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A quasi experimental study to evaluate the effectiveness of structured teaching program on knowledge regarding menstrual hygiene among adolescent girls in selected government schools, at Panipat

Anju and Meena Kumari

Abstract

Background of the study: Current population of India in 2018 is estimated to be 1.30 billion, second most populous country also it has the largest population of adolescents in the world being home to 243 million individuals aged 10-19 years. Female adolescents comprise 46.9% and male adolescent 53.1%* according to census data, the child sex ratio (0-6 years) in India was 927 girls per 1000 boys in 2001, which dropped drastically to 914 girls for every 1000 boys in 2011. In 2012 UNICEF report ranked India 41st among 195 countries. Haryana is the 16th largest state in India in terms of population. Population of Haryana in 2018 is about 23% of that composed of adolescent population. Today's adolescents are tomorrow's adults who are the strength of the nation. Today's adolescent girls are future homemakers. Most of the adolescents tend to be extremely unaware of their own body their physical wellbeing and psychological change. Half of the adolescent age 12-15 years residing in 8th to 12th standards does not know about menstruation until its onset.

Methods: A Quasi experimental research design (pre-test, post-test design) was adopted in the present study. Totally 80 students those who met the inclusion and exclusion criteria were selected by Simple random sampling technique. Data was collected using socio demographic variables with structure knowledge questionnaire.

Results: A pre-test was taken by using self structured knowledge questionnaire. After 7 days post-test was taken. The result of the post-test score revealed that the structured teaching programme had its impact on improving the level of knowledge regarding ill effects of alcohol consumption among senior secondary school students. The overall mean pre-test scores in experimental group was 12.47, the mean post-test scores was 23.47 and the mean difference was 11.000, the standard deviation for the following is 2.34 for pre-test and 1.70 for post-test and 't' value at 0.05 level of significance is 19.390 which is statistically significant at $p < 0.05$ level, and the mean pre-test scores in control group was 13.57, the mean post-test scores was 18.50 and the mean difference was 4.933, the standard deviation for the following is 2.73 for pre-test and 2.61 for post-test and 't' value at 0.05 level of significance is 8.320. There was no significant association between the pretest level of knowledge and the selected socio- demographic variables in experimental group and in control group.

Conclusion: The participants had less knowledge regarding ill effects of menstrual hygiene, which indicated the need for learning the same. The structured teaching programme was found to be effective in increasing the knowledge of students regarding menstrual hygiene.

Keywords: Effectiveness, structured teaching programme, ill effects of menstrual hygiene, government senior secondary schools students

1. Introduction

WHO defined adolescence as the age group of 10-19 years ; it is approximately on fifth of the world's population. It can be distinguished as early adolescence 10-13 years middle adolescence age 14-16 years, late adolescence age 17-20 years. A woman goes through several development milestones that greatly influence her reproductive health. Puberty is a period of transition between childhood and adulthood, a time of profound biological, intellectual, psychosocial and sexual maturity ^[1].

Adolescence is a period of human life distinguished by the maturation of the organs and the functions of reproduction extending from onset of puberty to adulthood. It is a span of human growth extending from the immaturity of childhood to the physical and physiological maturity of adulthood. This period extends from 10-19 years ^[2].

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Reproduction health deals with the reproduction process, functions and system at all stages of life. It is of special importance for women particularly during the reproduction years [3].

In many countries the topic adolescent sexuality and reproductive health is politically and culturally sensitive. As a result, the reproductive health information does not reach most of the youth. However, some countries have taken policy and programme measures to address health needs of the adolescent [4].

If proper hygiene management will be followed, one can be relaxed and continuing with her routine work during menstruation. Therefore, menstruation hygiene management essentially promotes to keeping a good standard of hygiene which helps to prevent the development and spread of infections, illness and bad odour during menstruation [5].

Therefore, it is essential to maintain healthy practices, traditions and customs in the society and prevent unhygienic and unhealthy habits during menstruation through various educational and training programs. So here is a great need perceived, in teaching these issues in the schools and communities for adolescent girls with enough teaching materials [6].

Need for the Study

Current population of India in 2018 is estimated to be 1.30 billion, second most populous country also it has the largest population of adolescents in the world being home to 243 million individuals aged 10-19 years. Female adolescents comprise 46.9% and male adolescent 53.1%* according to census data, the child sex ratio (0-6 years) in India was 927 girls per 1000 boys in 2001, which dropped drastically to 914 girls for every 1000 boys in 2011. In 2012 UNICEF, report ranked India 41st among 195 countries. Haryana is the 16th largest state in India in terms of population. Population of Haryana in 2018 is and about 23% of that composed of adolescent population.

Today's adolescents are tomorrow's adults who are the strength of the nation. Today's adolescent girls are future homemakers. Most of the adolescents tend to be extremely unaware of their own body their physical wellbeing and psychological change. Half of the adolescent age 12-15 years residing in 8th to 12th standards does not know about menstruation until its onset [7].

Any program to be effective should be based on the felt need of individuals to whom the program is intended. The program should be such that it would be helpful in finding out solutions to the problems experienced by the group. For organizing educational program on menstruation for adolescent in schools, knowledge of the nature and intensity of the problem experienced by them is relevant.

Statement of Problem

A Quasi experimental study to evaluate the effectiveness of structured teaching program on knowledge regarding

menstrual hygiene among adolescent girls in selected government Schools, at Panipat.

Objectives

- To assess the pre and post test knowledge regarding menstrual hygiene among adolescent girls in experimental and control group.
- To evaluate the effectiveness of structured teaching program on knowledge regarding menstrual hygiene among adolescent girls in experimental and control group.
- To find out the association between pre test knowledge regarding menstrual hygiene with selected socio demographic variables in experimental and control group.

Hypotheses

All the hypothesis will be tested at 0.05 level of significance.

H1: There will be a significant difference in level of knowledge regarding menstrual hygiene among adolescent girls in experimental and control group.

H2: There will be significant association between pre test knowledge regarding menstrual hygiene among adolescent girls in experimental and control group with selected socio-demographic variables.

Operational Definition

Assess: It refers to measurement of level of knowledge regarding menstrual hygiene among adolescent girls.

Effectiveness: It refers to gain in knowledge on menstrual hygiene determined by differences in pre-tested and post-tested knowledge scores.

Structured Teaching Program: it refers to pre validated, systematically planned and executed teaching program on menstrual hygiene among adolescent girls.

Knowledge: It refers to the correct responses of the adolescent girls on menstrual hygiene.

Menstrual Hygiene: It refers to the include all those measures taken by the individual to keep the genital area clean and dry during the menstrual cycle and period.

Adolescent girls: It refers to the girls which comes under the age group of 10-19 years and had attained menarche and studying in 8th and 9th standards in government school of Baroli and Kabri (Panipat).

Selected Government school: It refers to and government schools in panipat district, which are coming under the state education board of Haryana.

Table 1: Frequency and Percentage Distribution of Samples According to Demographic Variables in Experimental Group. (n=40)

S. No	Demographic Variables	Frequency	Percentage
1	Age (Years)		
	a) 11 – 13	27	67.50
	b) 14 – 16	13	32.50
2	Education Status		
	a) 8 th Standard	19	47.50
	b) 9 th Standard	21	52.50
3	Religion		
	a) Hindu	35	87.50
	b) Muslim	5	12.50
4	Education of Mother		
	a) Illiterate	8	20.00
	b) Primary	15	37.50
	c) Secondary	14	35.00
	d) Higher-Secondary	2	5.00
e) Diploma	1	2.50	
5	Place of Domicile		
	a) Rural	40	100.00
	b) Urban	0	0.00
6	Monthly Income (Rupees)		
	a) < than 5000	9	22.50
	b) 5001 – 10,000	12	30.00
	c) 10,001 – 15,000	16	40.00
d) > than 15,001	3	7.50	
7	Occupation of Mother		
	a) House Wife	33	82.50
	b) Private Job	5	12.50
c) Government Job	2	5.00	
8	Age of Menarche		
	a) 10 – 11	26	65.00
	b) 12 – 13	12	30.00
c) 14 – 15	2	5.00	
9	Sources of Information		
	a) Peer Group	30	75.00
	b) Others	10	25.00

Table 2: Frequency and Percentage Distribution of Samples According to Demographic Variables in Control Group. (n=40)

S. No	Demographic Variables	Frequency	Percentage
1	Age (Years)		
	c) 11 – 13	30	75.00
	d) 14 – 16	10	25.00
2	Education Status		
	c) 8 th Standard	22	55.00
	d) 9 th Standard	18	45.00
3	Religion		
	c) Hindu	37	92.50
	d) Muslim	3	7.50
4	Education of Mother		
	f) Illiterate	8	20.00
	g) Primary	8	20.00
	h) Secondary	23	57.50
	i) Higher-Secondary	0	0.00
j) Diploma	1	2.50	
5	Place of Domicile		
	c) Rural	40	100.00
	d) Urban	0	0.00
6	Monthly Income (Rupees)		
	e) < than 5000	6	15.00
	f) 5001 – 10,000	28	70.00
	g) 10,001 – 15,000	6	15.00
h) > than 15,001	0	0.00	
7	Occupation of Mother		
	d) House Wife	38	95.00
	e) Private Job	2	5.00
f) Government Job	0	0.00	
8	Age of Menarche		
	d) 10 – 11	24	60.00
	e) 12 – 13	16	40.00
f) 14 – 15	0	0.00	
9	Sources of Information		
	c) Peer Group	29	72.50
	d) Others	11	27.50

Table 3: Frequency and Percentage Distribution of Sample According to Level of Knowledge in Experimental Group (n = 40)

Knowledge Level	Pre-Test		Post-Test	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor	12	30.00	0	0.00
Average	28	70.00	6	15.00
Good	0	0.00	34	85.00

Table 4: Frequency and Percentage Distribution of Sample According to Level of Knowledge in Control Group (n = 40)

Knowledge Level	Pre-Test		Post-Test	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor	12	30.00	0	0.00
Average	28	70.00	24	60.00
Good	0	0.00	16	40.00

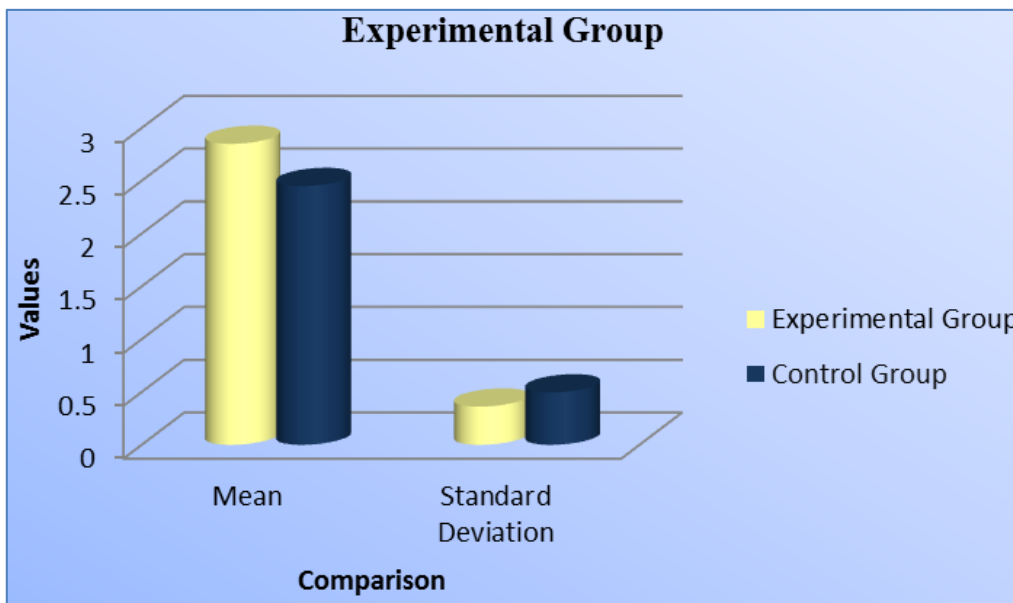


Fig 1: Comparison of Pre-Test Mean & Post-Test Mean and Standard Deviation of Samples in Experimental Group

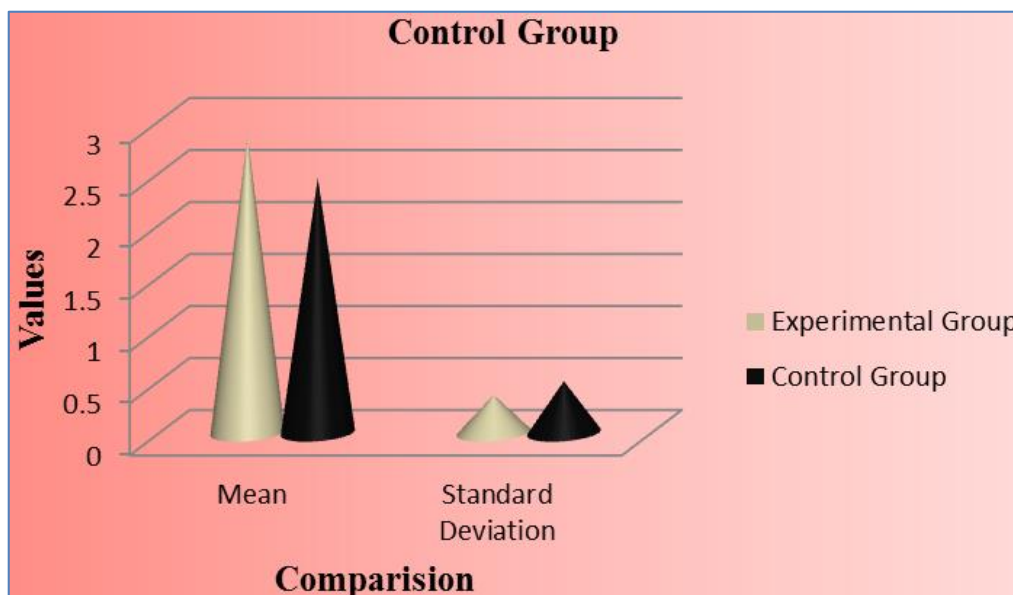


Fig 2: Comparison of Pre-Test Mean & Post-Test Mean and Standard Deviation of Samples in Control Group

Table 5: Level of Association between Pre-Test Knowledge and Selected Socio-Demographic Variables in Experimental Group (n=40)

S. No	Demographic Variables	Pre-Test Knowledge Level		Chi-Square Value	Degree of Freedom	Significant Level
		Poor	Average			
1	Age (Years)			.005 ^{NS}	1	.609
	a) 11 – 13	8	19			
	b) 14 – 16	4	9			
2	Religion			2.449 ^{NS}	1	.149
	a) Hindus	9	3			
	b) Muslims	26	2			
3	Education			2.525 ^{NS}	1	.107
	a) 8 th Standard	8	11			
	b) 9 th Standard	4	17			
4	Mother's Education			.998 ^{NS}	4	.910
	a) Illiterate	2	6			
	b) Primary	5	10			
	c) Secondary	4	10			
	d) Higher Secondary	6	1			
e) Diploma	0	1				
5	Monthly Income			.218 ^{NS}	3	.975
	a) < than 5000	3	6			
	b) 5001 – 10000	3	9			
	c) 10001 – 15000	5	11			
	d) > than 15001	1	2			
8	Mother's Occupation			.736 ^{NS}	2	.692
	a) House Wife	9	24			
	b) Private Job	2	3			
	c) Govt Job	1	1			
9	Age of Menarche			.928 ^{NS}	2	.629
	a) 10-11	8	18			
	b) 12-13	4	8			
	c) 14-15	0	2			
13	Source of Information			.635 ^{NS}	1	.337
	a) Peer group	8	22			
	b) Others	4	6			

NS- Non Significant, *Significant at 0.005 Level of Significance

Table 6: Level of Association between Pre-Test Knowledge and Selected Socio-Demographic Variables in Control Group (n=40)

S. No	Demographic Variables	Pre-Test Knowledge Level		Chi-Square Value	Degree of Freedom	Significant Level
		Poor	Average			
1	Age (Years)			.635 ^{NS}	1	.355
	c) 11 – 13	10	20			
	d) 14 – 16	2	8			
2	Religion			2.076 ^{NS}	1	.209
	c) Hindus	10	27			
	d) Muslims	2	1			
3	Education			.077 ^{NS}	1	.529
	c) 8 th Standard	7	15			
	d) 9 th Standard	5	13			
4	Mother's Education			2.060 ^{NS}	3	.560
	f) Illiterate	1	7			
	g) Primary	3	5			
	h) Secondary	8	15			
	i) Higher Secondary	0	1			
5	Monthly Income			1.678 ^{NS}	2	.432
	e) < than 5000	1	5			
	f) 5001 – 10000	8	20			
	g) 10001 – 15000	3	3			
8	Mother's Occupation			.401 ^{NS}	1	.515
	d) House Wife	11	27			
	e) Private Job	1	1			
9	Age of Menarche			.317 ^{NS}	1	.420
	d) 10-11	8	16			
	e) 12-13	4	12			
13	Source of Information			.054 ^{NS}	1	.817
	c) Peer group	9	20			
	d) Others	3	8			

NS- Non Significant, *Significant at 0.005 Level of Significance

Conclusion

This experimental study done to assess the effectiveness of structured teaching programme on the knowledge regarding menstrual hygiene among Government senior secondary schools students in selected Government Senior Secondary Schools of Baroli and Kabri, Panipat. The finding of the study showed that the structured teaching programme was more effective in improving the knowledge of the students regarding menstrual hygiene. There was no association between the pre test knowledge score and the demographic variables in experimental group whereas in control group. Ill effects of menstrual hygiene is essential for every human being and structured teaching programme with A.V aids was the effective and the simple way to teach the students regarding menstrual hygiene. As a health care professional we are in the position to educate students and thereby to adopt good and healthy practice.

Implications

It is the responsibility of health professional to educate the child as it grows will help them to live a healthy life in future. Majority of the health problems can be prevented if people get adequate information and essential precaution. The finding of the study have implication in different branches of nursing (i.e.) nursing practice, nursing education, nursing administration and nursing research by effectiveness of structure teaching programme in increasing the knowledge level of school students regarding menstrual hygiene. The investigator received a clear idea regarding the different steps to be taken in different fields to improve the same. There are several important implications for nursing practice.

Nursing Practice

- Holistic nursing care could be provided for individual, family and community to achieve optimum knowledge regarding menstrual hygiene.
- Understanding the need of school students with poor menstrual hygiene knowledge may help the nurse to plan and provide appropriate knowledge to students.
- Student nurse can use this intervention to create awareness regarding way to maintain proper knowledge about menstrual hygiene.
- A regular health teaching programme should be conducted in community and school setting to prevent and management for menstrual hygiene. So that students can identify themselves about their problem earlier.

Nursing Education

- The nursing curriculum should emphasize on imparting health information by giving teaching programme.
- Nursing students should be educated on health promotion and right practice on menstrual hygiene.
- Every student should be encouraged in helping student nurse during providing knowledge on menstrual hygiene to the students.
- Seminars, workshops and conferences can be arranged regarding menstruation and menstrual hygiene to make nursing professional competent enough to take care of the future generation healthier.
- There must be adequate supervision, instruction and evaluation of health personnels and nursing students to provide adequate knowledge regarding menstruation and menstrual hygiene.
- The nursing curriculum should allow for more exposure

in practical field along with the theory session to help them to correlate theory and practice.

Nursing Administration

The staff development programme for nursing personnel is inadequate in existing health care system. In the event of ever- growing challenges of community nursing, the administrator has a responsibility to provide nurses with staff development opportunities.

- People at the administrator position can make necessary policies to implement the concept of menstrual hygiene and need of student.
- Periodic discussion and conferences may be arranged with nurse and nurse administrators.
- The nurse administrator has to organize in service educational programme for school health nurses regarding menstrual hygiene.
- The nurse administrators have to motivate the school health nurse to incorporate various simple and cost effective method to educate students rather than traditional method of teaching.

Nursing Research

- There is a need for extensive and intensive research in their area, so that strategies for educating students on regarding menstrual hygiene.
- The nurse research should conduct research on various aspects of ill effects of menstrual hygiene, which provide more scientific data and more scientific body of knowledge information to students and also update the nursing profession.
- The study is a preliminary step for exploring the concept of nurse and involved nursing care with respect to the involvement of the student.
- The study provides awareness for further studies among the student in their area.
- The present study findings will help the school health nurse to plan for further research.

Limitation

- The study is limited to the selected schools of Panipat (Haryana).
- The study is limited in assessing knowledge regarding menstrual hygiene.
- The study is limited to 80 samples only.

Recommendations

- A similar study can be done on a large sample to generalize the findings.
- A similar study can be conducted to parents using the same teaching programme.
- A descriptive study can be done to find out the prevalence of menstrual hygiene among school students.
- A cross-sectional study among Government Senior Secondary Schools students to evaluate the prevalence, behavioral pattern and correlates of regular menstrual hygiene.
- A prospective cohort study conducted to assess the effect of body mass index (BMI) and menstrual hygiene.

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