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A Pre Experimental Study to Assess the Effectiveness of Planned Teaching Program on Knowledge and Attitude Regarding Prevention of Oral Cancer among Nursing Students at SGRR College of Nursing, Patel Nagar Dehradun, UK

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INTRODUCTION

The mouth, known as the oral cavity, is the initial section of the digestive system and comprises the lips, tongue, palate, and teeth. It carries out various critical roles in digestion and speech. Oral cavity cancer is one of the leading cancer types impacting individuals globally. Cancer is a condition characterized by the uncontrolled growth of abnormal cells, which can spread to other body areas and may lead to death. It is referred to as a malignant neoplasm or tumor. Cancer ranks as the second primary cause of mortality globally, with approximately 9.6 million fatalities reported in 2018. Oral cancer is among the most prevalent malignant tumors impacting the head and neck area. As stated by Peres et al. (2019), it is a significant health issue globally. Oral cancer, by definition, pertains to any cancerous growth that develops in the lips (especially at the vermilion border) or inside the oral cavity. The oral cavity contains significant components including the front two-thirds of the tongue, buccal mucosa (inner lining of the cheeks), gingiva (gums), hard palate (top of the mouth), retromolar pad (region behind the molars), and the floor of the mouth. Tumors in these areas disrupt vital functions such as chewing, swallowing, and speaking. The majority of oral cancer cases manifest as squamous cell carcinoma, which arises from the thin, flat squamous cells that line the oral cavity. It is frequently linked to risk factors such as tobacco use, alcohol intake, inadequate oral hygiene, and infection with human papillomavirus (HPV). If not identified promptly, oral cancer can extend to adjacent tissues and lymph nodes.

KEYWORDS: *Assess, Effectiveness, Oral cancer, nursing students, planned teaching programme, VAS score.*

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Objectives :-

1. To assess the knowledge and attitude regarding prevention of oral cancer.
2. To evaluate the planned teaching program on knowledge and attitude regarding prevention of oral cancer.
3. To find out association between pre test knowledge with their selected socio demographic variables.

OPERATIONAL DEFINITION:

Assess- In this study assess its refers to, determing the knowledge and attitude regarding the prevention of oral cancer among nursing students.

Effectiveness- It refers to the outcomes of after 7 days planned teaching programme regarding prevention of oral cancer among nursing B.Sc. nursing 4th semester elicited through self stryctured knowledge questionnaire scale.

Knowledge- In this study, its refers to attain the contents of knowledge regarding prevention of oral cancer.

Attitude – In this study, its refers to assess the attitude among nursing students regarding prevention of oralcancer.

Prevention – In this study, prevention refers to the ability to other occurrences of stopping oral cancer among nursing students.

Planned Teaching Program- In this study it refers to a systematically designed for education intervention to increase the knowledge and attitude which including the contents of prevention of oral cancer such as introduction, definitions, causes ,progression, treatments, through the power point and assessment tool, aimed at improving knowledge among nursing students.

Oral Cancer –In this study, oral cancer is a type of cancer that develops in the tissues of the mouth or throat, including the lips, tongue, gums, inner cheeks, roof and floor of the mouth.

Nursing Students - In this study it refers to, who are persuing B.Sc. nursing 4th semester.

Nursing College – In this study it refers to, an educational institution that provide professional nursing curriculum theory and practical.

HYPOTHESIS:

H1 : The mean post test knowledge and attitude score will be higher than their mean pre test knowledge and attitude score as evidence by 0.05 level of significant .

H2: There will be significant association between pre test score with their selected socio demographic variables as evidenced by 0.05 level of significant.

ASSUMPTION:

- The nursing students will be improve the prevention of oral cancer after administered of planned teaching programme.
- The nursing students will be change the positive attitude among patient after the administered of planned teaching programme.

LIMITATION:

- The study is limited to nursing students of **SGRR College of Nursing, Patel Nagar, Dehradun**, so findings may not be generalizable to students from other institutions.
- The **pre-experimental design** lacks a control group, which may limit the ability to attribute changes solely to the planned teaching programme.
- The study relies on **self-reported data**, which may be influenced by social desirability or response bias.
- The **sample size** may be small, affecting the statistical power and generalizability of the results.
- The **short duration** between pre-test and post-test may not capture long-term retention of knowledge or sustained attitude change.

DELIMITATION:

- The study is limited to nursing students of SGRR College of Nursing, Dehradun.
- The students who are studying in SGRR College OF Nursing Patel Nagar Dehradun.
- Only students who are present and willing to participate are included.
- The intervention includes only a planned teaching programme.

RESEARCH APPROACH

It encompasses outlining the approach to examine the phenomenon being studied through quantitative, qualitative, and mixed methods. The study utilized a quantitative research approach, aiming to evaluate the impact of a structured teaching program on the knowledge and attitudes towards oral cancer among B.Sc nursing 4th semester students at Shri Guru Ram Rai College Of Nursing, Uttarakhand, Dehradun.

Research design

Research design, often referred to as a blueprint, is the framework that researchers choose to execute their study. Research designs encompass the methods and procedures applied, ranging from general assumptions to specific tactics for data collection and analysis. In this research study, the pre-experimental one group pre-test post-test design was used.

VARIABLES

There are two types of variables: dependent and independent variables. In this present study, variables are independent and dependent.

- **Independent Variables:** In this study, Planned teaching programme is the independent variable.
- **Dependent Variables:** In this study, dependent variable is Knowledge and Attitude of nursing students
- **Demographic Variables:** In this study, the demographic variable includes student Age, gender, marital status, education, parents occupation, personal habits, diet, parents monthly income, place of living**.**

Setting of the study:

In this study was conducted at the Sushila Institute of Medical Science, Sheeshambara Vikashnagar, Dehradun.

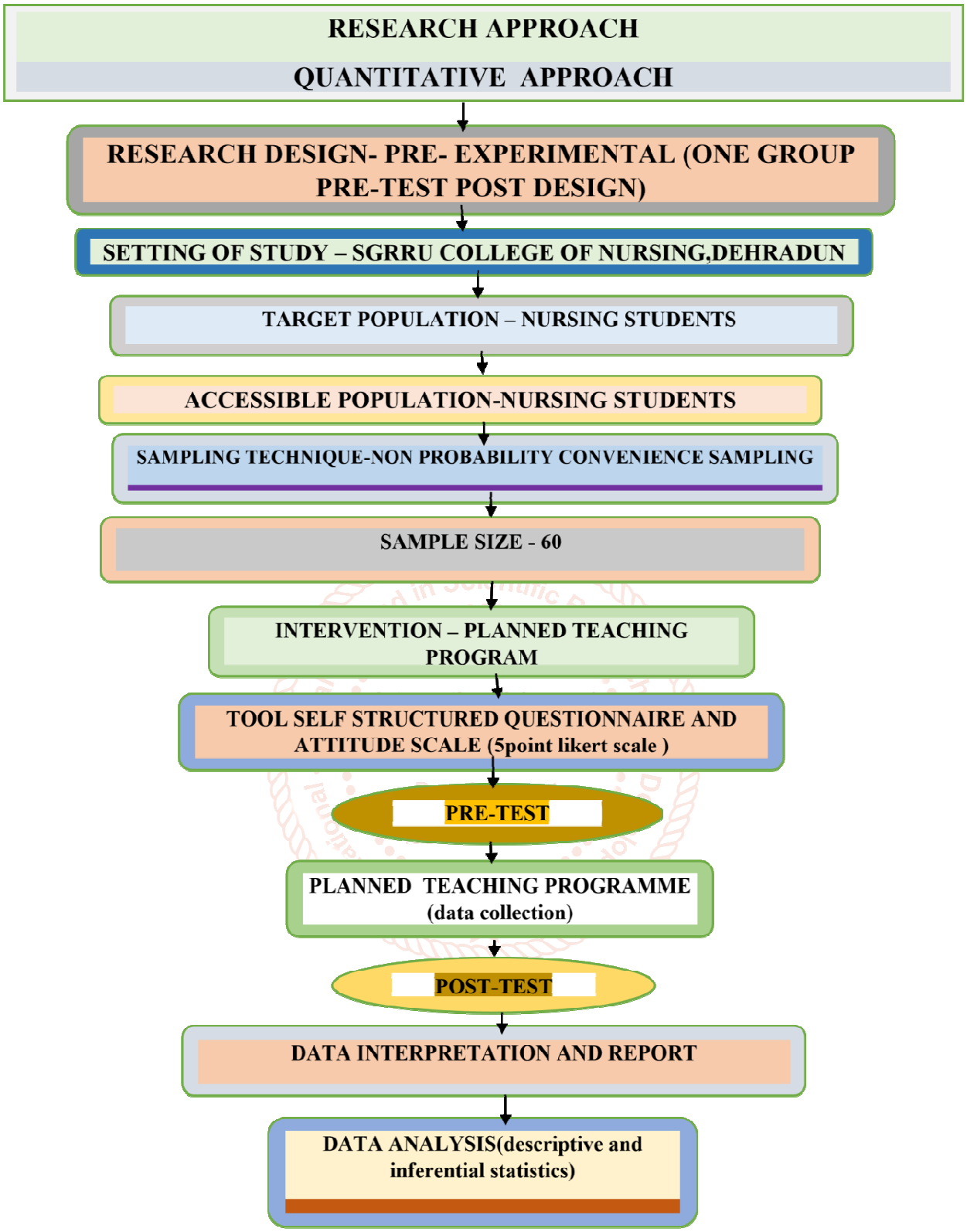

Fig 3.1 Schematic representation of the research methodology

POPULATION

Population- The chosen population for this study consisted of 100 BSc nursing students in their 4th semester at SGRR College of Nursing.

Target Population - The chosen target population for this study consisted of 60 BSc nursing students in their 4th semester.

The accessible population - chosen for this study was a group of 60 students from the BSc nursing 4th semester.

Sample size : The study comprises a sample size of 60. The sample in this study comprises Nursing students from Shri Guru Ram Rai College of Nursing, located in Patel Nagar, Dehradun, Uttarakhand.

SAMPLING TECHNIQUE

A nonprobability sampling method called Simple Convenience is employed to choose the sample in the research.

SAMPLING CRITERIA

Inclusion criteria This research study included the following criteria:- Students who were willing to participate in study.

- Students pursuing undergraduate in Nursing.
- Students who are available during the time of data collection.

EXCLUSION CRITERIA: It specified by students:

- Student nurses who are on leave during the study period.
- Student nurses who refuse to participate.
- Who all are having language barrier.

ETHICAL CONSIDERATION

- Prior to conduction of study permission will be obtained from:
- Authorities of SGRR College Of Nursing, Dehradun .
- Informed written consent from students who are willing to take part in the study.
- Privacy and confidentiality of the subjects will be maintained.
- Data collection will be used strickly for the research purpose only.

Research tools and techniques

- Part 1- demographic variables.
- Part 2- structured knowledge questionnaire regarding prevention of oral cancer .
- Part 3 – attitude questionnaire regarding prevention of oral cancer.

VALIDITY OF TOOLS

The tool used was the Visual Analogue Scale (VAS) Likert scale, which is widely recognized, and a demographic proforma was developed by the researcher and distributed to ten experts to evaluate content validity. Four experts were selected from medical surgical nursing, one physician from the medicine department, and one statistician. The final product was structured for data collection based on their concepts.

RELIABILITY OF TOOL

Reliability refers to the level of consistency and precision with which a tool assesses the characteristic it is intended to measure, and it was conducted with 10 B.Sc. nursing 4th semester students from SIMS Suahila Institute Of Medical Science, Sheeshambara Vikashnagar, Dehradun. The reliability coefficient was determined using the paired test-retest approach. The interval between the initial test and the retest is one week using the same sample. The test-retest method was applied, and the reliability of the knowledge questionnaire tool was confirmed with r = 0.83, while the attitude scale showed r = 0.84. Therefore, the instrument was deemed dependable for assessing the knowledge level of nursing students. Even though the tool is already widely recognized and very dependable, its reliability was further assessed using the Test-Retest method, confirming it to be highly reliable.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.836	.845	2

Section A: Frequency and percentage wise distribution of sample according to Socio demographic variable of nursing student .

Table no. 4.1 Demographic variable of nursing students N = 60

S. NO.	DEMOGRAPHIC VARIABLES	FREQUENCY {F}	PERCENTAGE {%}
1.	**Age in years**		
	a) 18- 20years	36	60.00 %
	b) 21- 25 years	24	40.00%
	c) 26-30 years	00	0 %
	d) > 30 years	00	0 %

2.	**Gender** a) Male b) Female c) others	 18 42 00	 30.00 % 70.00 % 0 %
3.	**Marital status** a) Single b) Married c) Divorced d) Widowed	 60 00 00 00	 100 % 0 % 0 % 0 %
4.	**Education status** a) ANM b) B.Sc. c) GNM d) Others	 00 60 00 00	 0 % 100 % 0 % 0 %
5.	**Parents Occupation status** a) Employed b) Self-employed c) Unemployed d) Retired	 30 15 15 00	 50.00 % 25.00 % 25.00 % 0 %
6.	**Personal Habits** a) Smoking b) Chewing tobacco c) Alcoholism d) NO, Any other substance abuse habits	 00 00 00 60	 0 % 0 % 0 % 100 %
7.	**Any specific diet** a) Vegetarian b) Non vegetarian c) Gluten-free d) Any other	 29 31 00	 48.33 % 52.67 % 0 %
8.	**Parents Income status** a) < 20000 rs b) 20000 – 40000 rs c) 40000 – 60000 rs d) > 60000 rs	 30 12 16 00	 50.00 % 20.00 % 26.67 % 0 %
9.	**Place of living** a) Hostellers b) Day scholars c) Rented House d) Other	 60 00 00 00	 100 % 0 % 0 % 0 %

EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING PREVENTION OF ORAL CANCER AMONG NURSING STUDENTS

LEVEL OF KNOWLEDGE	SCORE	PRE TEST FREQUENCY	SCORE %	POST-TEST FREQUENCY	SCORE %
GOOD knowledge	21 and above	25	41.7%	38	63.3%
AVERAGE knowledge	11 - 20	30	50%	20	33.33%
POOR knowledge	10 and below	5	8.3%	2	3.3%

- Knowledge improved notably, with Good knowledge increasing from 41.7% to 63.3%. Attitude shifted positively, especially in the Very Good category rising from 16.67% to 50%. Both Poor knowledge and Poor attitude percentages decreased significantly after the programme. Interpretation of Knowledge and Attitude Scores Pre-Test and Post-Test The effectiveness of the planned teaching programme on participants' knowledge and attitude regarding oral cancer was evaluated by comparing pre-test and post-test scores.
- Knowledge levels were categorized into Poor (1–10), Average (11–20), and Good (21– 30). The results showed a positive shift in knowledge following the intervention. The proportion of participants with good knowledge

increased substantially from 41.7% in the pre-test to 63.3% in the post-test. Correspondingly, the percentage of participants with Poor knowledge decreased from 8.3% to 3.3%, indicating improved understanding after the teaching programme.

- Overall, these findings indicate that the planned teaching programme was effective in significantly enhancing both knowledge and attitude toward oral cancer prevention among the participants.

EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON ATTITUDE REGARDING PREVENTION OF ORAL CANCER AMONG NURSING STUDENT N= 60

S. NO.	ARBITARY SCORING	FREQUENCY (f)		PERCENTAGE (%)	
		PRE	POST	PRE	POST
1.	Poor (0-5)	25	5	41.67%	8.33%
2.	Average (6- 10)	28	20	46.67%	33.33%
3.	Good (11- 15)	7	25	11.66%	41.67%
4.	Very good (16 – 20)	0	10	0%	16.67%
5.	Excellent (> 20)	0	0	0%	0 %

These findings indicate that the educational or training intervention had a positive impact on improving the knowledge of nursing students.

DISCUSSION

FINDINGS OF THE STUDY: The findings were based on the objectives of the study.

To evaluate the planned teaching program on knowledge and attitude regarding prevention of oral cancer.

The outcomes of the paired t-test performed on the pilot group show a statistically meaningful enhancement in knowledge or performance after the intervention. The average score on the pre-test was 19.8, whereas the average score on the post-test increased to 22.3, indicating a beneficial effect. The computed t-statistic is -4.61, significantly exceeding the critical value of ±2.26 (two-tailed), suggesting that the variation between pre- and post-test scores is improbable to be due to randomness.

Moreover, the two-tailed p-value is 0.0013, considerably lower than the typical significance level of 0.05, indicating that the difference is statistically significant. A Pearson correlation coefficient of 0.48 indicates a moderate positive correlation between pre- and post-test scores, implying steady performance patterns among participants. In conclusion, the intervention seems to be successful in greatly improving the participants' scores.

Given that the calculated value is significantly lower than 0.05, we accept our null hypothesis. The average attitude score prior to the intervention was 19.8, which rose to 22.3 following the intervention. The pre-test scores had a variance of 3.29, whereas the post-test scores had a variance of 2.23. Both groups had a total of 10 observations each.

The Pearson correlation of the pre- and post-test scores was 0.476, showing a moderate positive association. A paired t-test showed a t-statistic of -4.61 along with 9 degrees of freedom. The one-tailed P-value calculated was 0.0006, considerably lower than the significance threshold of 0.05.

The average score rose marginally from 24.64 (pre-test) to 25.29 (post-test), indicating a small enhancement.

The one-tailed p-value is 0.030, which is lower than the critical value of 0.05, and the t-value (not displayed but suggested) surpasses the critical t-value of 1.671. This indicates that the enhancement is statistically significant, implying that the intervention positively affected the participants' scores. the comprehensive evaluation still indicates that the performance after the test.

To find out association between pretest knowledge with their selected socio demographic variables.

To examine the association between pre-test knowledge on oral cancer prevention and selected socio-demographic variables, a Chi-square test of independence was performed. Knowledge levels were categorized as Very Poor, Average, and Excellent, and compared with demographic factors. The results showed that age ($\chi^2 = 4.02$, $p = 0.045$), gender ($\chi^2 = 10.0$, $p = 0.0016$), and type of diet ($\chi^2 = 8.02$, $p = 0.0046$) had statistically significant associations with knowledge levels, while parent's occupation ($\chi^2 = 0.40$, $p = 0.818$) and parental income status ($\chi^2 = 0.09$, $p = 0.957$) did not. Similarly, to explore the association between attitude toward oral cancer prevention and demographic variables, the Chi-square test indicated no significant association for gender ($\chi^2 = 3.14$, $p = 0.208$), parent's occupation ($\chi^2 = 7.68$, $p = 0.26$), and place of living ($\chi^2 = 5.71$, $p = 0.455$). However, dietary preference ($\chi^2 = 9.98$, $p = 0.007$) and parent's income status ($\chi^2 = 6.43$, $p = 0.040$) were found to have significant associations with attitude

levels. Overall, these findings highlight that age, gender, and diet influenced pre-test knowledge, while diet and income status were associated with participants' attitudes toward oral cancer prevention, whereas other variables showed no significant association. **HENCE THE HYPOTHESIS IS ACCEPTED.**

The major findings of the study :

The data represents the proportion of 60 nursing students based on several factors, including age, gender, education, parents' occupation, parents' monthly income, and so on. The largest percentage among the demographic variables is from the age group: most student nurses (60%) fall within the 18–20 age range, with 40% aged 21–25 years. All participants are under 25 years old, reflecting a youthful student demographic. Gender Distribution: The sample is primarily composed of female students (70%), while male students represent 30%. No participants classified themselves as 'other' gender. Marital Status: Every participant (100%) is single, indicating that the sample consists of unmarried people, probably in the initial phases of life or schooling. Educational Background: Every participant is pursuing a B.Sc. degree. Nursing courses. No students are part of ANM, GNM, or other nursing programs, maintaining consistency in educational background. Parental Occupation: Fifty percent (50%) of the students have parents who are employed, 25% are self-employed, and 25% are without a job. All parents are still employed, suggesting ongoing involvement in the economy. Personal Habits: All participants abstain from smoking, chewing tobacco, and using alcohol. All 60 students indicated they had no substance abuse habits, possibly indicating awareness from health education or institutional policies. Dietary Preferences: Eating habits are almost evenly split: 51.67% are non-vegetarians, while 48.33% are vegetarians. No students adhere to gluten- free or any other specific dietary plans. Parental Income: 50% of the students come from households that make under ₹20,000 per month. 20% earn between ₹20,000 and ₹40,000, whereas 26.67% belong to families with somewhat higher incomes (₹40,000–₹60,000). Merely 3.33% originate from households making over ₹60,000/month, suggesting a predominantly lower to middle-income demographic. Living Situation: Every student (100%) resides in hostels, signifying institutional housing and a shared living space. The research was fundamentally an experimental study.

CONCLUSION

Based on the study's findings, the conclusions mentioned below were reached. It also highlights the study's limitations in the context presented. There is no significant relationship between the pre-test and demographic factors like age, gender, religion, education, number of children, marital status, or prior knowledge.

LIMITATION:

- The pre-experimental design lacks a control group, which may limit the ability to attribute changes solely to the planned teaching programme.
- The study relies on self-reported data, which may be influenced by social desirability or response bias.
- The sample size may be small, affecting the statistical power and generalizability of the results.
- The short duration between pre-test and post-test may not capture long-term retention of knowledge or sustained attitude change.

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