

A Comparative Study to Assess the Knowledge Regarding Maintenance of Menstrual Hygiene Among Adolescent Girls Studying in Government and Private Schools, Tarn Taran, Punjab

Amanpreet Kaur*, Ramesh Kumari, Bimla Rani, Rajesh P
Mai Bhago, College of Nursing, Tarn Taran, Punjab, India

Abstract

Menstruation is also sometimes known as 'menses' or described as a 'menstrual period'. The menstrual cycle is usually around 28 days but can vary from 21 to 35 days. Each cycle involves the release of an egg (ovulation) which moves into the uterus through the fallopian tubes. Tissue and blood start to line the walls of the uterus and the lining of the uterus is shed through the vagina along with blood. The bleeding generally lasts between two to seven days, with some lighter and some heavier flow days. The cycle is often irregular for the first year or two after the beginning of menstruation. Most of the girls suffer from period pains such as abdominal cramps, nausea, fatigue, feeling faint, headaches, back ache and general discomfort. The aim of the present study was to assess the knowledge regarding maintenance of menstrual hygiene among adolescent girls within the age group of 13–19 years. A nonexperimental comparative research design was used with nonprobability purposive sampling technique to assess the knowledge regarding maintenance of menstrual hygiene among adolescent girl. The study was carried out in Shri Guru Arjan Dev Government Senior Secondary School and in Mai Bhago International Public School, Tarn Taran. The sample of the study consisted of 50 adolescent girls from government school and 50 from private school. A self-structured questionnaire was used to assess the knowledge regarding maintenance of menstrual hygiene. Analysis was done using both descriptive and inferential statistics. Findings of the study showed that majority (48%) of the adolescent girls studying in government school had average knowledge regarding maintenance of menstrual hygiene followed by 34% who had good knowledge and 18% who had poor knowledge. Whereas majority, i.e., 44% of the adolescent girls studying in private school had good knowledge followed by 14% who had poor knowledge and 4% whose knowledge was average regarding the maintenance of menstrual hygiene. The result of the study reveals that adolescent girls of private school have more knowledge regarding maintenance of menstrual hygiene as compared to adolescent girls of government school.

Keywords: adolescent girls, knowledge, menstruation, menstruation hygiene

*Corresponding Author

E-mail: amanpreetkaur2626@gmail.com

INTRODUCTION

Term adolescence comes from a Latin word which means growth towards maturity. Adolescence is a unique period of development which covers puberty and

grows towards adulthood. In India, about 24% of the total population belongs to the adolescent period. The blossoming of adolescence in each generation is as fascinating as the unfolding offspring. This

is a crucial period and needs to be handled with care and human touch. Developmental changes take place during this period which can have life-long effects on the individual, family and society. Changes occur in the pattern of thinking, relationship, moral standard, which generally takes away a girl's self-confidence and lowers her self-esteem.

During adolescence anatomical and physiological changes takes place, like widening of pelvis, deposition of fat in thighs and hips, development of breast, functioning of reproductive organs.

A girl's first episode of menstruation can be a scary one, if she doesn't have any prior knowledge about the process. She can be stunned to see blood coming out of her vagina which might lead her to believe that either she is sick or dying, or is being punished for something that she has done wrong.^[1-4] Adult women normally feel reluctant to talk about menstruation, which results in young girls not getting any proper information related to the changes that are happening in their bodies or ways to stay healthy and maintain their self-esteem. Giving factual information to girls before they reach the age of adolescence is necessary in order to defy the myths regarding menstruation and support those with positive impacts.

The risk of infection during mensuration gets increased many-fold when different practices like extended use of the same pad, douching or forcing liquid into the vagina, which disturbs the normal balance of yeast in the vagina and makes infection more likely to occur,^[2,3] wiping from back to front following defecation or urination, which causes contamination with harmful anal bacteria, that can also be transmitted from the rectum to the urinary tract and/or vagina during sex. Girls and women can be more at risk of developing infections during menstruation. There are other

conditions that are sometimes associated with menstruation, and include, endometriosis, fibroids, ovarian cancer, toxic shock syndrome, etc.

NEED FOR THE STUDY

Menstruation has often been dealt as a confidential issue in many cultures, which results in the usage of poor and inadequate sanitary facilities. Girls do not wish to attend their school during menstruation due to unavailability of clean sanitation amenities and the use of a homemade cloth. As a result, they grow up with a low self-regard and disempowerment. Adolescent girls are normally a vulnerable group, particularly in India, where a female child is often the mistreated one. In this day and age, in the Indian society, menstruation is still considered to be something that is unhygienic or dirty. The response to it depends upon the level of awareness and knowledge about the subject.

Although menstruation is a normal biological process, it is often associated with several misconceptions and practices that sometimes results into undesirable health consequences. Maintaining proper hygiene and cleanliness during menstruation has a significant importance, as neglecting these can impact their health and make them more sustainable to reproductive tract infections (RTI). The inter-relation between socio-economic status, menstrual hygiene practices and RTI is quite evident. The various side effects of not getting proper knowledge regarding menstruation includes risk to hygiene during menses, unpleasant effect of menstruation on schooling and social life, use of unhygienic material as a menstrual absorbent, unacceptable methods of disposal for menstrual absorbents, etc., that have been found to be more common among girls. Also girls who have had no training regarding the disposing off of their menstrual

absorbents, usually do that in farms and on the road side or else recycle them by washing, as compared to those who were trained.^[5-7]

The above study and personal views of the researcher are due to her exposure to her surroundings in the form of relatives, neighborhood ends, who face certain problems in the aspect of menstruation that lead the researcher to conduct the present study to assess the knowledge towards menstrual hygiene among adolescent girls with a view to develop a self-instructional module.

OBJECTIVES

- (1) To assess the knowledge regarding maintenance of menstrual hygiene among adolescent girls studying in government schools.
- (2) To assess the knowledge regarding maintenance of menstrual hygiene among adolescent girls studying in private schools.
- (3) To compare the knowledge score regarding menstrual hygiene among adolescent girls of government and private schools.
- (4) To associate the knowledge score regarding menstrual hygiene among adolescent girls of government and private school with selected demographic variables.

METHODOLOGY

A non-experimental research design was considered appropriate for the present study to assess the knowledge regarding maintenance of menstrual hygiene among adolescent girls studying in government and private schools.

The present study was conducted in Shri Guru Arjun Dev Government Senior Secondary School and Mai Bhago International Public School, Tarn Taran, Punjab. Selected demographic variables

such as age, religion, type of family, dietary habits, family income, place of residence, age at menarche, duration of menses and source of information were used as independent variables in the study. Dependent variables of the study were knowledge of adolescent girls regarding maintenance of menstrual hygiene.

The target population of the study were adolescent girls of government school and private school in Tarn Taran district, Punjab, who fulfilled the present inclusion and exclusion criteria.

The sample for the study consisted of 100 adolescent girls, out of which, 50 belonged to government school and 50 were from a private school. The selection was done on the basis of non-probability-purposive sampling technique.

Table 1 depicts the frequency and percentage distribution of government school girls and private school girls. According to age, majority of adolescent girls studying in a government school, i.e., 42% belonged to the age group of 10–13 years, followed by 38%, who belonged to the age group of 14–16 years and 20%, that belonged to the age group of 17–19 years, whereas, maximum, i.e., 48% of the girls studying in a private school belonged to the age group of 10–13 years, followed by 38% that were in the age group of 14–16 years and 14% (the least) belonged to the age group of 17–19 years.

The data presented in Table 2 reveals the frequency and percentage distribution of adolescent girls studying in government school. Majority of the adolescent girls of government school, i.e., 48% had average knowledge, followed by 34% who had good knowledge, whereas minority of them, i.e., 18% had poor knowledge regarding maintenance of menstrual hygiene.

Hence it can be concluded that most of the adolescent girls of government school

have average knowledge regarding the maintenance of menstrual hygiene.

RESULTS

Table 1. Frequency and Percentage Distribution of Demographic Variables of Government and Private School of Adolescent Girls

N=100

S.No.	Demographic Variables	Government School n=50		Private School n=50	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1.	Age				
a.	10–13	21	42	24	42
b.	14–16	19	38	19	40
c.	17–19	10	20	7	18
2.	Religion				
a.	Hindu	13	26	16	32
b.	Muslim	10	20	9	18
c.	Sikh	18	36	23	46
d.	Christian	9	18	3	6
3.	Type of family				
a.	Nuclear	19	38	30	60
b.	Joint	31	62	20	40
4.	Age at menarche				
a.	10–14	28	56	28	56
b.	15–19	22	44	22	44
5.	Duration of Menses				
a.	1–2 days	7	14	6	44
b.	3–4 days	14	28	20	40
c.	5–6 days	22	44	19	38
d.	More 6 days	7	14	5	10
6	Dietary habits				
a.	Vegetarian	22	44	27	54
b.	Non vegetarian	19	38	14	28
c.	Eggetarian	9	18	9	18
7	Family income				
a	<5000	20	40	23	46
b.	5001–10,000	17	34	18	36
c	10,001–15,000	9	18	5	10
d	>15,000	4	8	4	8
8	Place of residence				
a.	Rural	38	76	37	74
b.	Urban	12	24	13	26
9.	Source of information				
a.	Mother	14	28	15	30
b.	Peer group	13	26	22	44
c.	Teacher	18	36	10	22
d	Mass media	5	10	3	6

Table 2. Frequency and Percentage Distribution of Knowledge Regarding Maintenance of Menstrual Hygiene Among Adolescent Girls Studying in Government School

N=50

Knowledge Level	Grading of Knowledge Score	n	%
Poor	0–10	9	18
Average	11–23	24	48
Good	24–34	17	34

Maximum Knowledge Score – 34. Minimum Knowledge Score – 0.

Table 3. Obtained Range of Score, Maximum Score, Mean, Standard Deviation (SD), Mean Percentage (%) of Knowledge Score of Adolescent Girls Studying in Government School

Obtained Range	Maximum Score	Mean	SD	Mean %
11–23	34	22.8	2.77	67.05

Maximum Score – 34. Minimum Score – 0.

Table 4. Frequency and Percentage Distribution of Knowledge Regarding Maintenance of Menstrual Hygiene Among Adolescent Girls Studying in Private School

N=50

Knowledge Level	Grading of Knowledge Score	n	%
Poor	0–11	7	14
Average	12–23	21	4
Good	24–34	22	44

Maximum Score – 34. Minimum Score – 0.

The data depicted in Table 3 shows the range (11–23), maximum score (34), mean (22.8), standard deviation (2.77), and mean percentage (67.05) obtained during knowledge questionnaire of adolescent girls studying in government school.

The data presented in Table 4 depicts that 14% of the adolescent girls studying in private school had poor knowledge, followed by 4% who had average knowledge and 44% who had good knowledge regarding the maintenance of menstrual hygiene. According to the data collected, there is a significant difference in knowledge regarding maintenance of menstrual hygiene among adolescent girls studying in private school. The data depicted in the Table 5 shows the range

(24–34), maximum score (34), mean (24.24), standard deviation (3.04), and mean percentage (71.20) obtained during knowledge questionnaire of adolescent girls studying in private school.

Table 6 depicts that the mean knowledge score of adolescent girls studying in government school was found to be 22.8 with SD of 2.77 as compared to mean knowledge score of adolescent girls studying in private school that was 24.24 with SD of 3.04. The data when subjected to statistical unpaired t-test showed a significant difference ($p < 0.05$) existing between the overall mean knowledge score of adolescent girls studying in government and private school ($t = 2.41^*$).

Table 5. Obtained Range of Score, Maximum Score, Mean, Standard Deviation (SD), Mean Percentage (%) of Knowledge Score of Adolescent Girls Studying in Private School

Obtained Range	Maximum Score	Mean	SD	Mean %
24–34	34	24.24	3.04	71.29

Table 6. Comparison of Knowledge Regarding Maintenance of Menstrual Hygiene Among Adolescent Girls of Government and Private Schools.

N=50

Schools	Maximum Score	Mean Score	SD	Unpaired t Test
Government school	34	22.8	2.77	2.41*
Private school	34	24.24	3.04	

*Highly Significant at 0.05 Level.

Table 7. Frequency and Percentage Distribution of Chi-Square Test Showing Association Between Knowledge Score Regarding Maintenance of Menstrual Hygiene Among Adolescent Girls Studying in Government Schools

S. No.	Demographic Variables	Total Frequency	Level of Knowledge						Chi-Square Value	df	Table Value
			Poor		Average		Good				
			f	%	f	%	f	%			
1.	Age in years										
a.	10-13	21	3	6	8	16	10	20	19.31*	4	9.48*
b.	14-16	19	4	8	10	20	5	10			
c.	17-19	10	2	4	6	12	2	4			
2.	Religion								5.30 ^{NS}	6	12.59
a.	Hindu	13	4	8	7	14	2	4			
b.	Muslim	10	2	4	5	10	3	6			
c.	Sikh	18	2	4	7	14	9	18			
d.	Christian	9	1	2	5	10	3	6			
3.	Type of family								7.79*	2	5.99*
a.	Nuclear	19	7	14	6	12	6	12			
b.	Joint	31	2	4	18	36	11	22			
4.	Dietary habits								4.559 ^{NS}	4	9.49
a.	Vegetarian	22	5	10	12	24	5	10			
b.	Non vegetarian	19	4	8	7	14	8	16			
c.	Eggetarian	9	0	0	5	10	4	8			
5.	Family income								13.82*	6	12.59
a.	<5000	20	0	0	16	32	4	8			
b.	5001-10,000	17	6	12	4	8	7	14			
c.	10,001-15,000	9	3	6	2	4	4	8			
d.	>15000	4	0	0	2	4	2	4			
6.	Place of residence								2.56 ^{NS}	2	5.99
a.	Rural	38	5	10	19	38	14	28			
b.	Urban	12	4	8	5	10	3	6			
7.	Age at menarche								0.96 ^{NS}	2	5.99
a.	10-14	28	5	10	15	30	8	16			
b.	15-19	22	4	8	9	18	9	18			
8.	Duration of menses								2.91 ^{NS}	6	12.59
a.	1-2 days	7	2	4	3	6	2	4			
b.	3-4 days	14	3	6	7	14	4	8			
c.	5-6 days	22	3	6	12	4	7	14			
d.	More 6 days	7	1	2	2	4	4	8			
9.	Source of information								4.55 ^{NS}	6	12.59
a.	Mother	14	3	6	7	14	4	8			
b.	Peer group	13	2	4	5	10	8	16			
c.	Teacher	18	4	8	8	16	6	12			
d.	Mass media	5	0	0	4	8	1	2			

f = frequency, df = degree of freedom, * = significant. NS=not significant.

Table 7 shows the association of knowledge scores regarding maintenance of menstrual hygiene among adolescent

girls studying in government school with the selected demographic variables. The chi square test result depicts a significant

impact of age, type of family and family income on the knowledge score of adolescent girls of government school regarding maintenance of menstrual hygiene as the calculated value is more than the tabulated value, at 0.05 level of significance. The impact of religion, dietary habits, place of residence, age at menarche, duration of menses and source of information were found to be non-significant, as the calculated value was less than the tabulated value, at 0.05 level of significance.

Findings Related to Socio-demographic Variables

- Majority, i.e., 42% of the adolescent girls studying in government school, were from the age group of 10–13 years. Similarly, majority of the adolescent girls of private school, i.e., 48% were from the age group of 10–13 years. Minority, i.e., 20% of the girls of government school, were in the age group of 17–19 years and minority, i.e., 14% of the girls in private school were of the age group of 17–19 years.
- Majority, i.e., 36% girls of government school belonged to Sikh religion and minority, i.e., 18% were from Hindu family. In case of girls studying in private school, majority, i.e., 46% belonged to Sikh family and minority (6%) belonged to Christian family.
- Maximum, i.e., 62% of the adolescent girls of government school were from joint families and minimum, i.e., 38% were from nuclear families, whereas, in private school, maximum, i.e., 60% of adolescent girls were from nuclear families and minority (40%) belonged to joint families.
- Majority of the girls of government school, i.e., 44% were vegetarian and minority, i.e., 18% were egg vegetarian, whereas in private school, 54% were vegetarian and minority (18%) were egg vegetarian.
- For girls of government school, majority, i.e., 40% of adolescent girls were from families whose monthly income was less than Rs. 5000, minority, i.e., 8% were from families whose monthly income was above Rs. 15,000, whereas for the girls studying in private school, majority, i.e., 46% were from families whose monthly income was less than Rs.5000 and minority (8%) were those whose family's income was above Rs. 15,000.
- Maximum of the adolescent girls in government school, i.e., 76% belonged to rural area and minimum, i.e., 24% were from urban area, whereas, for girl studying in private school, majority, i.e., 74% were from rural area and minority (26%) were from urban area.
- The age at menarche of 56% of the adolescent girls of government school was between 10 and 14 years and of 44% of the girl's was 15–19 years. For girls of private school, majority (56%), it was in the age group of 10–14 years and for 44% girls it was in the age group of 15–19 years.
- For majority, i.e., 44% of the adolescent girls belonging to government school, the duration of menses was between 5 and 6 days and for minimum, i.e., 14% the duration 1–2 days and more than 6 days, whereas for majority (40%) of the girls of private school, the duration of menses was between 3 and 4 days and for 10% of them, it was more than 6 days.
- Maximum of the adolescent girls of government school, i.e., 36% got the information regarding menstruation from their teachers, minimum (10%) got it from mass media, whereas for girls studying in private school, i.e., 44% got the information from their peer group and minimum (6%) got it through mass media.

IMPLICATIONS

Nursing Education

Nursing education emphasizes that health care system should pay more attention to train the nursing students on family centered care approach, role of community health nurse in quality assurance, consumer roles and involvement in school health care services. Hence the use of education to devise strategies should encourage involvement of school girls in school health programmes to impart menstrual hygiene education so as to promote a better healthy life outcome.

Planned health education programme by health professionals should be made an ongoing process in the primary health center, school health services and in the community settings.

Nursing Service

Lack of knowledge among adolescent girls regarding the health aspects is the major cause for increased morbidity rates. Nursing plays a very important role in imparting the knowledge regarding anatomy and physiology of the reproductive system, meaning of menstruation and menstrual cycle, purpose of menstrual hygiene, risk factors for reproductive tract infection due to poor menstrual hygiene and menstrual hygiene practice. Thus acquisition of knowledge helps in better outcome of health condition. The finding of the study indicates that the nurse in the practice area should encourage individual conversation with the girls about to enter the adolescent age as part of the basic programme, by providing them guidelines which could enhance their knowledge. The nurse's involvement in menstrual hygiene can lead to better health outcomes with respect to healthy life for girls.

Nursing Administration

Instructions providing maternity services should review their policies and practices regarding 10-14 year old girls involvement

regarding menstrual hygiene. Nursing administration should necessarily involve formulating policies, guidelines and health education for expectant girls in hospitals as well as in the community settings. This study finding helps in reviewing policies at the administrative level.

Nursing Research

It is essential to identify at present the level of knowledge regarding menstrual hygiene among adolescent girls so as to know the extent of information which is necessary to be given. Extensive research must be conducted in this area to identify several more effective methods of education. This study also brings out the facts that more studies are required to be done in different settings, which is culturally acceptable as better teaching strategies of education. This study can be a baseline for future studies.

RECOMMENDATIONS

The following recommendations can be made on the thesis of this study

- The study can be replicated on a large sample to validate and generalize the findings.
- Similar study can be conducted in different settings like in a community.
- Same study can be replicated by including attitude of adolescent girls regarding menstrual hygiene.

CONCLUSION

From the findings of the study, following conclusions can be drawn:

- This study was conducted to assess the knowledge regarding maintenance of menstrual hygiene among adolescent girls and the conclusion drawn from it is that most of the girls have average knowledge regarding menstrual hygiene as the result of the study showed that 48% of the adolescent girls of government school had average knowledge regarding menstrual hygiene and 34% had good

knowledge score regarding menstrual hygiene, whereas, least (18%) had poor knowledge regarding menstrual hygiene in. In case of girls of private school, 44% had good knowledge followed by 14% who had poor knowledge and least (4%) had average knowledge score regarding maintenance of menstrual hygiene.

- The data subjected for statistical unpaired t-test showed a significance difference at the level of ($p < 0.05$) existing knowledge score regarding maintenance of menstrual hygiene among adolescent girls studying in government and private schools.
- The selected demographic variables had no significant relationship with knowledge regarding maintenance of menstrual hygiene among adolescent girls.

REFERENCES

1. United Nations Population Information Network (POPIN). Guidelines on Reproductive Health. Available at: www.undp.org/popin reviewed on 10/9/13.
2. Adhikari P, Kadel B, Dhungel SI, Mandal A. *Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal*. Unpublished thesis of department of community. Kathmandu, Nepal. 2007.
3. Fawole A O, Ojenqbede O A. Menstrual characteristics of secondary school girls in Ibdan, Nigeria, West Africa. *J Med*. 2009; reviewed on 14/9/13.
4. Mohammed Poureslami, Farzaneh Osati-Ashtiani. Attitudes of female adolescents about dysmenorrhoea and menstrual hygiene in Tehsan. Unpublished thesis of gynaecological department. 2002.
5. Trinoye. Ogunghomi. A. Menstruation: knowledge attitude and practices of students in Nigeria. *J Med Sci*. 2003: 43–51p.
6. B.N Joshi, V. Bhadoria. Reproductive health problems and help seeking behavior among adolescents in urban India. *Indian J Pediatr*. 2006: 9–13p.
7. Patil S.N., Wasnik V. Health problems among adolescent girls in rural areas of Rathnagiri Dist of Maharashtra India. Unpublished thesis of Department of community health 2009.