



A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING PUBERTAL GROWTH AMONG PRE-ADOLESCENT GIRLS IN A SELECTED SCHOOL, AGARTALA, TRIPURA

Nursing

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ABSTRACT

Introduction: Puberty marks a critical period of physiological and psychological changes, particularly among pre-adolescent girls. Understanding these changes is vital for their health and well-being. In this context, a structured teaching program was implemented to enhance knowledge about pubertal growth among pre-adolescent girls in a selected school in Agartala, Tripura. **Aims and Objective of the Study:** The primary aim of this study was to evaluate the effectiveness of a structured teaching program in improving knowledge regarding pubertal growth among pre-adolescent girls. Utilizing Imogene King's theory of Goal Attainment (1997) as the conceptual framework, the study aimed to assess the knowledge levels before and after the structured teaching program. **Methodology:** This study employed a pre-experimental, one-group pretest-posttest design, with 60 pre-adolescent girls aged between 9 to 12 years selected using purposive sampling. A structured questionnaire was developed and validated by six experts to assess demographic variables and knowledge levels regarding pubertal growth. The reliability of the knowledge questionnaire was established using the Spearman Brown prophecy formula (reliability coefficient = 0.95). Data analysis was conducted using descriptive statistics such as mean and standard deviation, as well as paired t-tests to compare pre- and post-test knowledge scores. **Results:** Prior to the structured teaching program, 93.33% of participants exhibited inadequate knowledge about pubertal growth, while 6.67% had moderate knowledge. Following the program, there was a significant improvement in knowledge levels, with 23.3% demonstrating inadequate knowledge, 56.6% displaying moderate knowledge, and 20% possessing adequate knowledge. The mean post-test knowledge score ($O_2 = 16.67$) was substantially higher than the mean pre-test score ($O_1 = 5$), indicating the effectiveness of the structured teaching program in enhancing knowledge about pubertal growth among pre-adolescent girls. Furthermore, statistical analysis revealed significant associations between dietary patterns of families, area of residence, and knowledge levels regarding pubertal growth among participants ($p < 0.05$). **Conclusion:** The findings of this study underscore the importance of structured educational interventions in improving knowledge about pubertal growth among pre-adolescent girls. The structured teaching program significantly enhanced knowledge levels, indicating its effectiveness in addressing gaps in understanding among this demographic. These results have implications for nursing education and research, suggesting the potential for similar interventions to be implemented in different settings and with larger sample sizes to further validate the findings.

KEYWORDS

Pubertal Growth, Pre-Adolescent Girls, Structured Teaching Program, Knowledge Enhancement.

INTRODUCTION

Puberty is a natural and inevitable phase of human development that marks the transition from childhood to adolescence. It is characterized by rapid physical, psychological, and emotional changes, including the development of primary and secondary sexual characteristics. These changes can be overwhelming and confusing for pre-adolescent girls, as they navigate their way through this crucial stage of growth. Therefore, it is essential to educate them about these changes and equip them with the necessary knowledge and skills to manage them effectively.

This study aims to assess the effectiveness of a structured teaching programme on pubertal growth among pre-adolescent girls in a selected school in Agartala. The study will focus on evaluating the impact of the programme on the girls' knowledge, attitudes, and practices related to pubertal growth.

BACKGROUND

Adolescence is a critical period of growth and development, marked by physical, emotional, and cognitive changes. It is a time when children begin to develop their own identity and form relationships with their peers. Puberty, which usually starts between the ages of 8 and 14, is a significant milestone in this phase. It is a complex process that involves hormonal changes, physical growth, and the development of secondary sexual characteristics. In India, the average age of menarche (the first menstrual period) is around 13 years. As per the National Family Health Survey (NFHS-4), 27% of girls aged 15-19 years in India are married, and 7% have already given birth to a child. These statistics highlight the need for early education and awareness about pubertal growth among pre-adolescent girls.

Studies have shown that lack of knowledge about puberty can lead to anxiety, confusion, and negative attitudes towards one's own body. It can also result in unhealthy practices, such as using unhygienic materials during menstruation and engaging in risky sexual behaviors. Therefore, it is essential to provide accurate and age-appropriate information to pre-adolescent girls to help them understand and manage their pubertal changes effectively.

OBJECTIVES OF THE STUDY:

1. To assess knowledge regarding pubertal growth among pre-adolescent girls.
2. To evaluate the effectiveness of structured teaching programme regarding pubertal growth among pre-adolescent girls.
3. To find out the association between pre-test knowledge scores on pubertal growth among pre adolescent girls with their selected demographic variables.

Hypothesis:

- H₁:** There is significant difference between the mean level of knowledge scores among pre-adolescent girls regarding pubertal growth before and after Structure teaching programme at the level of significant 0.05.
- H₂:** There is significant association between pre-test knowledge scores on pubertal growth with their selected demographic variables at the level of significant 0.05.

Research Methodology:

The methodology employed in this study focused on evaluating the effectiveness of a structured teaching program regarding pubertal growth among pre-adolescent girls.

Research Approach: A pre-experimental research approach was chosen to achieve the study's objectives.

Research Design:

The study utilized a pre-experimental, one-group pretest-posttest design.

Variables:

- Independent Variable: Structured teaching Program on pubertal growth
- Dependent Variable: Knowledge of pre-adolescent girls regarding Pubertal growth.

Setting:

The research was conducted in a selected school in Tripura, with a pilot study conducted in East Durjoynagar High school and the final study conducted at Nutannagar Girls' HS School.

Population and Sample:

The population comprised pre-adolescent girls aged between 9-12 years, studying in 4th to 6th standard in Nutannagar Government Girls High School. A sample of 60 pre-adolescent girls was selected using purposive sampling technique.

Inclusion Criteria:

- Students studying in 4th to 6th standard in government girls' high school.
- Students aged between 9 and 12 years.
- Students willing to participate in the research study.

Development of Study Tool:

- Two structured questionnaires were developed: one for collecting background data and another to assess knowledge regarding pubertal growth.
- Content validity of the tools was ensured through expert consultation, and reliability was confirmed using the Spearman correlation coefficient.

Structured Teaching Programme:

A structured teaching program was developed covering anatomy, physiological changes, and menstrual cycle during pubertal growth. It utilized lecture-cum-demonstration methods and visual aids.

Data Collection Procedure:

Data collection involved administering questionnaires for demographic data and conducting pre- and post-tests on knowledge regarding pubertal growth. The structured teaching program was administered between pre- and post-tests.

Data Analysis Plan:

- Data analysis included descriptive statistics for demographic variables and knowledge levels.
- Paired t-tests were used to determine the significance of differences between pre- and post-test knowledge scores.
- Chi-square tests were employed to explore associations between knowledge levels and demographic variables.

Ethical Permission:

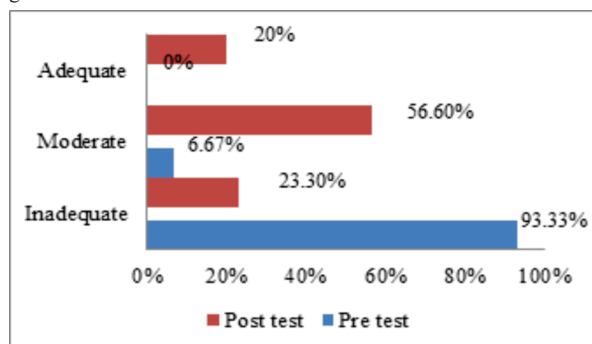
Ethical clearance was obtained from the Institute Ethical Committee, AHRCP, Agartala, and permissions were secured from the Principal of the Institute of Nursing Science, as well as the Headmistresses of Nutannagar Higher Secondary School and East Durjoynagar High School. Written informed consent was obtained from all participants. Pre-adolescent girls were informed about the study's purpose, duration, voluntary participation, and confidentiality. Safety and security measures were maintained throughout the study.

RESULTS:

Demographic key findings of the study:

Among the 60 pre-adolescent girls surveyed, the majority were aged 9-10 years (50%) and 11-12 years (50%). Most of the girls identified as Hindu (73.3%), while the rest identified as Muslim (26.6%). In terms of family monthly income, the majority earned above 15,000 rupees (50%). Education-wise, the majority were in 6th standard (50%).

Maternal education revealed that most had primary education (46.6%) and secondary education (46.6%). Dietary patterns showed that the majority had mixed dietary habits (83.3%). Regarding the area of residence, most lived in rural areas (73.3%). None of the pre-adolescent girls had attended any educational program on pubertal growth.



Graph:1 Level of Pretest and Posttest of Knowledge

Table 1 Level of knowledge in pretest and posttest

Level of Knowledge	Pre-test		Post test	
	N	%	N	%
Inadequate	56	93.33	14	23.3
Moderate	4	6.67	34	56.6
Adequate	0	0	12	20

Table 2 Compare of pretest and posttest knowledge

Observation	Mean	SD	Paired t test	
Pre-test	5	3	df=59	20.81**
Post-test	16.67	4.96		

After the structured teaching program, the mean posttest score increased to 16.67 with a standard deviation of 4.96. A paired t-test revealed a significant difference between pretest and posttest scores ($t=20.81$, $df=59$, $p<0.01$).

Regarding the association between selected demographic variables and the level of knowledge

Age:

The age groups considered are 9-10 years and 11-12 years. The chi-square value associated with age is 0.27, indicating no significant association between age and knowledge scores.

Religion:

Respondents are categorized into Hindu, Muslim, Christian, and Others. The chi-square value for religion is 0.44, suggesting no significant association with knowledge scores.

Family Monthly Income:

Income groups are divided into less than 5000, 5000-15000, and more than 15000. The chi-square value for family monthly income is 1.08, indicating no significant association with knowledge scores.

Educational Status of the Girl:

Educational levels include 4th standard, 5th standard, and 6th standard. The chi-square value for this demographic variable is 1.08, suggesting no significant association with knowledge scores.

Education of Mother:

Education levels of mothers are categorized as primary education, secondary education, and higher secondary education. The chi-square value for this variable is 2.01, indicating no significant association with knowledge scores.

Dietary Pattern:

Respondents are classified as vegetarians, non-vegetarians, and those with a mixed diet. The chi-square value for dietary pattern is 15.4, suggesting a significant association with knowledge scores.

Area of Living:

The area of living is categorized as urban and rural. The chi-square value for this variable is 8.11, indicating a significant association with knowledge scores.

In summary, Table 3 provides insights into how various demographic factors may or may not be associated with the level of knowledge scores among the surveyed population. Significant associations are observed for dietary pattern and area of living, while no significant associations are found for age, religion, family monthly income, educational status of the girl, and education of the mother.

Hence, researcher accepted research hypothesis (H_1) and rejected null hypothesis (H_0).

CONCLUSION:

The structured teaching program effectively enhanced knowledge about pubertal growth among pre-adolescent girls. Significant improvements were observed in post-test knowledge scores compared to pre-test scores. Furthermore, associations were found between dietary patterns, area of living, and knowledge levels, highlighting potential influencers of understanding in this demographic.

The study underscores the importance of structured educational interventions in addressing knowledge gaps and promoting awareness about pubertal development. These findings have implications for healthcare education and emphasize the need for continued efforts to

empower pre-adolescent girls with essential knowledge for their well-being during this critical developmental phase.

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