A Study to Evaluate the Effectiveness of Structured Teaching Programme on Knowledge Regarding Self-Care Measures to Reduce Dysmenorrhea Among Adolescents in Selected Pu Colleges at Vijayapura

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Abstract—**Background: The menstrual cycle is a regular physiological process involving cyclic changes in the female reproductive system, particularly in the uterus and ovaries, making pregnancy possible. Typically, an ovum is released from the ovary approximately every 28 days. If fertilization does not occur, the uterine lining is shed in the form of menstruation, commonly known as a period. Menarche usually begins between 12 and 15 years of age, and menstruation generally lasts for 3–5 days. The cycle continues until menopause, which commonly occurs between 45 and 55 years of age. The menstrual cycle is regulated by hormonal changes in the female body. Menstrual disorders refer to abnormalities in the menstrual cycle, which may present with various symptoms. Common menstrual problems among adolescent girls include dysmenorrhea, irregular menstrual flow, and premenstrual symptoms. Dysmenorrhea is defined as painful menstruation and may be classified as primary (spasmodic) or secondary (congestive).**

Objectives:

- **To assess the level of knowledge regarding self-care measures for dysmenorrhea among adolescents in selected PU colleges.**
- **To evaluate the effectiveness of the structured teaching programme on dysmenorrhea.**
- **To determine the association between pre-test and post-test knowledge scores with selected socio-demographic variables.**

Materials and methods

A pre-experimental one-group pre-test and post-test design was adopted for the study. The independent variable was the Structured Teaching Programme (STP), and the dependent variable was the knowledge of adolescents regarding self-care measures for dysmenorrhea. The study was conducted among adolescents studying in selected PU colleges at Vijayapur. A simple random sampling technique was used to select 60 participants. Data were collected using a structured knowledge questionnaire to assess knowledge regarding self-care measures for reducing dysmenorrhea. The tool was validated by experts and found to be reliable and feasible. The structured teaching programme was developed and validated prior to implementation. The study was conducted over six weeks. A pre-test was administered, followed by the teaching programme, and subsequently a post-test was conducted to evaluate the effectiveness of the intervention.

Results:

Most participants (53.3%) were aged 15–16 years. The majority were Hindu (58.3%), followed by Muslim (30%) and Christian (11.7%). A significant proportion belonged to semi-urban areas (33.3%), followed by rural (26.7%), urban (23.3%), and slum areas (16.7%). Most participants were from joint families (41.7%), followed by extended (35%), single-parent (15%), and nuclear families (8.3%).Regarding family income, 38.3% had a monthly income below ₹10,000. The primary source of information for many participants

was healthcare workers, followed by mass media, electronic media, and awareness programmes. Before the intervention, 63.3% of participants reported no prior knowledge of dysmenorrhea. In the pre-test, 75% of participants had inadequate knowledge, 25% had moderate knowledge, and none had adequate knowledge.In the post-test, none of the participants had inadequate knowledge; 38.3% had moderate knowledge, and 61.7% had adequate knowledge.

The mean post-test score (27.2) was significantly higher than the pre-test score, indicating that the structured teaching programme was effective in improving knowledge.

Conclusion:

The study concluded that the structured teaching programme was effective in enhancing the knowledge of adolescents regarding self-care measures to reduce dysmenorrhea

I. INTRODUCTION

Dysmenorrhea is defined as difficult menstrual flow or painful menstruation. It is classified as primary (spasmodic) or secondary (congestive). Primary dysmenorrhea is defined as menstrual pain not associated with macroscopic pelvic pathology, whereas secondary dysmenorrhea is defined as menstrual pain resulting from anatomic and/or macroscopic pelvic pathology, a condition most often observed in older women. Many women, especially adolescent girls, experience menstrual problems. After menarche, periods may be irregular, and systemic symptoms such as nausea, vomiting, diarrhoea, fatigue, fever, uterine cramps, and headache are fairly common. Uterine cramps are also referred to as dysmenorrhea. Self-care is defined as the practice of activities that individuals initiate and perform on their own behalf to maintain life, health, and well-being. Pharmacological strategies, dietary modifications, heat therapy, warm beverages, adequate sleep, massage therapy, and keeping warm are commonly reported measures for the management of dysmenorrhea. Taking pain-relieving medications such as ibuprofen or paracetamol may help to alleviate menstrual cramps and pain, and the use of a heating pad may also provide relief.

II. OBJECTIVES

1. To assess the level of knowledge on self-care measures to reduce dysmenorrhea among adolescents in selected P.U. Colleges.
2. To evaluate the effectiveness of the Structured Teaching Programme (STP) on self-care measures to reduce dysmenorrhea.
3. To determine the association between post-test knowledge scores and selected socio-demographic variables.

Hypothesis

The following hypotheses were formulated and tested at a 0.05 level of significance:

- H_1: There will be a statistically significant difference between the pre-test and post-test levels of knowledge of adolescents who have received the Structured Teaching Programme on self-care measures to reduce dysmenorrhea.
- H_2: There will be a statistically significant association between the post-test knowledge scores of adolescents and selected socio-demographic variables.

Assumptions:

The study is based on the following assumptions:

1. P.U. College students may have inadequate knowledge regarding self-care measures to reduce dysmenorrhea.
2. A Structured Teaching Programme on self-care measures to reduce dysmenorrhea would serve as an effective educational tool for adolescents enrolled in P.U. Colleges.

Delimitation:

- The study is limited to adolescent girls studying in selected PU colleges.
- The study includes only students who have attained menarche and experience dysmenorrhea.
- The study is confined to selected PU colleges in the chosen study area.

III. MATERIALS AND METHODS

Research approach: Quantitative research approach is used.

Research design: Pre experimental with one group pretest and posttest design is used.

Variables:

- Dependent variable: The level of knowledge regarding self-care measures to reduce dysmenorrhea among adolescent girls.
- Independent variable: The Structured Teaching Programme (STP) on self-care measures to reduce dysmenorrhea among adolescent girls.
- Sociodemographic variables: The socio-demographic variables considered in this study include age, religion, place of residency, type of family, family income, and source of information.

Selection criteria:
Inclusion criteria:
Adolescent girls were included in the study if they:

- Were enrolled in selected Pre-University Colleges at Vijayapura
- Were able to understand, read, and write in English
- Were willing to voluntarily participate in the study

Exclusion criteria:
Adolescent girls were excluded from the study if they:

- Were not available during the scheduled period of data collection
- Were not willing to participate in the study

Setting:
The study was conducted in selected PU colleges at Bangalore.
Study population:
The present study was conducted in selected Pre-University (P.U.) Colleges at Vijayapura, which were identified as appropriate sites given the target population and institutional accessibility.
Sampling technique:
Non randomized Purposive sampling technique is used in this study.
Sample size: The sample size for the study was set at 60 participants
Description of tools: In this study research instrument was divided into two different parts:
Part I: sociodemographic data sheet.
Part II: Structured Knowledge Questionnaire consisted of 30 multiple-choice questions assessing knowledge regarding self-care measures to reduce dysmenorrhea among adolescents.

Data Analysis:
The data was analyzed as per the objectives of the study using descriptive and inferential statistics by computing the data in excel sheet.
Data analysis involves the systematic organization, synthesis, and interpretation of research data in relation to the study's hypotheses and objectives. The data obtained were analyzed in accordance with the study objectives using both descriptive and inferential statistical methods. The plan of data analysis was as follows:

- Organization of data in a master sheet and computer database
- Computation of frequencies and percentages for the analysis of socio-demographic variables
- Computation of mean and standard deviation for pre-test and post-test knowledge scores
- Paired 't' test to examine the significance of differences between pre-test and post-test knowledge scores
- Chi-square test to assess the association between post-test knowledge scores and selected socio-demographic variables

IV.RESULTS AND DISCUSSION

Section I: Description of sociodemographic variables:

❖ Age.

32(53.3%) of the Adolescents were between the age group 15 to 1 years, 22(36.7%) of them were between the age group 17 to 18 years and 6 (10%) were between age group of 19 years and above.

❖ Religion.

Majority of the Adolescents 35(58.3%) were Hindu, 18 (30%) were Muslim respondents and 7(11.7%) were Christian.

❖ Income of the family

23(38.3%) of the respondents were belongs to below 10000 income of family, 19(31.7%) of the respondents were belong 11000 to 15000 income of family, 12(20%) were belongs to 16000 to 20000 income of family and 6 of them were 21000 income of family.

❖ Type of the family

5(8.3%) of the respondents were belonging to

Nuclear family, 25(41.7%) of the respondents were belongs to joint family, 21(35%) were belongs to extended family and 9(15.0%) of them were belonging to single parent family.

❖ Place of Residence

10(816.7%) of the respondents were belonging to slum residence, 16(26.7%) of the respondents were belongs to rural area, 14(23.3%) were belongs to urban area and 20(33.3%) of them were belonging to semi urban area.

❖ Knowledge about dysmenorrhea.

22(36.7%) of the respondents were replied with Yes and 38(63.3%) of the respondents were replied with No regarding knowledge about dysmenorrhea.

❖ Source of Information.

9(40.9%) of the respondents were getting information from health worker and 4(18.2%) of the respondents were getting information from electronic media regarding knowledge about dysmenorrhea, 6(27.3%) of respondents were getting information from mass media and 3(13.6%) of them were getting knowledge from awareness programme.

Section II

Assessment of pretest and posttest knowledge of respondent

Pre-test knowledge regarding Dysmenorrhea among Adolescents of selected PU colleges in vijayapura

n=60

Level of knowledge	Score	No of Respondents	
		No	%
Inadequate	<50%	45	75.0
Moderate	50-75%	15	25.0
Adequate	>75%	0	0.0
Total		60	100

Pre-test of knowledge regarding Dysmenorrhea among Adolescents that the level of knowledge of Adolescents before using structured teaching programme. In that 45(75%) of respondents were have inadequate knowledge, 15(25%) of them have moderate knowledge and no one of respondents have adequate knowledge.

post-test knowledge regarding Dysmenorrhea among Adolescents of selected PU colleges in Vijayapura

n=60

Level of knowledge	Score	No of Respondents	
		No	%
Inadequate	<50%	0	0.0
Moderate	50-75%	23	38.3
Adequate	>75%	37	61.7
Total		60	100

Post-test knowledge regarding Dysmenorrhea among Adolescents of selected PU colleges in Vijayapuraafter Structured teaching programme . In that 0(0%) of respondents were have inadequate knowledge, 23(38.3%) of them have moderate knowledge and 37(61.7%) of respondents have adequate knowledge.

Section – III

Evaluate effectiveness of STP on knowledge regarding Dysmenorrhea among Adolescents of selected PU colleges in vijayapura

The effectiveness of structured teaching programmes in terms of gaining knowledge score in post-test. According to this pre-test knowledge regarding dysmenorrhoea among adolescents of selected PU colleges in vijayapura was 16.4 and post-test

knowledge regarding dysmenorrhoea among adolescents was 27.2, which is significant, so there is enough evidence that Structured teaching programme is effective in enhancing the knowledge of dysmenorrhoea among adolescents of selected PU colleges in Vijayapura.

Section – IV

To find the association between knowledge scores regarding Dysmenorrhea with selected socio demographic variables

n=60

S.No	Demographic Variables	No	%	No of Respondents				Chi-square
				≤ Median (28)		> Median (32)		
1	Age (in years)							
	a. 15-16	32	53.3	14	43.8	18	56.3	0.23
	b. 17-18	22	36.7	11	50.0	11	50.0	df 2
	c. 19 years and above	6	10.0	3	50.0	3	50.0	N.S
2	Religion							
	a. Hindu	35	58.3	14	40.0	21	60.0	2.2
	b. Muslim	18	30.0	11	61.1	7	38.9	df 2
	c. Christian	7	11.7	3	42.9	4	57.1	N.S
	d. Others	0	0.0	0	0.0	0	0.0	
3	Family Income (in rupees)							
	a. Below 10000	23	38.3	12	52.2	11	47.8	0.93
	b. 11000-15000	19	31.7	8	42.1	11	57.9	df 3
	c. 16000-20000	12	20.0	6	50.0	6	50.0	N.S
	d. >Rs.21000	6	10.0	2	33.3	4	66.7	
4	Type of family							
	a. Nuclear family	5	8.3	5	100.0	0	0.0	14.5
	b. Joint family	25	41.7	14	56.0	11	44.0	df 3
	c. Extended family	21	35.0	9	42.9	12	57.1	S
	d. Single parent family	9	15.0	0	0.0	9	100.0	

The calculated Chi square test was used to find the association between the socio- demographic variables and knowledge of subjects regarding self-care measures to reduce dysmenorrhea. No significant association was found between the knowledge of dysmenorrhea and their socio-demographic variables: Age, Religion, and Type of family.

Significant association was found between the knowledge of self-care measures to reduce dysmenorrhea and their socio-demographic variables: Place of residence, Family Income and Source of Information.

V.CONCLUSION

No significant association was found between the knowledge of dysmenorrhea and their socio-demographic variables: Age, Religion, and Type of family.

Significant association was found between the knowledge of self-care measures to reduce dysmenorrhea and their socio-demographic variables: Place of residence, Family Income and Source of Information.

The calculated chi square value is less than tabulated value. H_1 was rejected.

Hence There is significant difference between pretest knowledge score with selected socio-demographic

variables.

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CONFLICT OF INTEREST- None declared

ETHICALCLEARENCE- Ethical Clearance Certificate was obtained by Institutional Ethical Committee**.**

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