



EFFECTIVENESS OF EDUCATIONAL PROGRAMME ON MENSTRUAL IRREGULARITIES AND ITS MANAGEMENT THROUGH HOME REMEDIES

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1. ABSTRACT

Introduction: Adolescence is transitional phase of growth and development from childhood to adulthood. Adolescents are the minimum amount of advantage which in future would be the greatest profits to the nation's economy. The overall one fifth of the entire population is detailed by adolescent girls. An article published in 2018 expressed that 71 % of adolescent girls in India stay unconscious of period till menarche. Monthly cycle is a once in a while examined theme in homes and schools in India. 2014 report by NGO Dasra titled Spot on found that about 23 million adolescent girls drop out of school every year because of absence of consistent familiarity with period and absence of appropriate awareness about menstrual disorder .Menstrual irregularities are a common complaint in adolescent girls. Menstrual dysfunction occurs in adolescent for the most part because of relative youthfulness of the hypothalamic-pituitary-ovary hub in the initial 2 years after menarche which leads to irregular cycles where the amount of bleeding is less or more, painful menstruation, pre-menstrual syndrome and frequency of cycle is less than 20 days and more than 90 days . **Objective:** the study was to evaluate the Knowledge regarding menstrual irregularities and its management through home remedies among adolescent girls in selected schools at Moradabad, Uttar Pradesh. **Methods:** It is True experimental research, conducted on 90 samples who are adolescent girls age between 15 to 19 years. Simple random sampling was used to select the sample. The selected adolescent girls were equally divided 42 in each group experimental and control. Self- structured Knowledge questionnaire, including demographic Performa, was used for the data collection and collected data

was analyzed with descriptive and inferential statistics by using SPSS software 16 version. **Results:** The study revealed that, In the experimental group of pretest 17 (37.8%) were having a poor level of Knowledge, 28 (62.2%) were having a average level of Knowledge. In the control group, 24 (53.3%) were having a poor level of Knowledge, 21 (46.7%) were having a average level of Knowledge. The result of the post-test in trial bunch 3 (6.7%) was having a poor level of Knowledge, 37 (82.2%) were having a average level of knowledge and 5 (11.1%) were having a good level of Knowledge. In the control group, 23 (51.1%) were having a poor level of Knowledge, 22 (48.9%) were having a average level of Knowledge. Finally, the study revealed that there is a significant difference between the mean pre-test and post-test knowledge score among adolescent girls. It shows that educational program was effective in improving knowledge regarding menstrual irregularities and its management through home remedies for adolescent girls. So, the study concluded that educational program can be used for improving knowledge of adolescent girls. **Conclusion:** There is a greater need to provide education, information and awareness regarding menstrual irregularities among adolescent girls

KEYWORDS: Knowledge, Menstrual irregularities, adolescent girls, home remedies.

2. INTRODUCTION:

“ The adolescent girls still remains a young plant that gets light nor water, she remains the flower that could have blossomed but didn ’t.. ”

Kamala Bhasin from “our daughters”

Adolescence is a transformation period from childhood to adulthood. This complex process of change from childhood to adulthood is very stressful for girls. The healthy adolescent population is considered as a social agent of change toward a population with a healthier lifestyle. During this period the body of a girl is physical and psychological preparation for safe motherhood. One of the major physiological changes that take place in adolescent girls is the onset of menarche which is usually associated with several menstrual irregularities among which dysmenorrhoea is the most common.

(Shabnam Omidvar, 2018) Menarche is one of the markers of puberty and therefore can be considered an important event in the life of adolescent girls. Several studies indicate that if community had proper sanitary , economical , nutritional facilities it will result in early onset of menarche. Majority of females are undergone menarche in between 10 to 16 year of age. The normal range of menstrual cycle is between 21 - 35 days. While most periods last from 3 to 5 days, the duration of menstrual flow normally ranges from 2 to 7 days. For the first few years after menarche, irregular and longer cycles are common

The menstrual cycle is a normal physiological phenomenon from menarche to menopause that is characterized by Periodic and cyclic uterine bleeding in response to cyclic hormonal changes once a month accompanied by loss of blood. The usual duration of the menstrual cycle is 3-5 days, but flows as short as 1st day & as long as 8th days can occur in normal girls. The average amount of blood loss during menstruation is in between 30 ml to 80 ml. Blood loss more than 80 ml is consider as abnormal condition.

2.1 NEED FOR THE STUDY:

The world wide 1/5th of whole female population is formulate by Adolescent girls. Generally, this group is considered healthy and has not been given adequate attention in health programs. The major reason is age related mortality is lower than the elder age groups. In countries like India, adolescent girls face serious health problems due to socio economic, environmental condition and gender discrimination. These factors make them more vulnerable to health risks.

According to a study conducted analysis revealed that a large proportion of the adolescents (64.5%) reportedly have been suffering from gynecological morbidity. The most frequent form of morbidity was menstrual disorders (63.9%) followed by lower abdominal pain (58.6%), burning sensation during urination (46.1%), genital itching (15.5%), vaginal discharge (3.4%), etc. Multivariate logistic regression analysis revealed that late adolescents aged 15-19 years, family income, type of family, type of residence and hygienic practice during menstruation appeared to be influencing factors for adolescent's reproductive morbidity. The results also revealed that about one fifth (18.0%) sought health care for their gynecological ailments indicating that adolescents were unaware of their reproductive morbidity. For assessing the factors influencing their health care seeking for reproductive morbidity, multivariate logistic regression analysis found a significant positive association with adolescents aged 15-19 years, having autonomy in seeking medical advice, occupation, type of family.

Even though the review of the literature was done on awareness regarding the management of menstrual irregularities to date, the investigator couldn't find any published articles from Uttar Pradesh state. Since the rate of menstrual irregularities is a rise in adolescent girls and its complication is oblivious current study was planned to assess the effectiveness of awareness programs for the reduction of menstrual irregularities and to planned regular education on it in future.

2.2 STATEMENT OF PROBLEM:

“A study to assess the effectiveness of the educational program on knowledge regarding menstrual irregularities and its management through home remedies among adolescent girls in selected schools of Moradabad District, Uttar Pradesh.”

2.3 OBJECTIVE:

- To assess the knowledge regarding menstrual irregularities and its management among adolescent girls.
- To determine the effectiveness of the educational program on knowledge regarding menstrual irregularities and its management among adolescent girls.
- To find the association between the pretest level of knowledge on the menstrual irregularities and its management among adolescent girls with their selected demographic variables.

2.4 HYPOTHESIS:

All hypothesis will be tested at 0.05 level of significance

H₁. There is a significant difference between mean pre and post-test knowledge scores on menstrual irregularities and its management among adolescent girls of the experimental group in selected schools at Moradabad.

H₂. There is a significant difference in mean post-test knowledge score between adolescent girls of experimental group and control group in selected college at Moradabad.

H₃. There is a significant association between pretest test level of knowledge on menstrual irregularities and its management among an experimental and control group of adolescent girls with their selected socio-demographic variables.

2.5 CONCEPTUAL FRAMEWORK

“A conceptual framework presents the logically constructed concepts that provide a general explanation of the relationship between the concepts of the research study. A conceptual model provides for logical thinking for systematic observation and interpreting the observed data”.

(Champion & Skinner, 2008).

The conceptual framework of this study modified and adopted a version of the theory of goal attainment proposed by IMOGENE KING in the process model in 1981.

Imogene King's emphasize on nurse role that it is a process of action-reaction and interaction whereby nurses and clients share information about the nursing situation and as a process of human interaction between nurses and clients. Whereby each perceiving the situation and through communication, they set a goal, explore means and agree to achieve the goal.

The components in this theory as role, Perception, Judgment, Action-reaction, Interaction, and Transaction.

Perception: In this study, it explains that perceiving the knowledge of adolescent girls pre-test.

Judgment: identify measures to improve the knowledge level of adolescent girls regarding menstrual irregularities and its management

Action: planning for conducting awareness programs.

Interaction: Conducting an awareness program upon menstrual irregularities among adolescent girls

Transaction: Evaluation of improvement in the knowledge regarding menstrual irregularities and its management through post-test.

3. RESEARCH METHODOLOGY

Research methodology adopted for the present study which includes research approach, research design, description of the setting, population, sample, sample size, sampling technique, ethical consideration, data development and description of tools used for data collection, content validity, presenting, reliability of tools, pilot study, procedure for data collection and plan for data analysis.

3.1 RESEARCH APPROACH

Aim of present research was to determine the effectiveness of educational program on menstrual irregularities and its management through home remedies among adolescent girls. Hence, a quantitative research path was used for the study.

3.2 RESEARCH DESIGN

In present study, true experimental, pre test post test control group design was used.

3.3 RESEARCH SETTING

In present study was conducted in selected Aryans international school & Springfield college of Moradabad.

The rationale for selecting the particular setting was:

- Appropriate feasibility for conducting a study.
- The number of adolescent girls.
- Administrative permission.
- Feasible as per time and access.

3.4 POPULATION

The population selected for the study consist of adolescent girls those who are studying in Aryans international school & Springfield college of Moradabad. The data was collected directly from these subjects.

Target population:

The target population of the study was adolescent girls studying in selected schools of Moradabad.

Accessible population:

The accessible population in the study consist of adolescent girls studying in Aryans international school & Springfield college of Moradabad.

3.5 SAMPLE

The sample for the present study was all adolescent girls studying in Aryans international school & Springfield college of Moradabad and those satisfied be sampling model.

3.6 SAMPLE SIZE

The sample size is the number of observation used for calculation and estimating the selected population.

In this study sample size is 90 adolescent girls (45 in experimental group and 45 in control group) were selected who fulfilment the sampling criteria.

The formula used to calculate sample size was estimation proportion

$$n = \frac{2 [z_{1-\alpha/2} + z_{1-\beta}] \sigma^2}{d^2}$$

$Z_{1-\alpha/2}$ = standard value (1.96)

$Z_{1-\beta}$ = standard value (0.84)

σ = pooled Standard deviation

d = mean difference

3.7 SAMPLING CRITERIA

Adolescent girls those who had encountered the following test were included in the study.

Inclusion criteria:

- Aged between 15-18 years.

- Who are able to understand Hindi and English Language.
- Who are undergone menarche.

Exclusion criteria:

- Those who are not willing to participate in the study.
- Those who are not present at the time of data collection.

3.8 SAMPLING TECHNIQUE

Simple random sampling was recycled of choose the sample for the present research.

3.9 DATA COLLECTION TECHNIQUE AND TOOLS

Data collection was adopted to gather information from various sources. The data collected over a period of 2 week 4/12/ 2019 to 18/12/ 2019 in Aryans international school & Springfield college of Moradabad after taking permission from the principal. The participants were made aware of the nature and purpose of the study. The participants was assured for the confidentiality of their responses and written permission was being taken from the member. The sampling was chosen by utilizing the simple random sampling technique and the determined sampling was allotted to the experimental and control group randomly.

The aim of the study to evaluate the effectiveness of educational program on menstrual irregularities and its management through home remedies among adolescent girls. Self report structured knowledge questionnaire was used for assessing the knowledge and demographic Performa was used to identify the samples.

3.10 DESCRIPTION OF DATA COLLECTION INSTRUMENT

Tool 1: Demographic Performa

This tool was developed for the purpose of identifying the demographic characteristics of adolescent girls. Demographic data consists of ten items, it include Age, Age at menarche, Residence, Religion, Duration of menstrual cycle, History of reproductive tract diseases, History of menstrual irregularities, Educational status of mother , Mother occupation, Monthly income.

Tool 2: Self report structured knowledge questionnaire

The tool was developed to assess the knowledge of adolescent girls regarding menstrual irregularities and its management through home remedies. Tool consist of thirty items. Each items has four options. Total score of 30 marks : right =1, wrong=0.

3.11 VALIDITY OF THE TOOL

The validity of the tool was established by consultation with guide and expert. In order to measure content validity, the tools were submitted to 7 experts. Teerthanker Mahaveer hospital and research centre, department of obstetric and gynecology State institute of medical education, Kerala; Vivekanand college of nursing, Moradabad; Christian college of nursing, K K district; Manipal college of nursing, Manipal university, Manipal; Shri Babu singh and Dadduji Nursing and Paramedical college, Farrukabad ; Galgotias University, Greater Noida.

3.12 RELIABILITY OF TOOL

The tool was administered to 10 adolescent girls who is fulfilling the inclusion criteria and available during the data collection period. The reliability of tool was done to assess internal consistency. The internal consistency of self report structured knowledge questionnaire was 0.817 by using Cronbach's alpha method.

3.13 DATA COLLECTION PROCEDURE FOR MAIN STUDY

Data collection was the assembly of guidance which addresses a research problem, Permission was taken from respective principal, Aryans international school and Springfield college before conducting the main study prior to data collection. The sample was selected according to selection criteria . Informed consent was taken from each subject. The researcher conducted a main study from 4 December 2019 to 18 December 2019. The investigator visited the Aryans international school and Springfield college on the given date and was introduced to the adolescent girls. Purpose of the study was to simplify among adolescent girls and the privacy of their identity and response was assured in order to ensure their cooperation and prompt response. 90 adolescent girls were taken as a sample and 45 sample were equally distributed in experimental and control group. Self structured knowledge questionnaire was used to assess the knowledge regarding menstrual irregularities and its management through home remedies among adolescent girls after two days intervention id given.

4. RESULT AND DISCUSSION

The result of data collected from the sample of 90 adolescent girls to assess the knowledge on menstrual irregularities and its management through home remedies, using self report structured questionnaire. Data gathered were analyzed by using descriptive and inferential statistics. SPSS 16.0 version was used for analysis. Findings are presented in light of objective and hypothesis formulated for the study.

ORGANIZATION OF FINDINGS:

The Analysis of data from the study was presented under the following headings:

Section-1 : Description of sample characteristics demographic Performa.

Section-2: The effectiveness of educational program among adolescent girls regarding menstrual irregularities and its management through home remedy.

2.1 : Description of knowledge in pre test regarding menstrual irregularities & its management through home remedy among adolescent girls

2.2 : Distribution of level of knowledge based on menstrual irregularities and its management through home remedy among adolescent girls.

2.3 : Comparison of mean pre-test and mean post-test of knowledge score adolescent girls in experimental group

2.4 : Comparison of post-test knowledge score of adolescent girls in experimental and control group

Section- 3: Association between the level of Knowledge on menstrual irregularities and its management through home remedy and demographic variables among adolescent girls.

3.1 : Association of demographic characteristics of adolescent girls in experimental group with pre test knowledge score.

3.2 : Association of demographic characteristics of adolescent girls in control group with pre test knowledge score

SECTION 1:

Description of sample characteristics demographic Performa.

The demographic Performa has been used to collect the data from 90 adolescent girls (45 each in experimental and control group) regarding age, age at menarche, duration of menstrual cycle, residence, religion, history of reproductive tract disease, history if menstrual irregularities, education status of mother, mother occupation, monthly income. Frequency and percentage distribution were calculated for describing the sample characteristics of adolescent girls.

TABLE -1.1

Frequency (f) and percentage (%) distribution of adolescent girls by their age in years in experimental group and control group.

$$N(n_1+n_2)=90$$

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
Age in years				
a. 15 years	15	33.3%	21	46.6%
b. 16 years	16	35.5%	23	51.1%
c. 17 years	14	31.1%	1	2.2%
d. 18 years	0	0%	0	0%

The table 1.1 depicts that **age in years** in experimental group majority 16(35.5%) of adolescent girls belongs to the age group of 15 years, whereas 15(33.3%) adolescent girls belongs to 16 years, 14(31.1%) adolescent girls belongs to 17 years, none of the adolescent girls belongs to 18 years age. In control group majority 23(51.1%) of adolescent girls belongs to the age group of 16 years, whereas 21(46.6%) adolescent girls belongs to 15 years, 1(2.2%) adolescent girls belongs to 15 years, none of the adolescent girls belongs to 18 years age.

TABLE -1.2

Frequency (f) and percentage (%) distribution of adolescent girls by their age at menarche in experimental group and control group.

$$N(n_1+n_2)=90$$

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
Age at menarche				
a. 11 years	4	8.8%	10	22.2%
b. 12 years	16	35.5%	15	33.3%
c. 13 years	15	33.3%	20	44.4%
d. 14 years	10	22.2%	0	0%

The table 1.2 depicts that **age at menarche** in experimental group majority 16(35.5%) of adolescent girls belongs to the age at menarche of 11 years, whereas 15(33.3%) adolescent girls belongs to 12 years, 10(22.2%) adolescent girls belongs to 13 years, 4(8.8%) of the adolescent girls belongs to 14 years of age at menarche. In control group majority 20(44.4%) of adolescent girls belongs to the age at menarche of 13 years, whereas 15(33.3%) adolescent girls belongs to 12 years, 10(22.2%) adolescent girls belongs to 11 years, none of the adolescent girls belongs to 14 years of age at menarche.

TABLE -1.3

Frequency (*f*) and percentage (%) distribution of adolescent girls by their duration of menstrual cycle in experimental group and control group. N(n₁+n₂)=90

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
Duration of menstrual cycle				
a. Below 3 days	3	6.6%	0	0%
b. 3-4 days	12	26.6%	10	22.2%
c. 5-6 days	23	51.1%	29	64.4%
d. 7 days & above	7	15.5%	6	13.3%

The table 1.3 that **duration of menstrual cycle** in experimental group majority 23(51.1%) of adolescent girls belongs to duration of menstrual cycle of 5-6 days, whereas 12(26.6%) adolescent girls belongs to 3-4 days, 7(15.5%) adolescent girls belong to 7 days and above, 3(6.6%) of the adolescent girls belongs to below 3 days of duration of menstrual cycle. In control group majority 29(64.4%) of adolescent girls belongs to duration of menstrual cycle of 5-6 days, whereas 10(22.2%) adolescent girls belongs to 3-4 days, 6(13.3%) adolescent girls belong to 7 days and above, none of the adolescent girls belongs to below 3 days of duration of menstrual cycle.

TABLE -1.4

Frequency (*f*) and percentage (%) distribution of adolescent girls by their residence in experimental group and control group. N(n₁+n₂)=90

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
Residence				
a. urban	2	4.4%	1	2.2%
b. semi urban	33	73.3%	39	86.6%
c. rural	1	22.2%	5	11.1%

The Table 1.4 depicts that **residence** in experimental group majority 33(73.3%) of adolescent girls belongs to the semi-urban area, whereas 10(22.2%) adolescent girls belongs to rural areas, 2(4.4%) adolescent girls belongs to urban area. In control group majority 39(86.6%) of adolescent girls belongs to the semi-urban area, whereas 5(11.1%) adolescent girls belongs to rural areas, 1(2.2%) adolescent girls belongs to urban area.

TABLE -1.5

Frequency (f) and percentage (%) distribution of adolescent girls by their religion in experimental group and control group.

$$N(n_1+n_2)=90$$

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
Religion				
a. Hindu	30	66.6%	41	91.1%
b. Muslim	8	17.7%	1	2.2%
c. Sikh				
d. Christian	7	15.5%	1	2.2%
e. Other	0	0%	2	4.4%
	0	0%	0	0%

The table 1.5 depicts that **religion** in experimental group majority 30(66.6%) of adolescent girls belongs to Hindu religion, whereas 8(17.7%) adolescent girls belongs to Muslim religion, 7(15.5%) adolescent girls belongs to Sikh religion, 4(8.8%). In control group majority 41(91.1%) of adolescent girls belongs to Hindu religion, whereas 1(2.2%) adolescent girls belongs to Muslim religion, 1(2.2%) adolescent girls belongs to Sikh religion, 2(4.4%) adolescent girls belongs to Christian religion.

TABLE -1.6

Frequency (f) and percentage (%) distribution of adolescent girls by their history of reproductive tract diseases in experimental group and control group.

$$N(n_1+n_2)=90$$

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
History of reproductive tract disease				
a. Yes				

b. No	1	2.2%	2	4.4%
	44	99.7%	43	95.5%

The table 1.6 depicts that **history of reproductive tract disease** in experimental group majority 44(97.7%) of adolescent girls had no history of reproductive tract disease, whereas 1(2.2%) adolescent girls had history of reproductive tract disease. In control group majority 43(95.5%) of adolescent girls had no history of reproductive tract disease, whereas 2(4.4%) adolescent girls had history of reproductive tract disease.

TABLE -1.7

Frequency (f) and percentage (%) distribution of adolescent girls by their history of menstrual irregularities in experimental group and control group. N(n₁+n₂)=90

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
History of menstrual irregularities				
a. Yes	33	73.3%	32	71.1%
b. No	12	26.6%	13	28.8%

The Table 1.7 depicts that **history of menstrual irregularities** in experimental group majority 33(73.3%) of adolescent girls had history of menstrual irregularities, whereas 12(26.6%) adolescent girls had no history of menstrual irregularities. In control group majority 32(71.1%) of adolescent girls had history of menstrual irregularities, whereas 13(28.8%) adolescent girls had no history of menstrual irregularities.

TABLE -1.8

Frequency (*f*) and percentage (%) distribution of adolescent girls by their education status of mother in experimental group and control group. N(n₁+n₂)=90

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
Education status of mother				
a. Illiterate	2	2.2%	3	6.6%
b. 10 th class	4	4.4%	0	0%
c. 12 th class	9	20%	3	6.6%
d. Graduate	24	44.4%	25	55.5%
e. Post graduate & above	6	13.3%	14	31.1%

The table 1.8 depicts that **Education status of mother** in experimental group majority 24(44.4%) of adolescent girls mother's belongs to graduate, whereas 9(20%) adolescent girls mother's belongs to 12th class, 6(13.3%) adolescent girls belongs to post graduate and above, 4(4.4%) of the adolescent girls mother's belongs to 10th class and 2(2.2%) of the adolescent girls mother's belongs to illiterate. in control group majority 25(55.5%) of adolescent girls mother's belongs to graduate, whereas 3(6.6%) adolescent girls mother's belongs to 12th class, 14(31.1%) adolescent girls mother's belongs to post graduate and above 3(6.6%) of the adolescent girls mother's belongs to illiterate, none of the adolescent girls mother's belongs to 10th class.

TABLE -1.9

Frequency (*f*) and percentage (%) distribution of adolescent girls by their mother occupation in experimental group and control group. N(n₁+n₂)=90

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
Mother occupation				
a. Homemaker	30	66.6%	36	80%
b. Government employee	7	15.5%	5	11.1%

c. Non-government employee	3	6.6%	3	6.6%
d. Business & other	5	11.1%	1	2.2%

The table 1.9 depict that **mother occupation** in experimental group majority 30(66.6%) of adolescent girls mother's belongs to homemaker, whereas 7(15.5%) adolescent girls mother's belongs to government employee, 5(11.1%) adolescent girls mother's belongs to business & other, 3(6.6%) of the adolescent girls mother's belongs to non government employee. in control group majority 36(80%) of adolescent girls mother's belongs to homemaker, whereas 5(11.1%) adolescent girls mother's belongs to government employee, 3(6.6%) adolescent girls mother's belongs to business & other, 1(2.2%) of the adolescent girls mother's belongs to non government employee.

TABLE -1.10

Frequency (f) and percentage (%) distribution of adolescent girls by their monthly income in experimental group and control group.

$$N(n_1+n_2)=90$$

DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
	<i>f</i>	%	<i>f</i>	%
Monthly Income				
a. Below 20,000	2	4.4%	6	13.3%
b. 20,000-30,000	18	40%	18	40%
c. 31,000-40,000	13	28.8%	5	11.1%
d. 41,000 & above	12	26.6%	16	35.5%

The table 1.10 depicts that **monthly income** in experimental group majority 18(40%) of adolescent girls belongs to 20,000-30,000 thousand, whereas 13(28.8%) adolescent girls belongs to 31,000-40,000 thousand , 12(26.6%) adolescent girls belongs to 41,000 thousand above, 2(4.4%) of the adolescent girls belongs to below 20,000 thousand . in control group majority 18(40%) of adolescent girls belongs to 20,000-30,000 thousand, whereas 5(11.1%) adolescent girls belongs to 31,000-40,000 thousand , 16(35.5%) adolescent girls belongs to 41,000 thousand above, 6(13.3%) of the adolescent girls belongs to below 20,000 thousand .

SECTION 2:**Frequency and Percentage distribution on Knowledge score among adolescent girls regarding menstrual irregularities and its management through home remedies****TABLE 2.1 :**

Description of knowledge in pre test regarding menstrual irregularities & its management through home remedy among adolescent girls . $N(n_1 + n_2)=90$

OBSERVATION	VARIABLE	RANGE	MEAN	STANDARD DEVIATION
Experimental group	Knowledge	6-19	1.62	.490
Control group	Knowledge	4-16	1.47	.505

Table 2.1: revealed that in experimental group knowledge of adolescent girls in pretest regarding Menstrual irregularities and its management through home remedies range from 6 - 19 , mean 1.62 and standard deviation .490 and in control group knowledge of adolescent girls in pretest regarding Menstrual irregularities and its management through home remedies range from 4 - 16 , mean 1.47 and standard deviation .505.

TABLE 2.2:

frequency percentage distribution on knowledge among adolescent girls regarding menstrual irregularities and its management through home remedies. $N(n_1 + n_2)=90$

OBSERVATIO N	CATEGORY	POOR		AVERAGE		GOOD	
		<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Pre test	Experimental	17	37.8	28	62.2	0	0
	Control	24	53.3	21	46.7	0	0
Post test	Experimental	3	6.7	37	82.2	5	11.1
	Control	23	51.1	22	48.9	0	0

Table 2.2: depict that in experimental group of pretest 17 (37.8%) were having poor level of Knowledge, 28 (62.2%) were having average level of Knowledge. In control group 24 (53.3%) were having poor level of Knowledge, 21 (46.7%) were having average level of Knowledge. The result of post test in experimental group 3 (6.7%) were having poor level of Knowledge, 37 (82.2%) were having average level of knowledge and 5 (11.1%) were having good level of knowledge. In control group 23 (51.1%) were having poor level

TABLE 2.3:

Comparison of mean pre-test and mean post-test of knowledge score adolescent girls in experimental group (n₁=45)

<i>Observation</i>	<i>Mean ± SD</i>	<i>Mean difference</i>	<i>“t” value (p value)</i>
Pre-test	11.84 ± 3.54	8.6	3.1(.000)
Post-test	20.44 ± 3.45		

Table 2.3 : reveals that the mean pre test knowledge score 11.84 ± 3.54 of experimental group was lesser than mean post test knowledge score 20.44 ± 3.45 with mean difference of 8.40 . It shows that education program is effective in improving knowledge among adolescent girls. The calculated value was “t” = 13.043 is greater than table value 2.00. Hence, H_{01} is rejected and inferred that there is significant improve in knowledge score among adolescent girls . So, the education program is effective

TABLE 2.4 :

Comparison of post-test knowledge score of adolescent girls in experimental and control group N(n₁ + n₂)=90

<i>Post test</i>	<i>Mean ± SD</i>	<i>Mean difference</i>	<i>“t” value (p value)</i>
Experimental group	8.71 ± 4.31	8.4	3.2 (.000)
Control group	0.31 ± 0.66		

Table 2.4 : reveals that the mean post test knowledge score of experimental group 8.71 ± 4.31 was higher than mean post test knowledge score of control group 0.31 ± 0.66 with mean difference of 8.4. It shows that education program is effective in improving knowledge among adolescent girls. The calculated value was “t” = 12.905 is greater than table value 1.98 . Hence, the H_{03} is rejected and inferred that there is significant improve in knowledge score among adolescent girls . So, the education program is effective.

SECTION 3:**Association between the level of Knowledge on menstrual irregularities and its management through home remedy and demographic variables among adolescent girls.****Table 3.1 :**

Association of demographic characteristics of adolescent girls in experimental group with pre test knowledge score.
($n_1 = 45$)

Demographic variables	Total number	Level of knowledge			P value
		Poor	Average	Good	
Age in years					
15 years	15	5	10	0	0.86
16 years	16	6	10	0	
17 years	14	6	8	0	
18 years					
Age at menarche					
11 years	4	1	3	0	0.79
12 years	16	6	10	0	
13 years	15	4	11	0	
14 years	10	5	5	0	
Duration of menstrual cycle					
Below 3 days	3	0	3	0	0.29
3-4 days	12	3	9	0	
5-6 days	23	10	13	0	
7 days & above	7	3	4	0	
Residence					
urban					

semi urban	33	9	24	0	0.22
rural	10	6	4	0	
	2	1	1	0	

<i>Demographic variables</i>	<i>Total number</i>	<i>Level of knowledge</i>			<i>P value</i>
		<i>Poor</i>	<i>Average</i>	<i>Good</i>	
Religion					
Hindu	30	9	21	0	0.50
Muslim	8	3	5	0	
Sikh	7	4	3	0	
Christian					
Other					
History of reproductive tract disease					
Yes					
No	1	0	1	0	0.43
History of menstrual irregularities	44	16	28	0	
Yes					
No	17	6	1	0	0.28
Education status of mother	28	10	18	0	
Illiterate					
10 th class					

12 th class	2	1	1	0	0.60
Graduate	4	1	3	0	
Post graduate & above	9	5	4	0	
Mother occupation	24	8	16	0	
Homemaker	6	1	5	0	
Government employee	30	11	19	0	0.98
Non-government employee	7	3	4	0	
Business & other	3	1	2	0	
	5	1	4	0	

<i>Demographic variables</i>	<i>Total number</i>	<i>Level of knowledge</i>			<i>P value</i>
		<i>Poor</i>	<i>Average</i>	<i>Good</i>	
Monthly Income					
Below 20,000	2	0	2	0	0.52
20,000-30,000	18	7	11	0	
31,000-40,000	13	4	9	0	
41,000 & above	12	5	7	0	

Table 3.1 depicted the association of demographic characteristics of adolescent girls with level of knowledge regarding menstrual irregularities & its management through home remedies on pre test score of experimental group. It shows that there was no significant association for Age of menarche, Duration of menstrual cycle, Residence, History of menstrual irregularities, Education status of mother, Monthly income with pre test of experimental group .Hence, H_0 is failed to reject.

Table 3.1

Association of demographic characteristics of adolescent girls in control group with pre test knowledge score
($n_2 = 45$)

<i>Demographic variables</i>	<i>Total number</i>	<i>Level of knowledge</i>			<i>P value</i>
		<i>Poor</i>	<i>Average</i>	<i>Good</i>	
Age in years					
15 years	21	12	9	0	0.52
16 years	23	11	12	0	
17 years	1	1	0	0	
18 years					
Age at menarche					
11 years	10	6	4	0	0.79
12 years	15	7	8	0	
13 years	20	11	9	0	
14 years					

<i>Demographic variables</i>	<i>Total number</i>	<i>Level of knowledge</i>			<i>P value</i>
		<i>Poor</i>	<i>Average</i>	<i>Good</i>	
Duration of menstrual cycle					
Below 3 days	10	8	2	0	0.08
3-4 days	29	12	17	0	
5-6 days					
7 days & above					

Residence	6	4	2	0	
urban					
semi urban					
rural	39	20	19	0	0.59
Religion	5	3	2	0	
Hindu	1	1	0	0	
Muslim					
Sikh					
Christian	41	23	18	0	0.49
Other	1	0	1	0	
History of reproductive tract disease	1	0	1	0	
	2	1	1	0	
Yes					
No	2	2	0	0	0.17
History of menstrual irregularities	43	22	21	0	
Yes					
No	19	11	8	0	0.53
	25	13	12	0	

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<i>Demographic variables</i>	<i>Total number</i>	<i>Level of knowledge</i>			<i>P value</i>
		<i>Poor</i>	<i>Average</i>	<i>Good</i>	
Education status of mother					
Illiterate	3	1	2	0	0.77
10 th class					
12 th class	3	1	2	0	
Graduate	25	14	11	0	
Post graduate & above	14	8	6	0	
Mother occupation					
Homemaker	36	18	18	0	0.40
Government employee	5	4	1	0	
Non-government employee	3	1	2	0	
Business & other					
Monthly Income					
Below 20,000	1	1	0	0	0.47
20,000-30,000	6	2	4	0	
31,000-40,000	18	10	8	0	
41,000 & above	5	4	1	0	
	16	8	8	0	

Table 3.2 depicted the association of demographic characteristics of adolescent girls with level of knowledge regarding menstrual irregularities & its management through home remedies on pre test score of control group. It shows that there was no significant association for age in years, Age of menarche, Duration of menstrual cycle, residence, History of menstrual irregularities, Education status of mother, Monthly income with pre test of control group. Hence, H_{02} is failed to reject.

el of Knowledge, 22 (48.9%) were having average level of Knowledge.

4.2 DISCUSSION

The present study findings were discussed based on the objectives of the study and statistical findings and with similar study findings.

Effectiveness of educational programme among adolescent girls

The mean pre test knowledge score 11.84 ± 3.54 of experimental group was lesser than mean post test knowledge score 20.44 ± 3.45 with mean difference of 8.40. It shows that education program is effective in improving knowledge among adolescent girls. The calculated value was " t " = 13.043 is greater than table value 2.00. Hence, H_{01} is rejected and inferred that there is significant improve in knowledge score among adolescent girls. So, the education program is effective.

Distribution of knowledge score based on menstrual irregularities and its management through home remedy among adolescent girls.

In experimental group knowledge of adolescent girls in pretest regarding Menstrual irregularities and its management through home remedies range from 6 - 19 , mean 1.62 and standard deviation .490 and in control group knowledge of adolescent girls in pretest regarding Menstrual irregularities and its management through home remedies range from 4 - 16 , mean 1.47 and standard deviation 0.505.

Distribution of level of knowledge based on menstrual irregularities and its management through home remedy among adolescent girls.

In experimental group of pretest 17 (37.8%) were having poor level of Knowledge, 28 (62.2%) were having average level of Knowledge. In control group 24 (53.3%) were having poor level of Knowledge, 21 (46.7%) were having average level of Knowledge. The result of post test in experimental group 3 (6.7%) were having poor level of Knowledge, 37 (82.2%) were having average level of knowledge and 5 (11.1%) were having good level of knowledge. In control group 23 (51.1%) were having poor level of Knowledge, 22 (48.9%) were having average level of Knowledge.

Comparison of post-test knowledge score of adolescent girls in experimental and control group

The mean post test knowledge score of experimental group 8.71 ± 4.31 was higher than mean post test knowledge score of control group 0.31 ± 0.66 with mean difference of 8.4. It shows that education program is

effective in improving knowledge among adolescent girls. The calculated value was “t” = 12.905 is greater than table value 1.98. Hence, the H_{03} is rejected and inferred that there is significant improve in knowledge score among adolescent girls. So, the education program is effective.

Association between the level of Knowledge on menstrual irregularities and its management through home remedy and demographic variables among adolescent girls.

The association of demographic characteristics of adolescent girls with level of knowledge regarding menstrual irregularities & its management through home remedies on pre test score of experimental group. It shows that there was no significant association for Age of menarche, Duration of menstrual cycle, Residence, History of menstrual irregularities, Education status of mother, Monthly income with pre test of experimental group .Hence, H_{02} is failed to reject. And in control group there was no significant association for age in years, Age of menarche, Duration of menstrual cycle, residence, History of menstrual irregularities, Education status of mother, Monthly income with pre test of control group . Hence, H_{02} is failed to reject.

The student researcher observed while collecting the data that the respondents were very much interested to manage the menstrual irregularities through home remedies among adolescent girls.

4.3 IMPLICATIONS

The nursing implication of the study could be discussed under nursing service, nursing education, nursing research and nursing administration.

Nursing Education

- ❖ The study findings have a vast contribution to nursing education. The tool we have used in this study will help nursing students to make them understand about menstrual irregularities and its management through home remedies.
- ❖ Nursing students and staff nurses must be aware and educate regarding menstrual irregularities and its management through home remedies.
- ❖ So all these areas of non pharmacological method to reduce risk of menstrual irregularities among adolescent girls. It can be included in the obstetrics subjects syllabus of nursing curriculum and practice home remedies during menstruation.

Nursing Practice

- ❖ The study findings will help the nursing personnel to improve the knowledge regarding menstrual irregularities and its management through home remedies.
- ❖ Educational program might effective in influencing the knowledge of adolescent girls.
- ❖ Nursing curriculum can include measures which enable the nurses to prevent menstrual irregularities.

Nursing Administration

- ❖ Nurse administrators are the backbone for providing facilitates to improve knowledge regarding adolescent girls.
- ❖ The nurse administrator should develop in-service education program so as to make them aware of the recent changes in the medical treatment and nursing field.
- ❖ Nurse administrator should be provide surveillance to assess the outcome of implementation of various non-pharmacological treatment.

Nursing Research

- ❖ Study should be done in an areas which brings quality and evidence in professional practice.
- ❖ The study found can be added to the reviews regarding the effectiveness of educational program on improving the knowledge of adolescent girls with menstrual irregularities.
- ❖ A study to find out the effectiveness of educational program regarding menstrual irregularities and its management through home remedies among adolescent girls in selected schools of Moradabad.

4.4 RECOMMENDATION

- ❖ The similar study can be done in some different settings
- ❖ A retrospective review can be done immediately after to assess the effectiveness of educational program
- ❖ A comparative study can be done with home remedies with other pharmacological treatment to manage menstrual irregularities
- ❖ A comparative study can be done with one group using home remedies and another group using pharmacological treatment.
- ❖ A replicable study can be done with a series of different treatment methods for menstrual irregularities
- ❖ A study can be done for married women.

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