



A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF
STRUCTURED EDUCATION PROGRAMME ON KNOWLEDGE REGARDING
PREVENTION OF ORAL CANCER AMONG COLLEGE STUDENTS OF SELECTED
COLLEGES, TRIPURA

Nursing

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ABSTRACT

Introduction: Oral cancer is a major public health problem worldwide, with high morbidity and mortality rates. The incidence of oral cancer is increasing in India, including the state of Tripura. Tobacco use, alcohol consumption, and poor oral hygiene are the major risk factors for oral cancer. **This study aimed to assess** the effectiveness of a structured education programme on knowledge regarding prevention of oral cancer among college students of selected colleges in Tripura. **Methodology:** This study employed a non-randomized control group quasi-experimental design to evaluate the effectiveness of a structured education program on knowledge regarding the prevention of oral cancer. The population targeted was BA 1st-year college students from selected colleges in Tripura. A total sample size of 110 students was selected using non-probability purposive sampling, with 55 students in the experimental group and 55 in the control group. A multiple-choice structured knowledge questionnaire was utilized as the primary tool for data collection. The validity of the questionnaire was ensured through consultations with various experts in the field. The reliability of the tool was confirmed using the Karl-Pearson correlation coefficient method, yielding reliability scores of $r = 0.73$ for the experimental group and $r = 0.75$ for the control group. **Results:** The study's findings revealed significant improvements in the knowledge of oral cancer prevention among the experimental group following the structured education program. In the pre-test, 27.27% of the experimental group had poor knowledge, 72.73% had average knowledge, and none had good knowledge. Post-test results showed that no students had poor knowledge, 49.09% had average knowledge, and 50.91% had good knowledge. In contrast, the control group showed minimal improvement, with 27.27% still having poor knowledge and only 1.82% achieving good knowledge post-test. The pre-test mean scores were similar between groups, but the experimental group demonstrated a significant increase post-intervention, with a paired t-test value of 27.48 ($p < 0.05$), indicating the program's effectiveness. **Conclusion:** The structured education program significantly enhanced college students' knowledge about oral cancer prevention. Post-intervention, the experimental group showed marked improvement, with no students remaining in the poor knowledge category and 50.91% achieving good knowledge.

KEYWORDS

Oral Cancer Prevention, Structured Education Program, College Students, Knowledge.

INTRODUCTION

Oral cancer is a significant public health concern in many parts of the world, including India. Young people are particularly vulnerable to oral cancer due to risk factors such as tobacco and alcohol use. This study aimed to assess the effectiveness of a structured education program in improving knowledge about oral cancer prevention among college students in Tripura. Oral cancer is a significant global health concern, ranking among the top ten most common cancers worldwide. The incidence and mortality rates associated with oral cancer are alarmingly high, with over 300,000 new cases diagnosed and approximately 145,000 deaths reported annually. The burden of oral cancer is particularly severe in countries with high tobacco consumption, such as India, which accounts for nearly one-third of the global oral cancer cases. In India, it is estimated that around 77,000 new cases of oral cancer are diagnosed each year, with about 52,000 deaths attributed to this disease. The high prevalence and mortality rates underscore the urgent need for effective prevention and education strategies.

The state of Tripura in Northeast India mirrors this national trend, with increasing incidences of oral cancer, primarily driven by the widespread use of tobacco products. The younger population, especially college students, is at a significant risk due to the prevalence of tobacco use and lack of awareness about the dangers of oral cancer. This demographic presents a critical opportunity for intervention through targeted educational programs aimed at prevention and early detection.

This study aims to assess the effectiveness of a structured education program in enhancing knowledge about the prevention of oral cancer among college students in selected colleges in Tripura. By focusing on this specific group, the study seeks to address the gap in awareness and understanding that contributes to the high incidence of oral cancer in the region. The structured education program includes interactive lectures, multimedia presentations, and informative pamphlets designed to provide comprehensive knowledge about oral cancer, its risk factors, and prevention strategies.

OBJECTIVES OF THE STUDY:

1. To assess the knowledge score regarding oral cancer among college

students of experimental group and control group.

2. To evaluate the effectiveness of structured education programme regarding prevention of oral cancer among college students.

3. To find out the association between pretest knowledge score of oral cancer among college students with their selected demographic variables.

HYPOTHESIS:

H₁: There is significant difference between the mean post-test knowledge score and mean pretest knowledge score regarding prevention of oral cancer of among experimental group at 0.05 level of significance.

H₂: The mean posttest knowledge score of experimental group is significantly higher than the mean posttest knowledge score of control group regarding oral cancer at 0.05 level of significance.

H₃: There is significant association between pre-test knowledge score of college students & their selected demographic variable at 0.05 level of significance.

RESEARCH METHODOLOGY:

Research Design: This study utilized a quasi-experimental non-randomized control group design to assess the effectiveness of a structured education program on knowledge regarding the prevention of oral cancer among college students in selected colleges in Tripura.

Data Collection Process: The study was conducted in two phases: pre-test and post-test, with the experimental group receiving an intervention in between.

Group	Pre-test	Intervention	Post-test
I (Experimental group)	Q1	Structured teaching program (pamphlet, leaflet, flex)	Q2
II (Control group)	Q3	No intervention	Q4

Variables:

Independent Variable: Structured Education Program on Oral Cancer.

Dependent Variable: Knowledge of college students regarding the prevention of oral cancer.

Research Setting:

Experimental Group: KNM College, Sonamura

Control Group: Holy Cross College, Agartala

Target Population:

BA 1st-year college students studying at KNM College and Holy Cross College in Tripura.

Sample: College students studying in BA 1st year at the selected colleges in Tripura.**Sampling Technique:** Non-probability purposive sampling technique was used to select students who met the inclusion criteria after obtaining informed consent.**Sample Size:** 110 college students.**Inclusion Criteria: College students who were:**

- Willing to participate in the study.
- Studying in BA 1st year (both male and female).
- Without any family history of oral cancer.

Selection And Development Of Tools:

Based on extensive literature review, socio-demographic proforma and structured knowledge questionnaire were developed to collect basic information and assess knowledge regarding oral cancer prevention. Additionally, a lesson plan was created for the educational intervention. The tools were refined based on the researcher's experience and expert suggestions. Structured knowledge questionnaire with 30 items to assess knowledge regarding oral cancer prevention.

Ethical Clearance:

Formal and administrative permissions were obtained from:

1. Institutional Ethical Committee.
2. Principals of the respective colleges.
3. Participants (informed consent).

RESULTS:

The demographic findings In the experimental group (n=55), the majority were aged 18-19 years (49.1%), male (52.7%), and Hindu (76.4%). Most hailed from nuclear families (54.5%), rural areas (58.2%), with monthly family incomes of 5001-10,000 INR (36.4%). None had a family history of oral cancer, and the majority did not regularly examine their oral cavity (83%). Few reported smoking (9.1%) or alcohol consumption (3.6%). Television was the primary information source (58.2%), with most students not attending any awareness programs on oral cancer (92.7%).

In the control group (n=55), the majority were aged 22-23 years (43.6%), male (65.5%), and Hindu (65.5%). Most hailed from nuclear families (69.1%), rural areas (45.5%), with monthly family incomes over 15000 INR (40%). None had a family history of cancer, and most did not regularly examine their oral cavity (89.1%). Few reported smoking (3.6%) or tobacco/pan chewing (1.8%). Television was the primary information source (49.1%), with most students not attending any awareness programs on oral cancer (89.1%).

Table 1 Level Of Knowledge In Pretest And Posttest In Experimental And Control Group.

Level of Knowledge	Experimental Group				Control Group			
	Pre-test		Post test		Pre-test		Post test	
	F	%	F	%	F	%	F	%
Poor	15	27.2	0	0	11	20	15	27.2
Average	40	72.3	27	49.1	44	80	39	70.9
Good	0	0	28	50.9	0	0	1	1.82

Table 1 summarizes the level of knowledge in the pre-test and post-test for both the experimental and control groups. In the experimental group, pre-test results show 27.2% with poor knowledge, 72.3% with average knowledge, and no students with good knowledge. Post-test results reveal significant improvement, with 0% having poor knowledge, 50.9% with average knowledge, and 50.9% with good knowledge. In the control group, pre-test results indicate 20% with poor knowledge, 80% with average knowledge, and no students with good knowledge. Post-test results show minimal improvement, with 27.2% having poor knowledge, 70.9% with average knowledge, and 1.82% with good knowledge.

Table 2 Compare Of Pretest And Posttest Knowledge In Experimental And Control Group (Paired t test)

Observation	Mean	SD	Mean Difference	Paired t test
Exp. Pre-test	12.38	2.70	8.04	27.48** S
Exp. Post-test	20.42	2.43		
Cont. Pre-test	12.89	3.02	0.04	0.096 NS
Cont. Post-test	12.93	3.09		

Table 2 presents a comparison of pre-test and post-test knowledge in both the experimental and control groups, along with the results of the paired t-test.

In the experimental group, the pre-test mean knowledge score was 12.38 with a standard deviation (SD) of 2.70. The post-test mean knowledge score significantly increased to 20.42. **The mean difference between pre-test and post-test scores was 8.04, with a highly significant paired t-test value of 27.48 ($p < 0.05$).**

In contrast, in the control group, the pre-test mean knowledge score was 12.89 with an SD of 3.02. The post-test mean knowledge score only slightly increased to 12.93. The mean difference between pre-test and post-test scores was 0.04, with a non-significant paired t-test value of 0.096 ($p > 0.05$).

Regarding The Association Between Selected Demographic Variables And The Level Of Knowledge

The chi-square analysis showed no significant associations between demographic variables (age, sex, etc.) and pre-test knowledge scores ($P > 0.05$). However, significant associations were found with sources of information and attending awareness programs about oral cancer ($p < 0.05$). These findings support the research hypotheses, highlighting the influence of information and programs on knowledge.

CONCLUSION:

The study assessed a structured education program on oral cancer prevention among 110 Tripura college students. In the experimental group, pre-test knowledge was poor in 27.27%, average in 72.73%, and good in none, improving post-test to 0%, 49.09%, and 50.91%, respectively. Significant improvement was noted ($t=27.48$) versus control ($t=0.096$). Post-test comparisons showed the program's effectiveness ($t=46.26$), with significant associations found between pre-test knowledge, information sources ($\chi^2=9.72$), and awareness program attendance ($\chi^2=5.27$).

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