studying in class 6-12<sup>th</sup> from each school were randomly selected to cover the sample size of 1000. Hence 18 randomly selected female students from each class (6<sup>th</sup> to 12<sup>th</sup>) were included. In case there was more than one section in a class, section was selected by chit in box method and 18 female students were selected by simple random method from the list of class roll numbers by using computer generated random numbers. If the selected female had not attained menarche than next roll number female student was selected. The aim was to take 18 girls from each class and if the number was not achieved from one section than shortened number of girls was selected from next consecutive section. All randomly selected eligible female students were asked to fill the pre-designed, pretested, structured knowledge and practice questionnaire after explaining them the purpose of study and promise anonymity.

# Data analysis

All the descriptive data collected was entered into Microsoft excel 2007 Worksheet in the form of master chart. This data was classified and analyzed as per the aims and objectives. Continuous variables like age of participants, age of menarche were summarized as mean and standard Deviation while Nominal/Categorical variables as proportion (%). Chi-square test was used to find out the association. Microsoft Excel and Primer version 6 statistical software were used for analysis of the data.

#### **RESULTS**

Table 1 depicts that most of the participants (43.77%) were in age group 13-15 years. Mean age of participants was found to be 15.13±1.63 years. Majority of participants were Hindu (93.27%). Proportion in upper middle class and lower middle class found to be 42.27% and 31.73% respectively. Majority (23.59%) had their

mother's educated till high school followed by intermediate/diploma course in 17.06%. Participants whose mothers were graduates were 13.45%; less than one percent was having professional degree. 70.88% of girl's mothers were homemakers (housewives) and 29.1% mothers were working. 68.07% participants were living in a nuclear family while 31.92% were living in joint family.

Table 2 depicts that the proportion with knowledge of menstruation before menarche is more in students of private school (87.57) than students of government

(73.84%) school and the difference is found to be significant (p<0.001).

In the present study 71.94% of girls from private school had correct knowledge regarding the process of menstruation in contrast to the girls of government school where only 48.28% had correct knowledge (Table 3) and the difference was found to be significantly associated. More than three fourth of the participants(76.95%) from private school use sanitary pad while 59.15% participants from government school uses sanitary pad (Figure 1).

Table 1: Socio-demographic distribution of study population (n=996).

S. no.	Socio-demographic variables	Number	Percentage (%)						
	Age group (in years)								
1	10-12	161	16.16						
1.	13-15	436	43.77						
	16-19	399	40.06						
	Religion								
	Hindu	929	93.27						
2.	Muslim	52	5.22						
	Sikh	6	0.60						
	Others	9	0.90						
	Socio economic status								
	Upper class	29	2.91						
3.	Upper-middle class	421	42.27						
3.	Lower-middle class	316	31.73						
	Upper-lower class	220	22.09						
	Lower class	10	1						
	Educational qualification of mother								
	Illiterate	233	23.39						
	Primary school	97	9.74						
4.	Middle school	122	12.24						
7.	High school	235	23.59						
	Intermediate/ diploma	170	17.06						
	Graduate	134	13.45						
	Professional degree	5	0.50						
	Mother's occupation								
5.	Home maker	706	70.88						
	Working	290	29.11						
6.	Type of family								
	Nuclear	678	68.07						
	Joint	318	31.92						
	School type								
7.	Government school	497	49.89						
	Private school	499	50.10						

Table 2: Difference in association of government and private schools with knowledge of menstruation before menarche.

	Did you had knowledge about menstruation before menarche							
School type	Yes (n=	Yes (n=804)		No (n=192)		Chi square; P value		
	N	<b>%</b>	N	%	(n=996)	r value		
Private	437	87.57	62	12.42	499	29.298;		
Government	367	73.84	130	26.16	497	p<0.001		

The difference between the participants correct practice of changing pad in government (25.35%) school was less than the private school (43.68%) and the difference was also found to be significant (Table 4).

The proportion of correct practice of cleaning genitalia during menstruation was found more in students of private school (31.26%) than in government schools (27.16%) but the difference is not significant (Table 5).

Table 3: Difference in association of government and private schools with knowledge of process of menstruation.

	What is a	What is menstruation?						
School type	Correct knowledge* (n=599)		Incorrec (n=397)	Incorrect knowledge (n=397)		)	Chi square; P value	
	N	%	N	%	N	%		
Private	359	71.94	140	28.05	499	100	57.136;	
Government	240	48.28	257	51.71	497	100	p<0.001	

<sup>\*</sup>Correct knowledge: normal process, source of bleeding is uterus.

Table 4: Difference in association of government and private schools with practice of changing pad during menstruation.

School type	How free	Chi square;					
	Correct practice* (n=344)		Incorrect practice (n=652)		Total (n=996)		P value
	N	%	N	%	N	%	
Private	218	43.68	281	56.31	499	100	36.218;
Government	126	25.35	371	74.64	497	100	p<0.001

<sup>\*</sup>Correct practice: to change pad every 4-5 hrs.

Table 5: Difference in association of government and private schools with practice of cleaning genitalia during menstruation.

	How many times do you clean your genital area during menstruation?							
School type	Correct practice* (n=291)		Incorrection (n=705)	Incorrect practice (n=705)		)	Chi square; P value	
	N	%	N	%	N	%		
Private	156	31.26	343	68.73	499	100	1.830;	
Government	135	27.16	362	72.83	497	100	p=0.493	

<sup>\*</sup>Correct practice: 2 or more than 2 times.

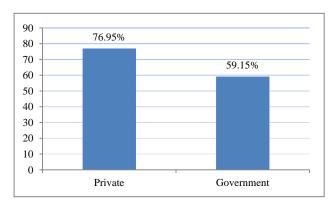


Figure 1: Usage of sanitary pad in government and private school.

#### **DISCUSSION**

A total of 996 adolescent girls between 10-19 years of age, 497 in a government and 499 in a private school were interviewed. Most of the participants (43.77%) were in age group 13-15 years. Mean age of participants was

found to be 15.13±1.63 years. Majority of participants were Hindu (93.27%). In the present study the proportion with knowledge of menstruation before menache is more in students of private school (87.57) than that of government (73.84%).

It is also concluded that 71.94% of girls from private school had correct knowledge regarding the process of menstruation in contrast to the girls of government school where only 48.28% had correct knowledge, this is also supported by the study done by Biruk et al who concluded that good knowledge about menstruation and menstrual hygiene were 7.01 times higher for those respondents from private school compared to the government ones. In contrast study done by Baisakhi et al in West Bengal conclude that only 21.07% girls believed menstruation as a physiological process. The difference may be due to difference in socio cultural characteristics.

More than three fourth of the participants (76.95%) from private school use sanitary pad while 59.15% participants

from government school uses sanitary pad which was supported by the study done by Manohar et al who concluded that 58.82% from the private school and 56 percent from the Government school were using disposable sanitary pads. <sup>10</sup> In the present study the difference between the participants correct practice of frequency of changing pad in government (25.35%) and private school (43.68%) was also found to be significant. The proportion of correct practice of cleaning genitalia during menstruation was found more in students of private school (31.26%) than in government schools (27.16%) but the difference is not significant.

#### **CONCLUSION**

Knowledge and practice regarding menstruation was more better in private school girls as compared to those of government school. Significantly more number of girls in the private schools was using sanitary pads as compared to government school girls. Girls should be educated about the facts of menstruation, physiological implications, significance of menstruation, and proper hygienic practices during menstruation. It is also required to bring them out of traditional beliefs, taboos, misconceptions, and restrictions.

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