

A Study to Assess the Effectiveness of a Structured Teaching Programme on the Level of Knowledge Regarding Primary Prevention of Oral Cancer Among Intermediate Students at Shatrughan Singh Inter College, Kalyanpur, Kanpur

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Abstract

Background: Oral cancer is a significant public health concern, yet awareness of its causes, risk factors, and preventive measures remains low among adolescents and young adults. Since intermediate students have a limited understanding of oral cancer and its impact on health, the present study aimed to assess the effectiveness of an informational pamphlet in improving knowledge regarding the primary prevention of oral cancer. **Method:** A quantitative pre-experimental research design with a one-group pre-test and post-test approach was adopted. A sample of 30 intermediate students was selected using a convenient sampling technique. Data were collected using a structured, self-designed questionnaire focusing on knowledge of oral cancer risk factors, symptoms, and prevention strategies. **Results:** The findings revealed a significant improvement in knowledge following the intervention. The mean pre-test knowledge score was 67%, which increased to 96.7% in the post-test. In the post-test, 29 (96.7%) participants demonstrated an adequate level of knowledge, while 1 (3.3%) participant showed a moderate level. The paired t-test value (-12.0042, $p < 0.05$) confirmed that the informational pamphlet was effective in enhancing awareness about the primary prevention of oral cancer. Furthermore, demographic factors such as age, gender, and monthly income were found to have a significant association with knowledge levels. **Conclusion:** The study concludes that health education through informational materials can effectively improve students' awareness of oral cancer prevention. Integrating oral health education into the school curriculum could further reduce risk factors and promote long-term healthy behaviours.

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INTRODUCTION

Oral cancer is the uncontrollable cell growth of the mouth or a buccal cavity. Oral cancer can develop in any part of the mouth, like the tongue, Tonsil, Gums, etc. It is the characteristics of difficulty or pain, swallowing or lump, or white and red patches on the inside of the mouth, ear pain, lip and mouth sores that do not heal. (1) The most common cause of oral cancer is Pan masala, Tobacco, Alcohol, and some genetic risk factors. Oral cancer is mainly found in the squamous cell. (2) Oral cancer has reached the highest rate in India. In MP (Madhya Pradesh), oral cancer reached at

highest rate because of the Tobacco and pan masala. (3) Oral cancer is most commonly found in males (75 to 80%) than in females (20 to 25%). Men are more than twice as likely as women to develop oral cancer, which mainly affects individuals over the age of 40. Most oral cancers are linked to alcohol and tobacco use, either separately or together. Additionally, many throat cancers are caused by infection with the human papillomavirus (HPV). (4) The incidence of the human papillomavirus-positive oral cancer has been rising in recent years. Tobacco, whether in cigarettes, cigars, chewing tobacco, or snuff, contains numerous harmful substances that can lead to oral cancer [1–6].

OBJECTIVES

- To evaluate the pre-test and post-test knowledge of oral cancer among intermediate students in Kanpur Nagar.
- To compare the pre-test and post-test knowledge levels of oral cancer among intermediate students in Kanpur Nagar.
- To determine the association between selected demographic factors and pre-test knowledge scores.

MATERIAL AND METHODS

Research approach: The study adopted a quantitative pre-experimental research approach to evaluate the effectiveness of the intervention on students' knowledge regarding the primary prevention of oral cancer.

Research design: The study employed a pre-experimental one-group pre-test post-test research design to evaluate the effectiveness of the intervention in improving intermediate students' knowledge about the primary prevention of oral cancer.

Research setting: The study was conducted at a selected college in Kalyanpur, Kanpur.

Population: The Study population consisted of Intermediate students at the selected college of Kalayanpur, Kanpur.

Sampling technique and sample: A total of 30 intermediate students were selected for the study.

Research tool: The tools used in the present study were divided into two sections.

Section I: The socio-demographic section included seven items designed to collect information on participants' socio-demographic characteristics.

Section II: The structured knowledge questionnaire consisted of 30 questions designed to assess the level of knowledge regarding the primary prevention of oral cancer among intermediate students. Before administering the questionnaire, all participants were provided with an information sheet explaining the purpose and expected outcomes of the study. Each participant gave their informed consent before the self-explanatory questionnaire was given out. The relevant authorities granted permission to carry out the study.

RESULTS

According to Table 1, the majority of the respondents (30 (100%)) were found to be males, whereas 0 (0%) respondents were found to be females. According to age distribution, none of the respondents (0%) were between 12–14 years old. The majority (15 respondents (50%)) were aged 15–17 years, followed by 8 respondents (26.5%) aged 18–19 years, and 7 respondents (23.3%) were in the 20–22 years age group. As per the type of family, 14 (46.7%) respondents belonged to a nuclear family, 14 (46.7%) belonged to a joint family, and 2 (6.7%) belonged to an extended family. As per religion, 13 (43.3%) were Hindus, 6 (20%) were Muslims, 7 (23%) were Sikhs, and 4 (13.3%) were Christians. As per family income, 7 (23.3%) respondents had a monthly income below Rs. 5000, the majority of

respondents (12 (40%)) had a monthly income of Rs. 5001 to 10,000, remaining 8 (26.7%) respondents had Rs. 10,000 to 20,000, and 3 (10%) had above Rs. 20,000 monthly incomes. As per residence, 16 (53.3%) resided in an urban area and 14(46.7%) resided in a rural area.

Table 1. Distribution of samples according to socio-demographic variables.

S.N.	Demographic variables	Frequency	Percentage
1	<i>Mainly found in</i>		
	Male	30	100%
	Female	0	0
2	<i>Age</i>		
	12–14 years	0	0
	15–17 years	15	50%
	18–19 years	8	26.5%
	20–22 years	7	23.3%
3	<i>Gender</i>		
	Male	30	100%
	Female	0	0
4	<i>Type of family</i>		
	Nuclear family	14	46.7%
	Joint family	14	46.7%
	Extended	2	6.7%
5	<i>Religion</i>		
	Hindu	13	43.3%
	Muslim	6	20%
	Sikh	7	23%
	Christian	4	13.3%
6	<i>Family income</i>		
	Below Rs. 5000	7	23.3%
	Rs. 5001–10,000	12	40%
	Rs. 10,000–20,000	8	26.7%
	Rs. 20,000 above	3	10%
7	<i>Residence</i>		
	Urban	16	53.3%
	Rural	14	46.7%

Table 2. Pre-test and Post-test level of knowledge among intermediate students regarding primary prevention of oral cancer.

S.N.	Level of knowledge	Score (%)	Pre-test		Post-test	
1	Inadequate knowledge	2(6.7%)	2	6.5%	00	00
2	Moderate knowledge	25(83.3%)	3	10%	1	3.3%
3	Adequate knowledge	3(10%)	25	83.3%	29	96.7%
	Total		30	100	30	100

Table 2 and Figure 1 show that among the 30 intermediate students, most, 25 (83.3%), had an adequate knowledge level, 3 (10%) had a moderate knowledge level, and 2 (6.5%) had an inadequate

knowledge level in the pre-test regarding the primary prevention of oral cancer. While in post-test, 29 (96%) had an adequate knowledge level about oral cancer, 1 (3.3%) had a moderate knowledge level, and no one had an inadequate knowledge level regarding primary prevention of oral cancer. From the above findings, it can be inferred that most participants had inadequate or moderate knowledge levels in the pre-test, while the majority demonstrated an adequate knowledge level in the post-test regarding the primary prevention of oral cancer.

Table 3 shows that among intermediate students, the mean pre-test score was 1.9667 with a standard deviation of 0.41484, while the mean post-test score was 2.9667 with a standard deviation of 0.18257. The mean difference was 4.30. The obtained 't' value, 12.0042, was statistically significant at the $p < 0.05$ level. Hence, H_1 , H_2 were accepted. The major finding of the study showed a significant association between post-test knowledge levels and selected demographic variables, including age, gender, type of family, family income, religion, residence, and source of information. The alternative hypothesis (H_2) was confirmed to be supported when the computed chi-square value was greater than the critical table value [7].

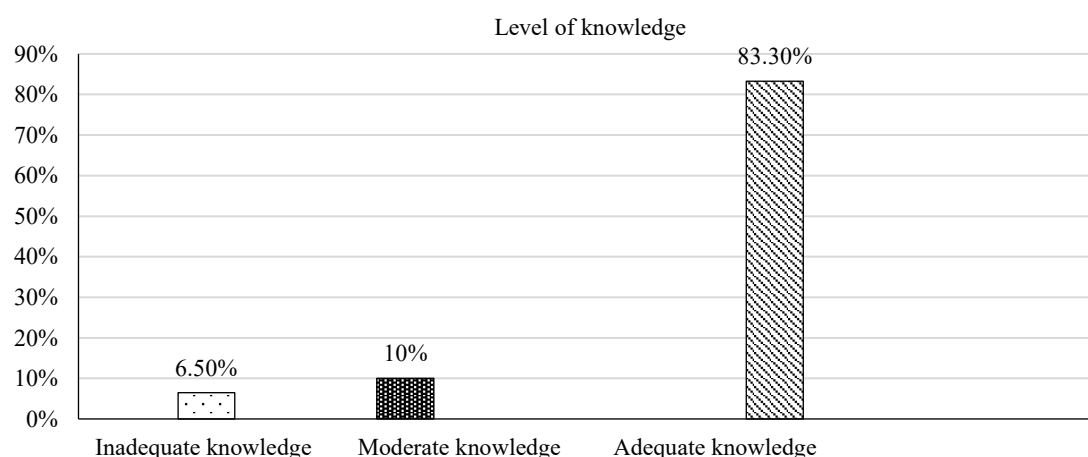


Figure 1. Percentage distribution of pre-test and post-test level of knowledge among primary prevention of oral cancer.

Table 3. Comparison of pre-test and post-test level of knowledge among intermediate students regarding primary prevention of oral cancer.

S.N.	Level of knowledge	Mean	Standard deviation	Mean difference	't' Value
1	Pre-test	1.9667	41384	4.30	-12.0042
2	Post-test	2.9667	18257		

DISCUSSION

The study's objective was to assess how well an organized educational program could increase intermediate students' understanding of oral cancer.

Respondent characteristics: The first objective focused on assessing the knowledge of students regarding oral cancer in relation to selected demographic variables [8]. The major findings of this questionnaire study were that the majority (2 (6.7%)) of the intermediate students had adequate knowledge regarding oral cancer, 25 (83.3%) of them had moderate assessment knowledge regarding oral cancer, and 3 (10%) of them had inadequate knowledge regarding oral cancer in the pre-test. The above finding summarizes that the majority of the samples have inadequate knowledge. Hence, H_1 was accepted. Assessing intermediate students' understanding of oral cancer in relation to specific demographic characteristics was the second goal. In the case of post-test level, after the effectiveness of the structured teaching programme, levels of knowledge are significantly increased. The obtained "t"

value (-12.0042) was significant at the 0.05 level with a degree of freedom of 4.30, indicating a significant difference between the pre-test and post-test knowledge scores among intermediate students regarding oral cancer. Therefore, hypotheses H1 and H2 were accepted. Additionally, a significant association was found between post-test knowledge levels and selected demographic variables, including age, gender, type of family, family income, religion, residence, and source of information. The acceptance of hypothesis H2 was further confirmed by the computed chi-square value exceeding the critical table value [9, 10].

CONCLUSION

The study findings provide clear statistical evidence that the structured teaching program on oral cancer has a significant positive effect on the knowledge and practices of intermediate students.

Limitations of the Study

The study was conducted on a single group of 30 students from Shatrughan Singh Inter College, Kalyanpur, Kanpur; therefore, the generalizability of the findings is limited to this specific population. Additionally, the study did not include a control group, which affects internal validity, as the investigator had no control over events that may have occurred between the pre-test and post-test.

Conflict of Interest

Not available.

Financial Support

Not available.

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