A Study to Assess the Effectiveness of Structure Teaching Programme on Knowledge Regarding Menstrual Irregularity Among Adolescent Girls in Selected High School of Nagpur

Jyoti Kiran Gaikwad

Author Affiliation: Lecturer, Department of Obstetrical Nursing, Ashram College of Nursing, Kamptee, Nagpur, Maharashtra 441001, India.

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Abstract

Background of the study: The normal menstrual cycle is about four weeks long, and often follows the phases of the moon. Its length varies from three to seven days, but is usually consistent. However, girls and teenagers who menstruate are usually irregular. For most women, a normal menstrual cycle ranges from 21 to 35 days.[1] However, 14% to 25% of women have irregular menstrual cycles, meaning the cycles are shorter or longer than normal; are heavier or lighter than normal; or are experienced with other problems, like abdominal cramps. Irregular cycles can be ovulatory, meaning that ovulation occurs, or anovulatory, meaning ovulation does not occur. *Objectives:* To assess the pre-test knowledge on menstrual irregularity among adolescent girls in selected high school. To assess the post test knowledge on menstrual irregularity among adolescent girls in selected high school. To evaluate the effectiveness of structure teaching programme on knowledge regarding menstrual irregularity among adolescent girls in selected high school. To find out the association between the pre-test knowledge score with selected demographic variables. *Methods:* The study involved evaluative approach and one group pre and post test only without control group research design with simple random sampling technique. And data has collected through structured knowledge quesionnarie. *Results:* As per the study findings 3.33% adolescent girls had inadequate knowledge, 76.67% had moderate level of knowledge and 20% had adequate level of knowledge regarding menstrual hygiene. In all demographic factors age in years of adolescent girls, educational status of mother, educational status of father, number of elder sisters statistically not associated with their pre-test knowledge score and there is association of pre test knowledge score with religion, type of family, monthly family income, age of menarche and source of information. The present statistically shows the enhancement of 11.07 in mean, 0.7 in standard deviation with the 'z' value of 29.19 at 0.05 level of significance. It was inferred that there was significant enhancement in knowledge score after structure teaching program.

Keywords: Adolescent; Menstrual irregularity; Chi-Square Test; Knowledge; Structure teaching programme.

Introduction

Adolescence is a time of moving from the immaturity of childhood into the maturity of adulthood. Period of life from puberty to adulthood characterized by marked physiological changes, development of sexual feelings, efforts toward the construction of identity, and progression from concrete to abstract through Most women have menstrual periods that last four to seven days. Examples of menstrual problems include periods that occur less than 21 days or more than 35 days apart, missing three or more periods in row, and menstrual flow that is much heavier or lighter than usual. Treatment options include medications and surgery.

A cross-sectional study was conducted on menstrual pattern and menstrual disorders among school going adolescent girls in 2015. To determine patterns of menstruation, prevalence of menstrual disorders and the health seeking behavior of the adolescent girls related to menstruation. Samples were 500 school going adolescent girls of government schools in south Delhi. After taking informed consent, the data was collected through a self-administered questionnaire prepared in Hindi. The mean age at menarche in the study subjects was 12.7 ± 1.00 years. Average menstrual interval was 29.01 ± 7.03 days. Dysmenorrhea was reported by 62% of the girls. Premenstrual syndrome was experienced by 34% girls. Out of 71.59% girls who had ever experienced any menstrual problem, some 30% had any consultation regarding the problem. Conclusion, Age at menarche had declined and there is significant variation in adolescent menstruation in initial 3 years after menarche. Menstrual problems are frequent among adolescent girls. However many adolescent girls do not seek medical advice for these menstrual problems.

Menarche is a normal female biological milestone and abnormalities of menstruation are a major gynaecological problem in adolescence. Menstrual irregularity was reported in 43-62% of girls during the first year of menstruation and in some it persists for three to five years. This irregularity may have a significant impact on the physical and social health of those affected. Delayed, irregular, painful, and heavy menstrual bleeding are leading reasons for physician office visits by adolescents, and dysmenorrhea is the leading reason for school absenteeism among girls. 75% of girls experience some problem associated with menstruation.

Objectives of the study

1. To assess the pre-test knowledge on menstrual irregularity among adolescent girls in selected higher secondary school.

2. To assess the post test knowledge on menstrual irregularity among adolescent girls in selected high school.

3. To evaluate the effectiveness of structure teaching programme on knowledge regarding menstrual irregularity among adolescent girls in selected high school.

4. To find out the association between the pre-test knowledge score with selected demographic variables.

Hypotheses

H_1: There is significant difference between pre-test and post-test knowledge scores after administering structured teaching program

H_2: There is significant association between pre-test knowledge scores and pre-test knowledge scores with demographic variables.

Methodology

Research Design: one group pre test–post test only research design.

Setting of the study: Shri pakwasa gujarati girls highschool, Nagpur.

Sample: The sample for the present study comprised of adolescents girls.

Sample size: Sample consisted 30 adolescents girls.

Sampling Technique: Simple random Sampling Technique.

Inclusion criteria

In this study, an inclusion criterion was:

1. Adolescent girls those who are present at the time of data collection.

2. Adolescent girls age between 13–17 years.

3. Adolescent girls those who have attended menarche.

4. Adolescent girls who are willing to participate in this study.

Exclusion criteria

In this study, the exclusion criterion was:

1. Adolescent girls who are absent at the time of data collection.

2. Adolescent girls those who are not attended menarche.

Data collection technique: The tool divided into two section

Section-A: Personal data consists of 9 items which includes age, religion, type of family, education of father, education of mother, family monthly income, number of elder sisters, age of menarche, source of information. *Section-B:* A structured knowledge questionnaire was planned, consisting of 20 items about menstrual irregularity.

Content Validity: The tool was given to experts from the nursing field of nursing to ensure content validity, The experts were requested to give their opinions and suggestions regarding the relevance of the tool for further modification to improve the clarity and content of the items. It was found to be valid and suitable for Adolescence girls.

Reliability of the Tool: The reliability of the tool was computed by using test re-test method. The reliability obtained for knowledge tool was r = 0.80. Hence, the tool was found to be reliable.

Procedure for Data collection: Prior permission was obtained from the concerned authority of school. The researcher met the adolescents girls in school and samples were selected by using simple random sampling. Total 30 adolescent girls selected from school. After selection written consent was established from the participants and gave assurance about confidentiality. On the days of data collection, each participant was given tool to assessed the knowledge of menstrual irregularity in adolescent girls by used a structured questionnaire. On the same day the investigator has given a structure teaching program to the adolescent girls regarding menstrual irregularity. Then after seven days the investigator personally assessed the knowledge of adolescent girls regarding menstrual irregularity by used the same structured questionnaire.
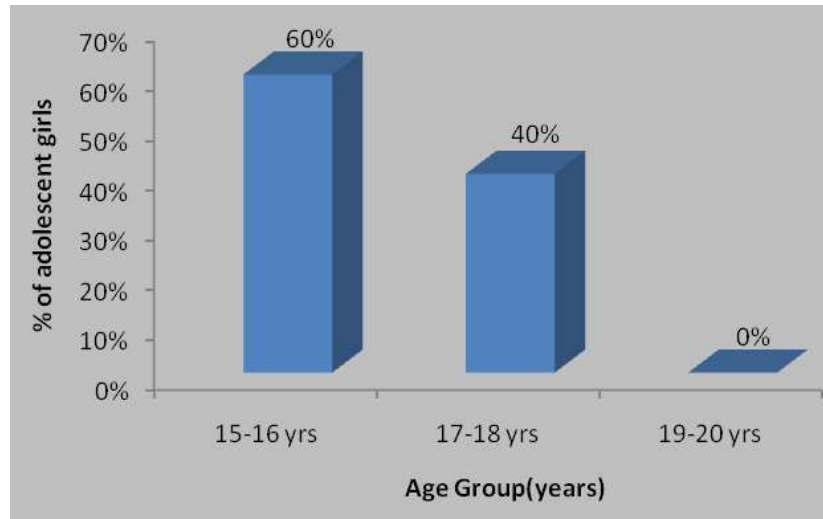
Results

The analyzed data has been organized and presented in the form of tables and graphs. The analysis done by using descriptive and inferential statistics.

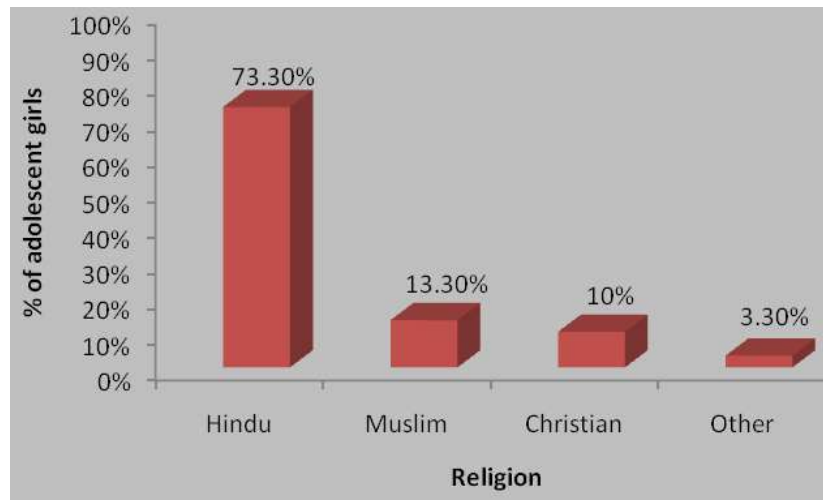*Section A: Distribution of Adolescent Girls According to Demographic Variables*

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

n=30

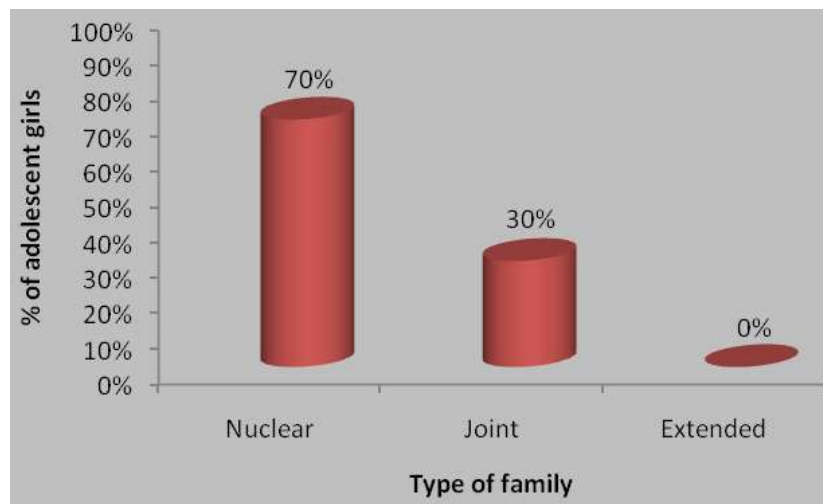| Demographic Variables	Frequency	%
Age in years		
15–16 yrs.	18	60.0
17–18 yrs.	12	40.0
19–20 yrs.	0	0
Religion		
Hindu	22	73.3
Muslim	4	13.3
Christian	3	10.0
Other	1	3.3
Type of family		
Nuclear	21	70.0
Joint	9	30.0
Extended	0	0
Education of mother		
Illiterate	0	0
Primary	0	0
Higher Education	7	23.3
Graduation/Diploma	23	76.7
Education of father		
Illiterate	0	0
Primary	0	0
Higher Education	11	36.7
Graduation/Diploma	19	63.3
Monthly family income(Rs)		
<4000 Rs	0	0
4001–6000 Rs	0	0
6001–8000 Rs	2	6.7
8001–10000 Rs	13	43.3
≥10001 Rs	15	50.0
Number of elder sisters		
Nil	14	46.7
One	13	43.3
Two	3	10.0
More than two	0	0
Age at menarche		
12 yrs. at age	12	40.0
13 yrs. at age	12	40.0
14 yrs. at age	1	3.3
15 yrs. at age	2	6.7
16 yrs. at age	2	6.7
17 yrs. at age	1	3.3
Source of information		
Parents	26	86.7
Teachers	1	3.3
Friends	2	6.7
Mass Media/Printed Aids	1	3.3

Significant findings was 60% of the adolescent

Graph 1: Percentage wise distribution of adolescent girls according to age in years

Graph 2: Percentage wise distribution of adolescent girls according to their religion.

Graph 3: Percentage wise distribution of adolescent girls according to their type of family

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girls were in the age group of 15-16 years and 40% were in the age group of 17-18 years (Graph 1). 73.30% of adolescent girls were Hindus, 13.30% were Muslim, 10% were Christian and 3.30% of them were belonging to other religion (Graph 2). 70% of the adolescent girls were from nuclear families and 30% of them were from joint families (Graph 3).

Section B: Assessment of pre test and post test knowledge of adolescent girls regarding menstrual irregularities in a selected high school

Table 2: Distribution of pre-test knowledge score of adolescent girls regarding menstrual irregularities   n=30

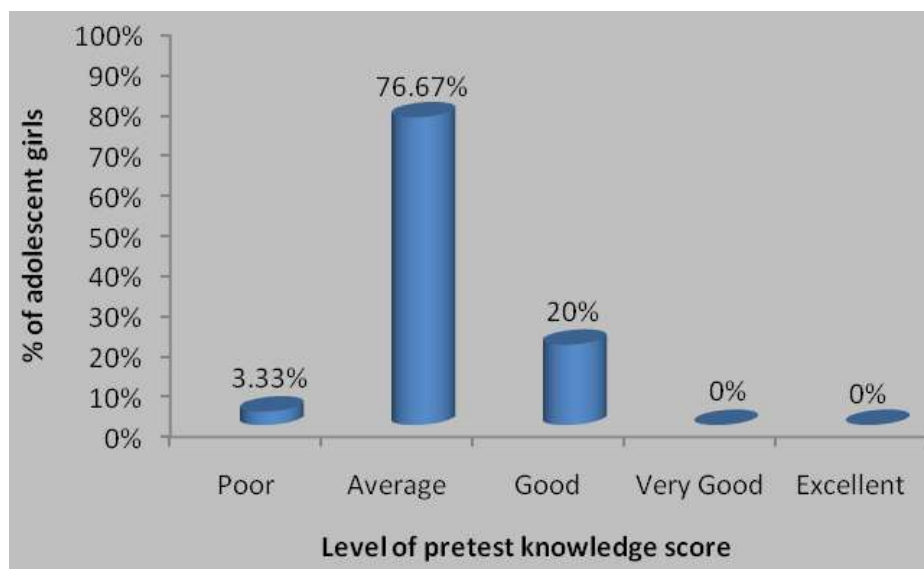| Level of knowledge score	Score Range	Percentage score	Level of Protest Knowledge Score	
			Frequency	Percentage
Poor	1–4	0–20%	1	3.33
Average	5–8	21–40%	23	76.67
Good	9–12	41–60%	6	20
Very Good	13–16	61–80%	0	0
Excellent	17–20	81–100%	0	0
Mean ± SD			6.93 ± 1.77	
Mean %			34.66 ± 8.99	
Range			4 to 12	

The above table 2 shows the levels of knowledge were seen into 5 categories, poor, average, good, very good and excellent. 3.33% of the adolescent girls in pre-test had poor level of knowledge score, 76.67% had average and 20% of them had good level of knowledge score. Mean Pre-test knowledge score of the adolescent girls was 6.93 ± 1.77.
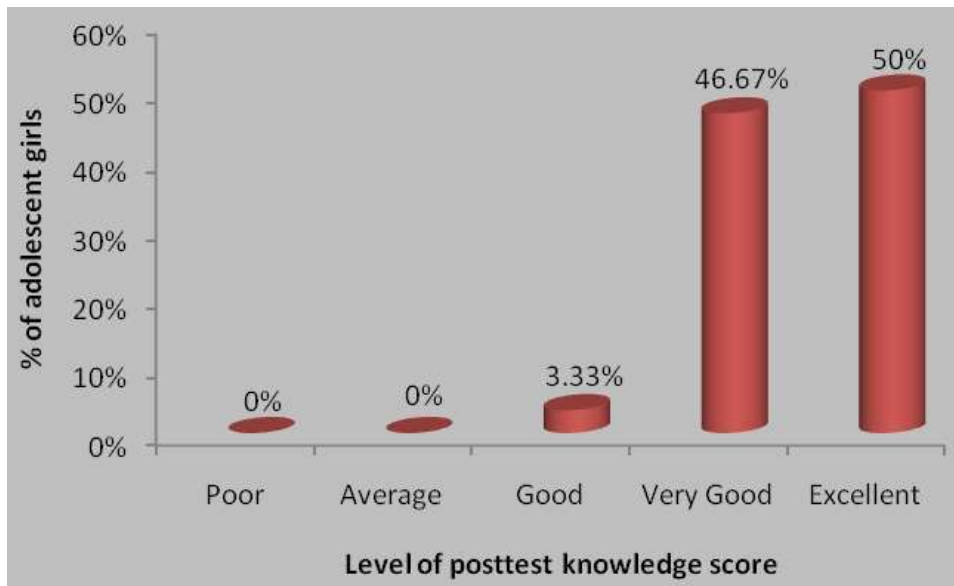
Table 3: Distribution of post-test knowledge score of adolescent girls regarding menstrual irregularities

n=30

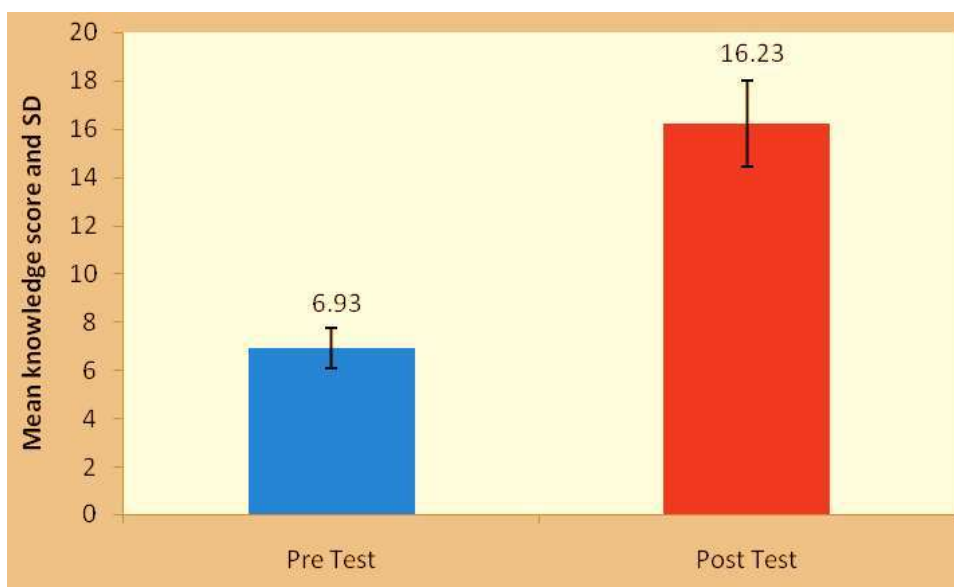| Level of knowledge score	Score Range	Percentage score	Level of Post-test Knowledge Score	
			Frequency	Percentage
Poor	1–4	0–20%	0	0
Average	5–8	21–40%	0	0
Good	9–12	41–60%	1	3.33
Very Good	13–16	61–80%	14	46.67
Excellent	17–20	81–100%	15	50
Mean±SD			16.23 ± 1.71	
Mean %			81.16 ± 8.57	
Range			12 to 19	

The above table 3 shows the levels of knowledge were seen into 5 categories, poor, average, good, very good and excellent. 3.33% of the adolescent girls in post-test had good level of knowledge score, 46.67% had very good and 50% had excellent level of knowledge score. Mean Post-test knowledge score of the adolescent girls was 16.23 ± 1.71.

Graph 4: Distribution of pre-test knowledge score of adolescent girls regarding menstrual irregularities

Graph 5: Distribution of post-test knowledge score of adolescent girls regarding menstrual irregularities

Graph 6: Significance of difference between knowledge scores in pre and post-test of adolescent girls regarding menstrual irregularities.

Section C: Analysis of effectiveness of structure teaching programme regarding menstrual irregularities among adolescent girls in a selected high school.

Table 4: Significance of difference between knowledge scores in pre and post-test of adolescent girls regarding menstrual irregularities

n=30

Overall	Mean	SD	Mean Difference	t-value	p-value
Pre Test	6.93	1.77	9.30 ± 1.74	29.19	0.0001,S
Post Test	16.23	1.71			

*S- Significant

Table 4 depicts the overall mean pre-test and post-test knowledge scores of adolescent girls in a selected high schools which reveals that post-test mean knowledge score was higher 16.23 with SD of ± 1.71 when compared with mean pre-test knowledge score which was 6.93 with SD of ± 1.77. The statistical Student's paired t test implies that the difference in the pre-test and post-test knowledge among adolescent girls in a selected high school was found to be 29.19 which is statistically significant at 0.05% level of significance. Hence it is statistically interpreted that Structure Teaching Programme on knowledge regarding menstrual irregularities among adolescent girls in a selected high school was effective. Thus H_1 is accepted and H_{01} is rejected.

Discussion

The study was designed to assess the effectiveness of structure teaching program on menstrual irregularity among adolescent girls in shri pakwasa gujarati highschool of nagpur. A socio demographic variable and structured questionnaire were selected on the basis of objective of the study and was considered to be most appropriate for assessing the level of knowledge. In pre-test data were collected by using a structured questionnaire. There after a structure teaching program on menstrual irregularity were given to all the samples. The post test were done with the same questionnaire after seven days. The research design adopted for this study was one group pre-test and post-test research design. 30 adolescents girls were selected by using simple random sampling technique. The obtained data were entered in to the master sheet for tabulation and statistical processing. The finding of the study is discussed in term of objective and hypothesis.

Objective 1: To assess the pre-test knowledge on menstrual irregularity among adolescent girls in selected high school

The levels of knowledge were seen into 5 categories, poor, average, good, very good and excellent. 3.33% of the adolescent girls inpre-test had poor level of knowledge score, 76.67% had average and 20% of them had good level of knowledge score. Mean Pre-test knowledge score of the adolescent girls was 6.93 ± 1.77. It was inferred that majority of adolescent girls in selected high school have average knowledge regarding menstrual irregularity, so there is a need for structure teaching programme on menstrual irregularity to enhance the knowledge.

Objective 2: To assess the post-test knowledge on menstrual irregularity among adolescent girls in selected high school

The levels of knowledge were seen into 5 categories, poor, average, good, very good and excellent. The finding showed that 3.33% of the adolescent girls inpost-test had good level of knowledge score, 46.67% had very good and 50% had excellent level of knowledge score. Mean Post-test knowledge score of the adolescent girls was 16.23 ± 1.71.

Objective 3: To evaluate the effectiveness of structure teaching programme on knowledge regarding menstrual irregularity among adolescent girls in selected high school

The overall mean pre-test and post-test knowledge scores of adolescent girls in a selected high schools which reveals that post-test mean knowledge score was higher 16.23 with SD of ± 1.71 when compared with mean pre-test knowledge score which was 6.93 with SD of ± 1.77.

The statistical Student's paired t test implies that the difference in the pre-test and post-test knowledge among adolescent girls in a selected high school was found to be 29.19 which is statistically significant at 0.05% level of significance.

Hence it is statistically interpreted that Structure Teaching Programme on knowledge regarding menstrual irregularities among adolescent girls in a selected high school was effective. Thus H$_1$ is accepted and H$_2$ is rejected.

Conclusion

It concluded that adolescents' girls had inadequate knowledge regarding menstrual irregularity before administration of structure knowledge questionnaire and the structure teaching programme helped them to improve knowledge regarding menstrual irregularity.

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