

# A Study to Evaluate the Effectiveness of Planned Teaching Programme on Knowledge regarding Risk Factors and Prevention of Oral Cancer among Adults in Selected Rural Areas of Bagalkot District

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**Abstract:** ***Background:** In today's generation oral cancer is a universal and non-communicable disease that affects people irrespective of race, gender, socio economics status or culture There are wide variations in the distribution of oral cancer throughout the world. Oral cancer is the second most common killer disease in the cancer group. It is a major disease with high incidence and mortality rate and increasingly recognized to be a global problem, not limited to the industrialized nations.<sup>1</sup>**Aims:**To assess the effectiveness of Planned Teaching Programme on knowledge regarding risk factors and preventive measures of oral cancer among adults. **Materials and Methods:** Pre experimental research design with one group pre-test and post-test without control group design was used with 60 subjects through purposive sampling technique. The data was collected by Structured knowledge Questionnaire, analyzed using descriptive and inferential statistics in terms of mean, frequency distribution, paired 't' test and chi-square test. **Results:** The results revealed that the mean % of knowledge scores of the adults in the pre-test was 39.06 % and with mean and SD 12.50 ± 4.57, whereas mean % in post-test was 63.84% with mean and SD 20.43± 3.78. The paired 't' test showed the significant difference in the knowledge of adults regarding risk factors and prevention of oral cancer among adults after the administration of PTP. Findings revealed that in the pre-test knowledge scores the majority (56.7%) of respondents had poor knowledge, 40 percent of them had average knowledge and 3.3 percent of them had good knowledge. Whereas in post-test majority (63.3%) percent of the respondents had average knowledge and 36.7% had good knowledge. **Conclusion:** A significant difference was found between the pre-test and post-test knowledge scores of the adults. The study proved that PTP was effective in improving the knowledge of adults regarding risk factors and prevention of oral cancer.*

**Keywords:** Assess, Effectiveness, planned teaching program, oral cancer.

## 1. Introduction

Cancer is a universal and non-communicable disease that affects people irrespective of race, gender, socio economics status or culture. It can occur at any site or tissue of the body and involves any type of cells. There are wide variations in the distribution of cancer throughout the world. Cancer is the second most common killer disease in the world. It is a major disease with high incidence and mortality rate and increasingly recognized to be a global problem, not limited to the industrialized nations<sup>1</sup>.

Oral health is essential to general health and quality of life. It is a state of being free from mouth and facial pain, oral and throat cancer, oral infection, and sores, periodontal (gum) disease, tooth decay, tooth loss, other diseases and disorders that limit individual's capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing<sup>2</sup>.

Oral cancer is one of the lethal diseases persisting in India and most of the time occurs due to improper life style and adverse habits. Oral cancer accounts for approximately 2, 00,000 deaths annually worldwide and around 46,000 1 deaths occurring in India<sup>3</sup>.

The most common site for oral cancer in the older age group was the buccal mucosa (37%), followed by tongue (21%) and gingiva (20%).It is among the most common cancers seen in both Indian men and women as can be gauged from the records of the National cancer registry program<sup>4</sup>.

Chewing betel, pan and Areca is known to be a strong risk factor for developing oral cancer even in the absence of tobacco. It increases the rate of oral cancer 2.1 times, through a variety of genetic and related effects through local irritation of the mucous membrane cells, particularly from the areca nut and slaked lime. In India where such practices are common, oral cancer represents up to 40% of all cancers, compared to just 4% in the UK.<sup>5</sup>

## 2. Objectives of the study

- 1) To assess the knowledge regarding risk factors and preventive measures of oral cancer before and after planned teaching programme among adults.
- 2) To assess the effectiveness of Planned Teaching Programme on knowledge regarding risk factors and preventive measures of oral cancer among adults.
- 3) To determine the association between pretest knowledge regarding risk factors and preventive measures of oral cancer among adults with their selected socio – demographic variables.

## 3. Materials and Methods

In the present study an evaluative approach using pre-test (O<sub>1</sub>) and post-test (O<sub>2</sub>) without a control group was adopted to accomplish the objectives. The research design selected for this study was pre-experimental, i.e., one group pre-test, post-test design. Purposive sampling technique was used to collect the data from the participants. A total of 60 subjects were selected by using this method. Data was collected by self-structured knowledge questionnaire which was validated by experts for assessing the knowledge of adults regarding the risk factors and prevention of oral cancer. The structured questionnaire comprised of two parts. **Part-I:** Consists of items seeking information regarding socio-demographic characteristics of adults such as age, religion. Education qualification, marital status, occupation, family income, habit of chewing, duration of eating tobacco and habit of smoking and source of information. **Part-II:** Consists of 32 items pertaining to knowledge regarding risk factors and prevention of oral cancer.

## 4. Results

**Table 6.1:** Frequency and percentage distribution of socio-demographic characteristics of sample, N=60

Variables	Frequency	Percentage (%)
<b>Age</b>		
18-22 years	32	53.3
23-27 years	28	46.7
<b>Sex</b>		
Male	60	100
Female	00	00
<b>Religion</b>		
Hindu	42	70.0
Muslim	16	26.7
Christian	2	3.3
<b>Education status</b>		
Illiterate/Non formal education	8	13.3
Primary education	14	23.3
High School	21	35.0
PUC	12	20.0
Degree	4	6.7
Post-graduation and above	1	1.7
<b>Marital status</b>		
Married	18	30.0
Unmarried	41	68.3
<b>Occupation</b>		
Agriculture	27	45.0
Business/Self Employed	6	10.0
Govt Employee	4	6.7
Pvt Employee	11	18.3

Coolie	12	20.0
<b>Income</b>		
Below 5000	13	21.7
5001-10000	32	53.3
10001 - 15000	11	18.3
Above 15000	4	6.7
<b>Habit of Chewing tobacco</b>		
Yes	60	100.0
No	00	00
<b>Types of chewing</b>		
Gutka	24	40.0
Mava	12	20.0
Tobacco	18	30.0
Others	6	10.0
<b>Duration of eating tobacco.</b>		
Less 1 yr.	12	20.0
1-5 yrs.	32	53.3
5-10 yrs.	16	26.7
<b>Habit of smoking</b>		
Yes	36	60.0
No	24	40.0
<b>Source of information</b>		
T.V	12	20.0
News Paper	18	30.0
Friends	30	50.0

**Table 6.2:** Level of knowledge of risk factors and prevention of oral cancer among adults, N=60

Level of knowledge	Range of scores	Number of respondents	Percentage (%)
Poor	0-10	34	56.7
Average	11-20	24	40.0
Good	21-32	2	3.3
Total		60	100.0

Assessment of the level of knowledge of the adults reveals that majority (56.7%) of the adults had a poor knowledge, 40.0% of them had average knowledge and there were 3.3% of adults who had a good knowledge regarding risk factors and preventive measures for oral cancer.

**Table 6.4:** Comparison of level of knowledge of adults in pre-test and post-test, N=60

Level of knowledge	Pre – Test		Post-Test	
	No.of respondents	Percentage	No.of respondents	Percentage
Poor	34	56.7	00	00
Average	24	40.0	38	63.3
Good	2	3.3	22	36.7
Total	60	100.0	60	100.0

In the pre-test knowledge scores the majority (56.7%) of respondents had poor knowledge, 40 percent of them had average knowledge and 3.3 percent of them had good knowledge. Whereas in post-test majority (63.3%) percent of the respondents had average knowledge and 36.7% had good knowledge.

**Table 6.7:** Association between the pre-test knowledge scores of adults on risk factors and prevention of oral cancer among adults and selected socio-demographic variables, N=60

S. No	Socio-demographic variables	Chi-square value/ Fisher's exact test value
1	Age	2.529
2	Religion	1.019
3	Education qualification	11.132
4	Marital status	3.076
5	Occupation	3.747
6	Family Income	2.313
7	Habit of Chewing ?	<b>11.879*</b>
8	Duration of eating tobacco	<b>19.812*</b>
9	Habit of smoking	<b>6.038*</b>
10	Source of information	1.053

\* P <0.05 [Significant]

Findings reveal that there is significant association between pre-test knowledge scores of the adults and socio demographic variables such as Habit of Chewing, Duration of eating tobacco and Habit of smoking and there is no significant association between Age, Religion. Education qualification, Marital status, Occupation, Family Income and Source of information. Thus, H<sub>2</sub> stated is accepted for Habit of Chewing, Duration of eating tobacco and Habit of smoking and H<sub>2</sub> is Rejected for Age, Religion. Education qualification, Marital status, Occupation, Family Income and Source of information.

## 5. Discussion

### Part I: Description of the socio-demographic characteristics of sample.

Findings revealed that majority ((53.3%) of respondents belongs to age group of 18-22 years and 46.7% of respondents belongs to age group of 23-27 years respectively. In relation to gender of the participants 100% of the respondents are male and distribution of adults according to their religion showed that most of the adults were Hindu (70%), (26.7%) of them were Muslim and. (3.3%) were Christian.

A similar cross-sectional study was conducted by Suginraj to assess the awareness of oral cancer among security guards working in AIIMS, Rishikesh. A structured questionnaire consisting of 27 questions based on sociodemographic profile. In this study, out of 186 study subjects, 84% were males and 16% were females. 38% of the subjects were unaware and 62% were aware of oral cancer. This study shows that the study subjects are aware of oral cancer as a type of cancer but not aware about the risk factors or causative factors of oral cancer.<sup>6</sup>

### Part -II: Comparison of level of knowledge of adults in pre-test and post-test.

Findings of the present study showed that in the pre-test knowledge scores the majority (56.7%) of respondents had poor knowledge, 40 percent of them had average knowledge and 3.3 percent of them had good knowledge. Whereas in post-test majority (63.3%) percent of the respondents had average knowledge and 36.7% had good knowledge.

A similar study was conducted by AmuhV. and OOkojie to assess the knowledge and attitude of oral cancer among the graduating students of the University of Benin. The research tool was a pre-tested self-administered questionnaire. The questionnaire elicited information on demographic characteristics, knowledge of risks factors for oral cancer, knowledge of signs and symptoms of oral cancer and practices with regards to performing oral cancer examination in patients. About one-fourth (23.0%) of the respondents had good knowledge and 76.2% had average knowledge about the risk factors of oral cancers. 85% of the students replied that tobacco, alcohol, radiation, and betel nut chewing were risk factors for oral cancers.<sup>7</sup>

### Part-3: Effectiveness of PTP on risk factors and prevention of oral cancer.

Analysis of the knowledge scores in the pre-test and post-test revealed that the mean percentage in the pre-test was 39.06% and with mean and SD 12.50 ± 4.57, whereas mean percentage in post-test was 63.84% with mean and SD 20.43±3.78. This showed the high effectiveness of PTP.

An evaluative study was conducted by Bhagya, Sheela s, Shanmuga and Raju to assess effectiveness of structured teaching programme on knowledge regarding preventive measures of oral cancer among late adolescents in selected junior college, Karimnagar, Telangana, with pre-experimental one group pre-test and post-test design approach. Non probability simple random sampling technique is used to select 30 samples of adults and data collection was done. Data analysed by using descriptive and inferential statistics. The results showed that the mean post-test knowledge score (17.43%) is higher than the mean pre-test knowledge score (9.6%). The comparison of pre and post-test knowledge score showed that there was a significant gain in knowledge score of late adolescents after structured teaching programme. The study concluded that structured teaching programme is highly effective in improving knowledge of late adolescents regarding preventive measures of oral cancer.<sup>8</sup>

### Part- 4: Testing of Hypothesis

#### Significance of difference between pre-test and post-test knowledge scores of adults

Paired 't' test was used to find out the significance of difference between pre-test and post-test knowledge scores of adults on risk factors and prevention of oral cancer. (Table- 6.6 Findings reveal that the difference between mean pre-test (12.50 ± 4.57) and post-test (20.43±3.78) knowledge scores of adults found to be statistically significant at 0.05 level of significance [t= 33.567, p<0.05]. It indicated that PTP was highly effective in improving the knowledge of adults on risk factors and prevention of oral cancer.

A study was conducted by Irani S. to assess the knowledge of primary school teachers in Dharwad, India, regarding the prevention of oral cancer and gum disease in this cross-sectional study a self-administered questionnaire was used for data collection. A total of 184 school teachers were selected for the study. A response rate of 96.7% (n = 178) was obtained. Results of the study showed that, 36.5% respondents (n = 65) had poor knowledge, while 27.5% had

good knowledge regarding the prevention of oral cancer and gum disease. School teachers with postgraduate qualification were better informed with regard to the prevention of oral diseases as compared to those with only a bachelor degree. Factors such as education, sex, and type of institutional funding (public/private) were significantly correlated with the level of knowledge ( $R^2=0.1128$ ;  $P<0.05$ ). The study concluded that School teachers need to be motivated to improve their awareness and knowledge about the prevention of oral cancer and gum diseases, particularly the younger teachers and those with only bachelor degrees. Establishment of school-based oral-health promotion programs in India is urgently required.<sup>9</sup>

#### Part IV: Association between Pre-test knowledge scores of adults and selected socio-demographic variables.

Findings reveal that there is significant association between pre-test knowledge scores of the adults and socio-demographic variables such as Habit of Chewing, Duration of eating tobacco and Habit of smoking and there is no significant association between Age, Religion. Education qualification, Marital status, Occupation, Family Income and Source of information. Thus,  $H_2$  stated is accepted for Habit of Chewing, Duration of eating tobacco and Habit of smoking and  $H_2$  is Rejected for Age, Religion. Education qualification, Marital status, Occupation, Family Income and Source of information.

A similar study was conducted by **Badariyathul Sabira** to assess the effectiveness of structured teaching programme on knowledge regarding oral cancer among adolescent boys in selected schools at Kollam. The objectives of the study were to a) to assess the knowledge regarding oral cancer among adolescent boys in selected schools at Kollam. B) to assess the effectiveness of structured teaching programme on knowledge regarding oral cancer among adolescent boys in selected schools at Kollam. C) to find out association between the pretest knowledge regarding oral cancer among adolescent boys and selected demographic variables. A quantitative research approach was used with pre-experimental one group pretest posttest only control group design. Purposive sampling was used. Sample size was 60. The investigator assessed the adolescent boy's knowledge using structured questionnaire regarding oral cancer. After conducting the pretest structured teaching programme was introduced to the adolescent boys. Post test was conducted on the fifth day using the same research tool. It is founded that the calculated t value is greater than the table value. There is a significant difference between pretest and post test scores of knowledges among adolescent boys. There is association between pretest knowledge among adolescent boys with selected demographic variable (area of residence). The findings of the study suggest that structured teaching programme is effective in increasing the knowledge regarding oral cancer among adolescent boys.<sup>10</sup>

## 6. Conclusion

A significant difference was found between the pre-test and post-test knowledge scores of the adults. The study proved that PTP is effective in improving the knowledge of adults on risk factors and prevention of oral cancer.

## 7. Recommendations or Future Scope

Based on the findings, the following recommendations are proposed for future research.

- A similar study can be undertaken with a large sample including adults from different villages to generalize the findings.
- A similar study can be undertaken with a control group design.
- A study can be conducted to find out the prevalence of risk factors and prevention of oral cancer.
- Manuals, information booklets and self-instruction module may be developed on risk factors and prevention of oral cancer
- A study can be carried out to evaluate the efficiency of various teaching strategies like SIM, pamphlets, leaflets and computer-assisted instruction on risk factors and prevention of oral cancer

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