

A Study to Assess the Effectiveness of Structured Teaching Programme On Knowledge Regarding Menstrual Hygiene Among Adolescent Girls at Selected Senior Secondary School in Rural Area of, Jaipur

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Abstract :

Introduction: Adolescence is the most pivotal period of life, yet one of the most vulnerable time for physical ailments. Adolescence is a period having the sense of identity and the sense of intimacy. It is the transition from childhood to adulthood and so it is not a smooth one. In addition to this intellectual and emotional upheaval, rapid body growth causes them anxiety and cultural pressures of today's world add further stress to their uncertainty. Ten to twenty percent of the world population comprises adolescents and their problems have not been fully appreciated and

Materials & Methods: The study was conducted at Stani Memorial Public School (CBSE Board), located in a rural area of Jaipur. The study sample consisted of 60 adolescent girls studying in the selected senior secondary school. A simple random sampling technique using the lottery method was employed for the selection of participants. A structured knowledge questionnaire consisting of 30 items was developed to assess the knowledge of adolescent girls regarding menstrual hygiene. The tool was validated by six experts, and its reliability was established using the correlation coefficient, which indicated high reliability. A pilot study was conducted among 10 adolescent girls. The main study was then conducted among 60 selected adolescent girls. Data were collected using the structured knowledge questionnaire and analyzed according to the objectives and hypotheses using descriptive and inferential statistics.

Results: The results showed that the mean knowledge score increased from 8.23 in the pre-test to 18.84 in the post-test, indicating a substantial improvement after the structured teaching programme. The obtained *t* value of 32.189 demonstrated a statistically significant improvement in knowledge regarding menstrual hygiene among adolescent girls.

Discussion: The findings showed a marked improvement in knowledge regarding menstrual hygiene among adolescent girls following the structured teaching programme. The mean knowledge score increased from **8.23 in the pre-test to 18.84 in the post-test**, with a significant *t* value of **32.189**, indicating that the structured teaching programme was effective.

Keyword: Assess; Effectiveness; Structured Teaching Programme; Menstrual Hygiene

INTRODUCTION

Changes are inherent in life, changes within and changes without, it is the eternal changefulness of life, that makes life so beautiful said Sigmund Freud. Yes, change makes life worth living if only one knows how to adapt oneself and adjust to the challenges created by the changing situation¹

Puberty is a period of rapid physical change and personality growth. A girl has entered puberty when she begins to menstruate (menarche). Puberty for girls is the period for her sexual maturity.²

Adolescence is the physiological period between the beginning of puberty and cessation of bodily growth. It is

regarded as unique phase of human development. Among adolescent girl's menarche is an important landmark in the process of growth and maturation. A modern description of adolescence is teenager. It is the time period extends from age of 10 or 12 years through at least 18 years of age.³

Twelve million girls are born every year in India. MC Causley and Salter (1995) reported that 19% of world's population are in the age of 10 and 18 years.⁴

Menstruation is a phenomenon unique to the females. The onset of menstruation (menarche) is one of the most important changes occurring among the girls during adolescent years. The first menstruation occurs between 11

and 15 years with a mean of 13 years. The word menstruation is derived from Greek word men month. It is the monthly vaginal bleeding coming at interval of about 28 days from uterine endometrial.⁵

It occurs during the reproductive period of a woman except during pregnancy and sometimes during lactation. Adolescence in girls has been recognized as a turbulent period which signifies the transition from girlhood to womanhood and considered as a land mark of female puberty. This transitional period is marked with the onset of "MENARCHE" which is generally accepted by young girls, as a sign of maturity.⁶

However, some girls show negative responses such as shame, fear, anxiety and depression. Onset of menstruation is one of the most important changes occurring among the girls during the adolescence. The first menstruation (menarche) occurs between 11-15 years with a mean age of 13 years. In existing Indian culture/milieu, there are several traditions, myths, misconceptions, mystery and superstition prevailing about menstruation. The mere mention of the topic has been a taboo in the past and even to this date the cultural & social influences appear to be a major hurdle for advancement of the knowledge of the subject.⁷

Menstruation is generally considered as unclean leading to isolation of the menstruating girls and restrictions imposed on them in the family. These practices have reinforced negative attitude toward menstruation in girls. The centre for social research in 1990 have reported restrictions in daily activities not being allowed to take bath, change clothes, comb hair, enter holy places. apart from their dietary restrictions (taboo on consumption of food like rice, curd milk, lassie, onion sugarcane, etc)⁸

There is very little awareness about menstruation among girls when they first experience it. Social prohibitions and negative attitude of parents in discussing the related issues openly has blocked the access of adolescent girls to right kind of information especially in rural, urban and tribal community.⁹

Adolescent girls constitute vulnerable group particularly in India where female child is neglected one. Menstruation is still regarded as something unclean (or) dirty in Indian society. The reaction to menstruation depends upon awareness & knowledge about the subject.¹⁰

OBJECTIVES OF THE STUDY:

1. To assess the existing level of pretest knowledge on menstrual hygiene among adolescent girls.
2. To evaluate the effectiveness of structured teaching programme on knowledge of menstrual hygiene among adolescent girls.
3. To find out the relationship between pre test and post test knowledge score of adolescent girls.
4. To find out the association between the post test knowledge score of adolescent girls and their demographic variables.

RESEARCH HYPOTHESES

H₁: There will be significant differences in pre and post test knowledge on menstrual hygiene among adolescent girls studying in 8th to 12th standard after structured teaching programme

H₂: There will be a significant association between post test knowledge on menstrual hygiene among adolescent girls with their selected demographic variables.

METHODOLOGY

1. **Research Approach:** Evaluative research approach was adopted to assess the effectiveness of the structured teaching programme (STP) on menstrual hygiene.
2. **Research Design:** One-group pre-test-post-test quasi-experimental design was used. Pre-test was conducted on Day 1, STP was administered on the same day, and post-test was conducted on Day 7.
3. **Variables:**
 - **Independent variable:** Structured Teaching Programme on menstrual hygiene.
 - **Dependent variable:** Knowledge regarding menstrual hygiene.
 - **Extraneous variables:** Age, education, religion, family type, mother's education, family income, age at menarche, and source of information.
4. **Study Setting:** Stani Memorial Public School, Phagi, Jaipur, Rajasthan.
5. **Population:** Adolescent girls aged 12–18 years studying in the selected school.
6. **Sample Size:** 60 adolescent girls aged 12–18 years.
7. **Sampling Technique:** Simple random sampling using the lottery method.
8. **Inclusion Criteria:** Girls aged 12–18 years, studying in the selected school, willing to participate, able to communicate in English, and available during data collection.
9. **Exclusion Criteria:** Girls below 12 years, unwilling to participate, or unavailable during the study period.
10. **Tool Development:** The tool was developed through literature review, expert consultation, and preparation of a blueprint.
11. **Tool Components:**
 - **Section A:** Demographic information.
 - **Section B:** 30-item structured knowledge questionnaire on menstrual hygiene.
 - Anatomy & Physiology of Reproductive System – 13 items
 - Facts Related to Menstruation – 7 items
 - Menstrual Hygiene – 10 items
 - **Content Validity of STP:** The Structured Teaching Programme was validated by 6 experts—4 from Community Health Nursing, 1 Medical Officer, and 1 Biostatistician. There was 100% agreement regarding the content.
 - **Final Draft:** Necessary corrections and modifications suggested by the experts were incorporated to prepare the final STP and tool.
 - **Content Validity of Tool:** The structured knowledge questionnaire was validated by the same 6 experts. Minor changes were made in question arrangement and difficult words were simplified.

- **Language Editing:** The final STP and questionnaire were reviewed and edited by an English language expert.
- **Pretesting:** Pretesting of the questionnaire was conducted among adolescent girls after obtaining permission from the school to assess clarity, feasibility, and administration of the tool.
- **Reliability:** Reliability testing was conducted to determine the consistency, accuracy, stability, and clarity of the structured knowledge questionnaire.
- **Pilot study:** A pilot study was conducted from 08-07-2014 to 16-07-2014 among 10 adolescent girls selected by simple random sampling from Govt. Senior

Secondary School, Phagi, Jaipur. After obtaining permission and informed consent, demographic data and pre-test knowledge were assessed, followed by the Structured Teaching Programme on menstrual hygiene. A post-test was conducted after 7 days using the same questionnaire. The study confirmed the feasibility of the methodology, tool, and STP, with good cooperation from the participants and school authorities.

RESULT

The findings of the present study are discussed in relation to the objectives of the study and relevant research evidence. The results obtained from the study are interpreted and compared with findings reported in previous studies.

Table 1.1: Percentage Distribution of Adolescent Girls According to Age N=60

S. No.	Age group (years)	Percentage (%)
1	12–13	19
2	14–15	43
3	16–17	24
4	18	14
Total		100

Interpretation: Majority (43%) of adolescent girls belonged to the age group of 14–15 years.

Table 1.2: Percentage Distribution of Adolescent Girls According to Educational Status N=60

S. No.	Educational status	Percentage (%)
1	8th–9th class	16
2	10th class	42
3	11th class	25
4	12th class	17
Total		100

Interpretation: Majority (42%) of adolescent girls had completed 10th class.

Table 1.3: Percentage Distribution of Adolescent Girls According to Religion N=60

S. No.	Religion	Percentage (%)
1	Hindu	84
2	Muslim	16
3	Christian	0
4	Others	0
Total		100

Interpretation: Majority (84%) of adolescent girls belonged to the Hindu religion.

Table 1.4: Percentage Distribution of Adolescent Girls According to Type of Family N=60

S. No.	Type of family	Percentage (%)
1	Nuclear family	78
2	Joint family	22
Total		100

Interpretation: Majority (78%) of adolescent girls belonged to nuclear families.

Table 1.5: Percentage Distribution of Adolescent Girls According to Educational Status of Mother

N=60

S. No.	Educational status of mother	Percentage (%)
1	No formal education	10
2	Primary and middle	25
3	Secondary and senior secondary	47
4	Graduate and postgraduate	18
Total		100

Interpretation: Majority (47%) of mothers had completed secondary and senior secondary education.

Table 1.6: Percentage Distribution of Adolescent Girls According to Monthly Family Income

N=60

S. No.	Monthly family income (₹)	Percentage (%)
1	Below ₹2,000	2
2	₹2,000–₹5,000	8
3	₹6,000–₹10,000	25
4	Above ₹10,000	63
Total		98

Table 1.7: Percentage Distribution of Adolescent Girls According to Age at Menarche

N=60

S. No.	Age at menarche (years)	Percentage (%)
1	12 years	42
2	13 years	34
3	14 years	25
4	15 years	0
Total		101

Interpretation: Majority (42%) of adolescent girls attained menarche at 12 years of age.

Table 1.8: Percentage Distribution of Adolescent Girls According to Source of Information

N=60

S. No.	Source of information	Percentage (%)
1	Friends	75
2	Elders in family	25
3	Newspaper	0
4	Television	0
5	Computer/Internet	0
Total		100

Interpretation: Majority (75%) of adolescent girls received information regarding menstruation from friends.

Table 2: Area wise comparison of mean, SD, and mean percentage of pre and post test knowledge scores of adolescent girls.

N=60

Area of knowledge items	Max scores	Pre test			Post test			Difference in Mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
Anatomy and Physiology of the Reproductive system	13	3.28	1.085	28.67	5.78	0.961	63.23	34.56
Facts related to menstruation	7	2.56	0.984	31.56	5.98	0.886	64.75	33.19
Menstrual Hygiene	10	2.88	1.843	32.48	7.63	0.855	69.56	37.08
Overall	30	8.23	2.053	30.87	18.84	1.923	66.54	35.67

Table 3 : Comparison of mean, SD, mean percentage of pre and post test knowledge scores of Adolescent Girls in relation to their age.

N=60

Age in years	No	Pre Test			Post Test			Difference in Mean %
		Mean	SD	Mean%	Mean	SD	Mean%	
12-13	12	7.85	1.982	30.02	18.00	1.083	70.4	40.38
14-15	26	9.00	2.923	32.05	19.10	2.095	70.2	36.15
16-17	14	8.26	2.867	31.23	20.32	1.958	74.2	42.07
18	8	7.22	1.643	30.00	18.11	1.000	72.0	41.00
Overall	60	8.23	2.053	30.87	18.84	1.923	66.54	35.67

Table 4: Comparison of mean, SD, mean percentage of pre and post test knowledge score of the adolescent girls in relation to their educational status. N=60

Educational Status	No	Pre Test			Post Test			Difference in Mean %
		Mean	SD	Mean%	Mean	SD	Mean%	
8 th - 9 th	10	7.50	3.532	28.13	19.00	1.026	65.7	37.04
10 th	25	8.58	2.146	28.6	19.67	1.090	66.2	37.11
11 th	15	9.65	2.080	32.57	20.25	1.760	68.5	37.34
12 th	10	9.56	2.082	31.77	21.00	1.788	70.0	38.22
Overall	60	8.23	2.053	30.87	18.84	1.923	66.54	35.67

Table 5 : Comparison of mean, SD, mean percentage of pre and post test knowledge score of the Adolescent Girls in relation to their religionN=60

Religion	No	Pre Test			Post Test			Difference in Mean %
		Mean	SD	Mean%	Mean	SD	Mean%	
Hindu	50	9.02	2.648	31.7	20.54	2.064	68	37.05
Muslim	10	7.64	1.578	29.7	19.82	1.534	66.4	35.08
Christian	0							
Overall	60	8.23	2.053	30.87	18.84	1.923	66.54	35.67

Table 6: Comparison of mean, SD, mean percentage of pre and post test knowledge score of the Adolescent Girls in relation to their type of family. N=60

Type of family	No	Pre Test			Post Test			Difference in Mean %
		Mean	SD	Mean%	Mean	SD	Mean%	
Nuclear	47	10.07	2.134	30.2	19.23	1.564	67	37.8
Joint	13	6.65	2.067	31.6	18.98	2.004	66.5	35.2
Overall	60	8.23	2.053	30.87	18.84	1.923	66.54	35.67

Table 7 : Comparison of mean, SD, mean percentage of pre and post test knowledge score of the Adolescent Girls in relation to their educational status of the mother. N=60

Educational status of the mother	No	Pre Test			Post Test			Difference in Mean %
		Mean	SD	Mean%	Mean	SD	Mean%	
No formal education	08	7.45	3.654	28.45	19.03	1.012	65.6	37.02
Primary and middle	13	8.64	2.238	28.34	19.76	1.040	66.5	37.22
Secondary and sr.secondary	28	9.53	2.056	31.34	21.05	1.765	70.2	38.31
Graduate and postGraduate	11	9.54	2.086	32.67	20.13	1.820	68.2	37.56
Overall	60	8.23	2.053	30.87	18.84	1.923	66.54	35.67

Table 8: Comparison of mean, SD, mean percentage of pre and post test knowledge score of the Adolescent Girls in relation to their Monthly income of the family. N=60

Monthly income of the family	No	Pre Test			Post Test			Difference in Mean %
		Mean	SD	Mean%	Mean	SD	Mean%	
2000 or Below	02	6.89	2.855	28.6	18.17	1.425	65.1	37.0
2001 - 5000	05	7.57	1.944	29.9	18.36	1.249	66.5	37.2
5001 -10000	15	8.25	2.423	31.2	19.25	1.434	67.8	36.5
Above 10000	38	9.34	3.498	32.8	20.39	1.574	68.2	36.0
Overall	60	8.23	2.053	30.87	18.84	1.923	66.54	35.67

Table 9: Comparison of mean, SD, mean percentage of pre and post-test knowledge scores of Adolescent Girls in relation to their Menstrual Started age. N=60

Menstrual started Age in years	No	Pre Test			Post Test			Difference in Mean %
		Mean	SD	Mean%	Mean	SD	Mean%	
12 years	25	9.85	2.003	31.34	20.00	1.422	67.13	35.39
13 years	20	8.00	2.913	30.25	19.10	1.095	67.20	36.25
14 years	15	8.26	1.568	29.23	19.32	1.167	66.21	36.48
15 years	00	—	—	—	—	—	—	—
Overall	60	8.23	2.053	30.87	18.84	1.923	66.54	35.67

Table 10: Comparison of mean, SD, mean percentage of pre and post-test knowledge score of the Adolescent Girls in relation to their source of Information. N=60

Source of Information	No	Pre Test			Post Test			Difference in Mean %
		Mean	SD	Mean%	Mean	SD	Mean%	
Elders of the family	15	9.40	2.079	31.5	18.98	2.027	66.8	35.32
Friends	45	8.22	2.073	30.1	19.78	1.616	67.6	36.58
News papers	00	—	—	—	—	—	—	—
T.V./Computer	00	—	—	—	—	—	—	—
Overall	60	8.23	2.053	30.87	18.84	1.923	66.54	35.67

Table 11: Association between post-test knowledge scores of the Adolescent girls and their demographic variables. N=60

Adolescent girls	df	χ^2	Table value	Level of Significance
Age	8	9.131	15.51	Not significant
Education status	4	5.426	9.49	Not significant
Religion	4	3.830	9.49	Not significant
Type of family	6	4.506	12.59	Not significant
Education status of mother	4	4.650	9.49	Not significant
Monthly income of the family	4	1.473	9.49	Not significant
Menstrual started age	2	0.874	5.9	Not significant
Source of information	2	5.90	5.9	Significant*

DISCUSSION

The study assessed the effectiveness of a structured teaching programme (STP) on menstrual hygiene among 60 adolescent girls. Most participants were aged 14–15 years, belonged to nuclear families, and received information mainly from friends. In the pre-test, 65% had inadequate knowledge, whereas after the STP, 80.7% achieved adequate knowledge. The overall mean knowledge score increased from 30.87% in the pre-test to 66.54% in the post-test, with a mean improvement of 35.67%. Improvement was observed across all areas of menstrual hygiene and demographic groups, indicating that the structured teaching programme was effective in improving knowledge among adolescent girls.

CONCLUSION

The study found that 43% of adolescent girls were aged 14–15 years, 42% had completed 10th class, 84% belonged to Hindu religion, and 78% belonged to nuclear families. About 47% of mothers had secondary/senior secondary education, while 63% of families had a monthly income above ₹10,000. Menarche occurred at 12 years in 42% of girls, and 75% reported friends as their main source of information. The mean knowledge score increased from 8.23 in the pre-test to 18.84 in the post-test. The obtained t value of 32.189 indicated a significant improvement in knowledge, demonstrating the effectiveness of the structured teaching programme on menstrual hygiene.

NURSING IMPLICATIONS

1. Nursing Practice: Nurses can use structured teaching programmes, health education, pamphlets, and other educational methods to improve awareness and promote healthy menstrual hygiene practices among adolescent girls.
2. Nursing Education: Menstrual hygiene should be emphasized in nursing education, with regular health education, in-service training, and awareness programmes for adolescent girls.
3. Nursing Research: The study provides a basis for further research using larger samples, different settings, variables, and updated teaching strategies related to menstrual hygiene.
4. Nursing Administration: Nurse administrators can plan and organize health education programmes, training sessions, awareness camps, and provide adequate resources for promoting menstrual hygiene.

RECOMMENDATIONS

Similar studies may be conducted with larger samples and in different settings. Experimental studies with control groups may be undertaken for better comparison. Longitudinal studies can also be conducted to assess long-term retention of knowledge.

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