

Knowledge Regarding the Menstrual Hygiene among Adolescent Girls in Selected Rural and Urban Schools

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Abstract

Background: Cleanliness is one of the most important practice for a clean and healthy environment. It may be related to public hygiene and personal hygiene. Menstruation is monthly uterine bleeding for 4-5 days coming regularly every 28 days from puberty till menopause in a woman's reproductive life. Menstrual hygiene is neglected and people do not wish to explore this subject as it is still considered a social taboo. Good menstrual hygiene is crucial for the health, education and dignity of girls and women. **Objectives:** To assess the knowledge related to menstrual hygiene among adolescent girls in selected rural schools. To assess the knowledge related to menstrual hygiene among adolescent girls in selected urban schools. To compare the knowledge score related to menstrual hygiene among adolescent girls in selected rural and urban area. To find out the association between knowledge score with their demographic variables. **Methodology:** This study aims to assess and compare the knowledge related to menstrual hygiene among adolescent girls in selected rural and urban schools of the city. Total number of sample are 100 (50 rural and 50 urban) with the age group 13-16 years. A non-experimental comparative descriptive research design is used with the quantitative approach. A non-probability convenient sampling technique used. **Result:** The present study showed that, in rural schools most of the samples i.e. 46% of the adolescent girls had average level of knowledge score, 52% had good and only 2% had very good level of knowledge score. The minimum score was 7 and the maximum score was 198, the mean score was 12.84 ± 2.87 with a mean percentage score of 42.80 ± 9.57 . Similarly in urban schools 26% of the adolescent girls had average level of knowledge score, 62% had good and 12% had very good level of knowledge score. The minimum score was 7 and the maximum score was 20, the mean score for the was 14.18 ± 3.07 with a mean percentage score of 47.26 ± 10.25 . **Conclusion:** The present study shows that the adolescent girls belongs to rural schools has less knowledge than adolescent girls belongs to urban schools.

Keywords: Adolescent; Compare; Knowledge; Menstruation; Rural; Urban.

Introduction

Reproductive health is a crucial part of general health and a central feature of adolescent development, reproductive health is a universal concern, but is of special importance for women

particularly during the reproductive years, that is, from 12-19 years [1].

Adolescents have not been told about menstruation and sexually transmitted diseases, due to the factors like cultural background, religion, family pattern, parent's education etc., these factors makes the adolescents to acquire incorrect and inadequate information, filled with wrong beliefs and taboos [2].

However some girls show negative responses such as shame, fear, anxiety and depression [3].

Many girls remain absent for 4 days during their menstrual cycle; remaining absent in school for 48 days a year is a huge loss for students [4].

Surveys reported from varies part of India have

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Recived on 29.10.2018, **Accepted on** 17.11.2018

shown that reproductive tract infection is major public health concern regarding to profound gynaecological morbidity in reproductive age group and it is mainly due to lack of menstrual hygiene [5].

There is empirical evidence that of the 113 million adolescent girls, 68 million attend about 1.4 million schools, with poor MHM practices and cultural taboos considered to be impediments to their school attendance. Therefore, it is imperative to recognize the importance of health, education and well-being of the young girls [6].

Background of the study:

Menstruation is the major contributing factor in absenteeism and poor academic performance among school girls. Girls often remain absent and drop out of schools because of bad sanitation facilities in schools. Many girls remain absent for 4 days during their menstrual cycle; remaining absent in school for 48 days a year is a huge loss for students. Menstrual hygiene has thus a vital aspect of health education and television programs, health officers, teachers and parents can play a very important role in transmitting a message of proper menstrual hygiene. This would save them from many health hazards [7].

Surveys reported from various part of India have shown that reproductive tract infection is major public health concern regarding to profound gynaecological morbidity in reproductive age group and it is mainly due to lack of menstrual hygiene. The prevalence of clinically diagnosed virginities due to poor menstrual hygiene ranged from 4% in rural west Bengal, 62% in rural Maharashtra. Cervicitis ranged from 8% in Gujarat, 48% in Maharashtra. In New Delhi the report showed that poor menstrual hygiene was observed among 72.7% women with reproductive tract infection. Further study was conducted in Gujarat. The result revealed that about 37.2% girls does not have prior knowledge about menstruation and menstrual hygiene.

From the above studies the investigator identify that the adolescent girls are more prone to get reproductive tract infection, and this can be prevented by maintain hygiene. So that health education should be developed to empower young women with sufficient knowledge on menstrual hygiene [8].

In these days, girls are having menarche at an early age as compared to previous times. The customs and practices of the past are not followed these days.

Women are not confined to their homes nor are they restricted to work. They move out of the house for education, jobs, and travel a lot. They are allowed to do everything normally, including taking daily baths or showers; exercising, dancing and playing sports are all fine. Women are always on the move, are more beauty conscience and they look for more convenient means to provide them comfort during menstrual periods. Hence, they need more education on hygienic health practices [9].

Objectives

- To assess the knowledge related to menstrual hygiene among adolescent girls in selected rural schools.
- To assess the knowledge related to menstrual hygiene among adolescent girls in selected urban schools.
- To compare the knowledge score related to menstrual hygiene among adolescent girls in selected rural and urban area.
- To find out the association between knowledge score with their demographic variables.

Operational definition

- *Compare* - In this study it is an activity to assess the difference between knowledge related to menstrual hygiene among adolescent girls in rural and urban schools.
- *Assess* - In this study, it refers to find out the knowledge of adolescent girls
- *Knowledge* - In this study, it refers to the correct response from the respondent regarding menstrual hygiene as elicited through a questionnaire.
- *Menstruation* - In this study it refers to maintaining hygienic practices during menstruation such as showering, use of sanitary products etc.
- *Adolescent* - In this study it refers to population between the age group 13-16years.
- *Rural* - In this study rural means adolescent girls from low population area or village area.
- *Urban* - In this study urban refers to adolescent girls from high populated area or city.

Delimitations

- Study is delimited to adolescent girls population, no adult population is involved.
- This study is delimited to the girls of age 13-16 only studying in selected schools.

Assumptions

1. Adolescent girls may have some knowledge regarding menstrual hygiene.
2. There may be a difference in the knowledge of adolescent girls in rural and urban schools
3. There may be relationship between knowledge score and selected demographic variable.

Hypothesis

H0- There will be no significant difference in the knowledge score regarding menstrual hygiene among adolescent girls in rural and urban schools.

H1- There will be a significant difference in the knowledge score regarding menstrual hygiene among adolescent girls in rural and urban schools.

Conceptual framework

The conceptual framework used for the present study is "Modified Roy's adaptation model". Roy's adaptation model was developed by Sr. Callista Roy.

Review of Literature

In the present study the literature reviewed has been organized into the following categories:

1. Literature related to assessment of knowledge regarding menstrual hygiene in adolescent girls.
2. Literature on comparison of knowledge between rural and urban adolescent girls.

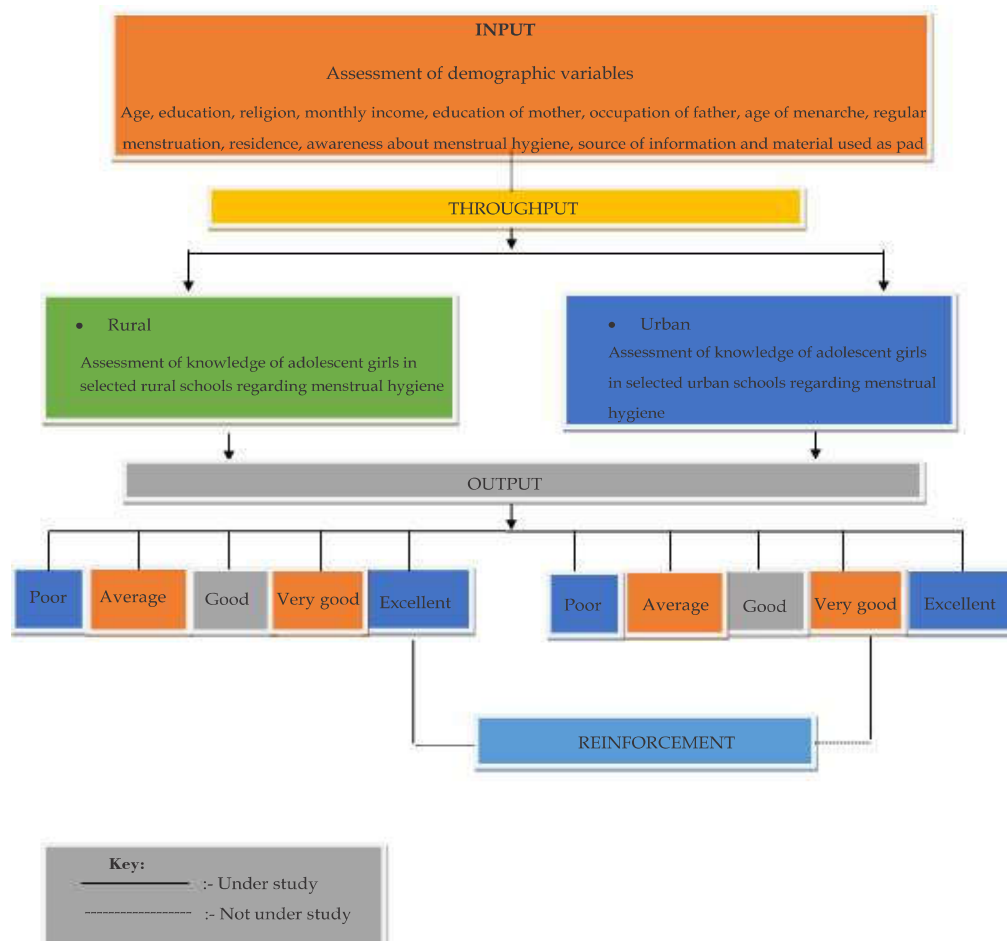


Fig. 1: Conceptual Framework Modified Roy's Adaptation Model

Methodology

Research approach: Quantitative research approach

Research Design: Non experimental comparative descriptive research design

Setting of the study: Selected areas of the Nagpur

Variable:

Research variable: Knowledge regarding menstrual hygiene among adolescent girls.

Demographic variables: Age, education, religion, monthly income, education of mother, occupation of father, age of menarche, regular menstruation, residence, awareness about menstrual hygiene, source of information and material used as pad.

Population:

Target population: all adolescent girls of the city (age:13-16)

Accessible population: adolescent girls of the selected schools of the city who were available at the time of data collection and who were fulfilling the inclusion criteria.

Sample size: 100 adolescent girls (50 rural and 50 urban)

Sampling technique: non-probability convenient sampling technique.

Sampling criteria:

Inclusion criteria: In this study, inclusion criteria was adolescent girls who were-

- Adolescent girls between the age 13 -16
- Adolescent girls who are willing to participate.
- Adolescent girls who are available during the data collection.
- Adolescent girls who are able to read English and Marathi.
- Adolescent girls who are studying in selected schools in rural and urban area of the city.

Exclusion criteria: In this study, inclusion criteria was adolescent girls who were-

- Adolescent girls who are not willing to participate
- Adolescent girls who have not attended menarche.

Tool and technique of data collection:

The tools used in this study consist of two sections:

Section I: Structured questionnaire on demographic Variable.

Section II: Structured questionnaire on knowledge regarding menstrual hygiene consist of 30 questions.

Content validity:

For content validity tool was given to 21 experts for the content and construct validity; including obstetrics and gynecology nursing experts, pediatric nursing experts, community health nursing experts and statistician.

Reliability:

Karl Pearson Correlation Coefficient formula was used for reliability. The questionnaire was said to be reliable if the correlation was more than 0.8. The correlation coefficient 'r' of the questionnaire was 0.867, which is more than 0.8. Hence the questionnaire was found to be reliable.

Pilot study: Permission was taken from concern authority. Pilot study was conducted from 04-12-17 to 12-12-2017 for a period of 7 days. A sample of 6 adult females was selected from the residential area. The pilot study was feasible in terms of time, money, material and resources.

Data collection: The main study data was gathered from 14 December 2017 to 13 January 2018. Permission was obtained from the principal of the schools.

Results

The analysis and interpretation is given in the following section:

Section I Description of adolescent girls with regards to demographic variables

Table 1: Percentage wise distribution of adolescent girls according to their demographic characteristics.

Demographic Variables	Rural Area		Urban Area	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Age(years)				
12-13 years	3	(6%)	16	(32%)
13-14 years	24	(48%)	15	(30%)
14-15 years	12	(24%)	11	(22%)
15-16 years	11	(22%)	8	(16%)

Educational status of adolescent girls

7 th standard	4	(8%)	20	(40%)
8 th standard	20	(40%)	11	(22%)
9 th standard	14	(28%)	9	(18%)
10 th standard	12	(24%)	10	(20%)
<i>Religion</i>				
Hindu	34	(68%)	27	(54%)
Muslim	6	(12%)	2	(4%)
Christian	0	(0%)	2	(4%)
Buddhist	3	(6%)	18	(36%)
Others	7	(14%)	1	(2%)
<i>Monthly Family Income(Rs)</i>				
<6000 Rs	25	(50%)	8	(16%)
6001-9000 Rs	5	(10%)	9	(18%)
9001-12000 Rs	7	(14%)	15	(30%)
>12000 Rs	13	(26%)	18	(36%)
<i>Educational status of mother</i>				
Illiterate	11	(22%)	0	(0%)
Primary	24	(48%)	6	(12%)
Secondary	12	(24%)	23	(46%)
Higher Secondary	3	(6%)	14	(28%)
Graduate	0	(0%)	4	(8%)
PG	0	(0%)	3	(6%)
Other	0	(0%)	0	(0%)
<i>Occupation of father</i>				
Farmer	9	(18%)	0	(0%)
Service	3	(6%)	16	(32%)
Business	14	(28%)	24	(48%)
Labour	24	(48%)	10	(20%)
Unemployed	0	(0%)	0	(0%)
<i>Age of menarche(years)</i>				
<13 years	16	(32%)	29	(58%)
13-14 years	28	(56%)	17	(34%)
14-15 years	4	(8%)	3	(6%)
15-16 years	2	(4%)	1	(2%)
<i>Regular Menstruation</i>				
Yes	38	(76%)	45	(90%)
No	12	(24%)	5	(10%)
<i>Residence</i>				
Urban	0	(0%)	50	(100%)
Rural	50	(100%)	0	(0%)
Semi Urban	0	(0%)	0	(0%)
<i>Aware about menstrual hygiene</i>				
Yes	46	(92%)	43	(86%)
No	4	(8%)	7	(14%)
<i>Source of information</i>				
Family	39	(78%)	38	(76%)
Friends	7	(14%)	8	(16%)
Teachers	1	(2%)	3	(6%)
Health Workers	3	(6%)	0	(0%)
Mass Media	0	(0%)	1	(2%)

Other	0	(0%)	0	(0%)
<i>What material is used as pad</i>				
Commercially made sanitary pad	33	(66%)	28	(56%)
Cloth	17	(34%)	8	(16%)
Home made cotton pad	0	(0%)	14	(28%)

Section II Assessment of existing knowledge regarding menstrual hygiene among adolescent girls in selected rural schools.

Table 2: Assessment of knowledge scores among adolescent girls in rural schools regarding menstrual hygiene

n=50

Level of knowledge score	Score range	Knowledge Score	
		Frequency (f)	Percentage (%)
Poor	0-6(0-20%)	0	0
Average	7-12(21-40%)	23	46
Good	13-18(41-60%)	26	52
Very Good	19-24(61-80%)	1	2
Excellent	25-30(>80%)	0	0

Section C Assessment of existing knowledge regarding menstrual hygiene among adolescent girls in selected urban schools.

Table 3: Assessment of knowledge scores among adolescent girls in urban schools regarding menstrual hygiene

n=50

Level of knowledge score	Score range	Knowledge Score	
		Frequency (f)	Percentage (%)
Poor	0-6(0-20%)	0	0
Average	7-12(21-40%)	13	26
Good	13-18(41-60%)	31	62
Very Good	19-24(61-80%)	6	12
Excellent	25-30(>80%)	0	0

Analysis reveals that there is association of knowledge score with age. While none of the other demographic variable were associated with knowledge score.

Section D Comparison of knowledge score related to menstrual hygiene among adolescent girls in selected rural and urban schools.

Table 4: Comparison of knowledge score related to menstrual hygiene among adolescent girls in selected urban and rural area schools

n=100

Overall	Mean	SD	Mean Difference	Calculated t-value	df	Table value	p-value	Level of signifi-cance
Rural Area	12.84	2.87	1.34	2.25	98	1.98	0.027	p≤0.05
Urban Area	14.18	3.07						

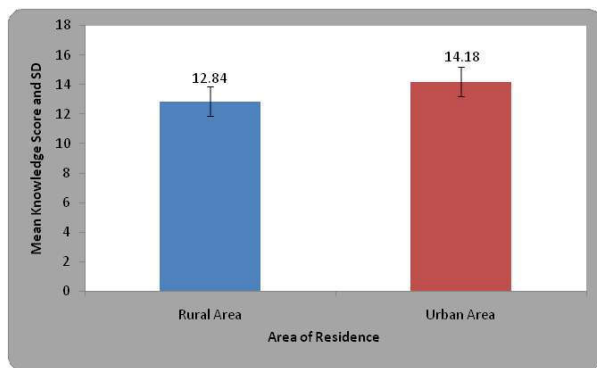


Fig. 1: Bar diagram represents Comparison of knowledge score related to menstrual hygiene among adolescent girls in selected urban and rural area schools

Discussion

The present study showed that, in rural schools most of the samples i.e. 46% of the adolescent girls had average level of knowledge score, 52% had good and only 2% had very good level of knowledge score. The minimum score was 7 and the maximum score was 19, the mean score for the was 12.84 ± 2.87 with a mean percentage score of 42.80 ± 9.57 . Similarly in urban schools 26% of the adolescent girls had average level of knowledge score, 62% had good and 12% had very good level of knowledge score. The minimum score was 7 and the maximum score was 20, the mean score was 14.18 ± 3.07 with a mean percentage score of 47.26 ± 10.25 . The analysis reveals that there is an association of knowledge score with the family income and education of mother. In urban schools the analysis reveals that there is an association of knowledge score with the education of students, age of menarche and material used as pad.

A cross-sectional study was carried out amongst 300 school going adolescent girls (10- 19 years) in the rural area of Wardha district, Maharashtra, India. Majority of the girls received the information regarding menstruation from their mothers (41%), followed by Media (24%) and friends (19%). Of the girls who developed genital tract infections, 66% used cloth. 37% girls do not disclose about their menstruation. Cleanliness of external genitalia was unsatisfactory. Hence it is important to educate the girls with scientific knowledge and dispelling their myths and misconceptions thereby encouraging safe and hygienic practices for safeguarding themselves against various infections [10].

In above study majority 41% of girls received information from mothers, 24% from media and 19% from friends. In present study majority 76% of

girls received information mothers, 2% from mass media and 16% from friends.

The cross-sectional study was conducted among 440 school going adolescent girls. After taking informed consent, the data was collected through self-administered questionnaire prepared in Hindi language to the girls. Results found that the mean age of menarche in school going adolescent girls was 12.7 ± 1.00 years. Out of 440 girls studied 315 (71.59) faced some problem during menstruation. 75% girls knew about menstrual cycle before their menarche. In most cases their first informant was their teacher. The study on the practices during menstruation showed that 378 (85.92%) girls used sanitary pads during menstruation, 13 (2.95%) girls used old cloth pieces. Age, Number of family members, Mother's education and Awareness about menstruation before menarche were significantly associated with good menstrual hygiene. Conclusion was the study showed that for more number of girls first informant about menstruation was their teachers and mothers. Different restrictions were practiced by most of the girls in the present study [11].

In above study 85.92% of adolescent girls were using sanitary pads and 2.95% using cloth. In present study 56% of adolescent girls were using sanitary pads and 16% using cloth.

Conclusion

This shows that the adolescent girls belongs to rural schools has less knowledge than adolescent girls belongs to urban schools.

Analysis also reveals that there is an association of knowledge score with the family income and education of mother in rural schools and there is an association of knowledge score with the education of students, age of menarche and material used as pad in urban schools.

Implication of the study:-

The findings of this study have implications for nursing practice, nursing education, nursing administration, and nursing research

Nursing practice

- The findings of the present study emphasis on knowledge regarding menstrual hygiene which can be put into nursing practice in early identification of disease or infection (urinary tract infection, vaginitis, cervicitis etc.) and planned teaching can be used as

a basis of educating them in prevention of menstrual hygiene problems.

- The health care professionals including nurses will be more vigilant and tactful in order to assess the knowledge, identify and prevent factors that cause high risk of menstrual hygiene problems that may alter their physical, social life and well being significantly.
- The findings of the study will help the nursing professionals working in hospital gaining the knowledge and helping in planning and implementing of health teaching.

Nursing education

- The present study emphasis that health education on knowledge regarding menstrual hygiene among adolescent girls. In order to educate the adolescent girls, it is essential that nurses are competent and have sound knowledge to improve the level of understanding which can be reflected to the public through education.
- The nursing students develops an insight regarding knowledge of menstrual hygiene and implement the knowledge of the same while dealing with clients in various setting.
- The student nurse can use the instrument prepared for this study for collecting information regarding menstrual hygiene.
- The findings can be utilized to prepare a module on factors contributing menstrual hygiene.
- The findings can be used in BSc and MSc nursing and can be made changes in the classroom teaching.

Nursing administration

- Health administration plays a vital role in supervision and management of nursing profession. The nurse administrators can utilize the present tool for assessing the knowledge of adolescent girls and can implement measures to promote health on the findings of the study. Teaching module, group discussion and periodical educational sessions can also be arranged for adolescent girls.
- Knowledge regarding reproductive health being concern of medical health care facilities, programmes at school and college

level foe perspective can be planned and implemented country wide to prevent the occurrence of menstrual hygiene.

Nursing research

- The findings of the present study can be utilized by nurse researchers to contribute to the profession to accumulate new knowledge regarding menstrual hygiene, and can take professional accountability to educate and motivate the adolescent girls towards health promoting practices. The present study would help nurses and other health care personnel to understand the level of knowledge of adolescent girls regarding menstrual hygiene. Based on this knowledge the nurse researchers may utilize the suggestions and recommendations for conducting further study.
- The nurse researchers can use the findings of this study as baseline data to conduct further interventional research to identify the level of knowledge and to determine the association of others demographic variable as age, education, religion etc of the samples and to identify the effect of nay variable on knowledge of menstrual hygiene.

Personal experience:

- The entire study gave an enriching experience to the researcher. It helped her develop her skill in critical thinking and analysis and realize the importance of effective communication with respondent.
- The entire study was varied and rich learning experiences, which enabled the researcher to develop her skill in dealing with different personalities. The concept clarity about research as a whole was increased. At every stage the researcher received guidance and support from the guide. This boosted confidence to go ahead and carry out the planned activities. The cooperation from study samples was remarkable. The research was a great learning opportunity for the researcher.

Recommendations

- On the basis of the study, following recommendation has been made:
- A similar study can be conducted on a large population for wider generalization.

- A similar study can be conducted by using a structured teaching programme on menstrual hygiene.
- A similar study can be conducted to evaluate the efficiency of various teaching strategies like informational booklet, leaflets, pamphlets and computer assisted instruction on menstrual hygiene.
- A similar study can be conducted in married and unmarried women to know their practices about menstrual hygiene.
- An experimental study can be undertaken with the control group for effective comparison of result.
- Mass media and educational programmes should be arranged to educate the girls and women regarding menstrual hygiene.

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