



A Study To Evaluate The Effectiveness Of Planned Teaching Programme On Knowledge Regarding Cervical Cancer Among Adolescent Girls In Selected Engineering College, Kozhikode District

Prof. Anil V, Ms. Sruthi KP, Mr. Keshav Sajeeth, Ms. Misna Fathima, Ms. Nabeena T.K, Ms. Nafseera Banu, Ms. Nakshathra K, Ms. Navyamol P.B, Ms. Sneha K, Ms. Sneha Sadanandan, Ms. Vismaya K Sree Anjaneya College of Nursing, Malabar Medical College Campus, Ulliyeri, Kozhikode, India

ABSTRACT

The present study was conducted among Undergraduate Engineering Students MDIT Engineering College, Kozhikode, to assess the knowledge regarding Cervical Cancer. The main objectives of the study were:

- Determine the pre-test knowledge on Cervical Cancer among Adolescent girls in selected Engineering College in Kozhikode District
- Determine the post-test knowledge on Cervical Cancer among Adolescent girls at selected Engineering College in Kozhikode District
- Determine the effect of planned health education on knowledge on Cervical Cancer among Students in selected Engineering College in Kozhikode
- Identify the association between knowledge and selected Socio demographic variables.

The present study was based on the conceptual framework – General systems theory (Ludwig Von Bertalanffy) and using Quasi experimental approach with One group pre-test post-test design. All the subject are given a pre-test, receive the treatment and are given a post test. The sample consists of 60 Undergraduate Engineering Adolescent girls, selected from MDIT Engineering College Kozhikode using convenient sampling method. The tool used was Semi-Planned interview schedule to collect demographic data, semi Planned interview schedule to assess the knowledge of the Engineering Adolescent girls on Cervical Cancer.

Content validity of the tool was done with the help of experts from the respective field.

Reliability of the tool was checked with inter-rater reliability and Cronbach's alpha method. The questionnaire was administered to 3 primary care givers of children with colostomy for checking the reliability of the tool. The reliability coefficient was found to be 0.87 and hence the tool is found to be statistically reliable. A pilot study was conducted. The pilot study revealed that the tools used in the study were simple, clear and unambiguous and data were found amenable to statistical analysis. Actual study was conducted at MDIT Engineering College, Kozhikode. The data were tabulated and analysed by descriptive and inferential statistics.

The findings of the study revealed that the mean post-test knowledge score is significantly higher than mean pre-test knowledge score. Hence it is evident that after providing the planned teaching Programme there was a significant

improvement in the level of knowledge regarding Cervical Cancer. Based on the above results the study was effective in Undergraduate Engineering Adolescent girls.

Index Terms - Cervical Cancer, Knowledge, Adolescent Girls, Planned Teaching Programme, Nursing Education.

I. INTRODUCTION

Cervical cancer is a significant global health concern, representing one of the most common cancers affecting women worldwide. It arises from the cells of the cervix, primarily caused by persistent infection with high-risk types of human papillomavirus (HPV) [1]. Despite being largely preventable through vaccination and regular screening, many women, especially in low-and middle-income countries, are diagnosed at advanced stages due to inadequate awareness and poor access to preventive healthcare services [2]. The level of knowledge about cervical cancer, including its risk factors, symptoms, and prevention, plays a critical role in early detection and management.

Adolescent and young adult women represent a key demographic for primary prevention and awareness-building initiatives. Studying cervical cancer awareness among college students can help develop targeted educational programs, improve vaccine uptake, and promote early prevention strategies [3]. This study aims to evaluate the effectiveness of a Planned Teaching Programme in improving knowledge regarding cervical cancer among adolescent girls in a selected engineering college in Kozhikode District, Kerala.

Research Methodology

The methodology section outlines the plan and methods for conducting the study, including the research approach, design, setting, population, sample, data collection tools, and analysis plan.

3.1 Research Approach and Design

A quasi-experimental approach with a one-group pre-test post-test design was adopted for the present study. This design was chosen to evaluate the knowledge of participants before and after the administration of the Planned Teaching Programme (PTP).

3.2 Population and Sample

The target population was female engineering students aged 18–25 years. The sample consisted of 60 adolescent girls from MDIT Engineering College, Kozhikode, selected using a convenient sampling technique. Inclusion criteria included female students aged 18-25 years who were willing to participate and available during the data collection period. Students with prior formal training on cervical cancer were excluded.

3.3 Data Collection Tool and Technique

A self-administered semi-structured questionnaire was used for data collection, divided into two sections:

Section A: Collected socio-demographic data including age, year of study, parental education and occupation, family income, and previous knowledge of cervical cancer.

Section B: Consisted of 30 multiple-choice questions assessing knowledge about cervical cancer, including its incidence, etiology, symptoms, diagnosis, management, and prevention.

Content validity of the tool was established with experts from the field, and reliability was confirmed with a Cronbach's alpha of 0.87. A pilot study ensured the tools were feasible. The PTP was delivered using a lecture-cum-discussion method with audio-visual aids.

3.4 Ethical Considerations

Ethical clearance was obtained from the Institutional Ethics Committee. Written informed consent was taken from all participants after explaining the purpose of the study. Confidentiality and the right to withdraw were assured.

3.5 Data Analysis

Data were analyzed using descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (paired t-test to compare pre- and post-test scores, Chi-square test to find associations). A p-value of less than 0.05 was considered statistically significant.

Results and Discussion

4.1 Socio-Demographic Characteristics

The analysis of demographic data revealed that the majority of participants were 19 years old (44%), in their first year of study (53%), and hailed from nuclear families (73%). A significant 70% reported having no previous knowledge regarding cervical cancer.

4.2 Assessment of Knowledge on Cervical Cancer

The pre-test and post-test knowledge scores are presented in Table 1.

Table 1: Frequency and Percentage Distribution of Pre-test and Post-test Knowledge Scores (N=60)

Level of Knowledge	Pre-test Score		Post-test Score	
	f	%	f	%
Poor (<50%)	33	55%	16	26.66%
Good (≥50%)	27	45%	44	73.34%
Total	60	100%	60	100%

Table 1 shows that in the pre-test, 55% of participants had poor knowledge, which decreased to 26.66% in the post-test. Conversely, the proportion of participants with good knowledge increased from 45% to 73.34% after the intervention.

4.3 Effectiveness of the Planned Teaching Programme

The effectiveness was determined by comparing the pre-test and post-test mean knowledge scores using a paired t-test, as shown in Table 2.

Table 2: Effectiveness of Planned Teaching Programme on Knowledge Scores (N=60)

Group	Mean Score	Standard Deviation	t-value	p-value
Pre-test	12.00	3.932	18.407	<0.05
Post-test	25.87	4.010		

Table 2 demonstrates a statistically significant increase in the mean knowledge score from 12.00 in the pre-test to 25.87 in the post-test. The calculated t-value of 18.407 ($p < 0.05$) indicates that the Planned Teaching Programme was highly effective in improving the participants' knowledge. Thus, the hypothesis (H1) that there is a significant difference between pre-test and post-test knowledge scores is accepted.

4.4 Association between Pre-test Knowledge and Demographic Variables

The Chi-square test revealed no significant association ($p > 0.05$) between the pre-test knowledge scores and any of the selected socio-demographic variables, including age, year of study, parental education and occupation, family income, and previous knowledge. Therefore, the hypothesis (H2) of a significant association is rejected.

Conclusion

The present study concluded that the adolescent girls had inadequate knowledge regarding cervical cancer in the pre-test. The Planned Teaching Programme proved to be an effective strategy, as evidenced by the significant improvement in post-test knowledge scores. The findings underscore the pressing need for structured educational programs and health campaigns to enhance awareness and encourage preventive practices among young women. Nurses, as health educators, play a vital role in organizing such awareness programs in various community and educational settings to empower adolescents and ultimately contribute to reducing the burden of cervical cancer.

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