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A study to evaluate the effectiveness of planned teaching program on knowledge regarding oral cancer among the adolescents in selected PU Colleges of Bengaluru city

Cheryl Lobo[1] and Dr. Amita Paul[2]

[1] Research Scholar, Mansarovar Global University Sehore, Madhya Pradesh, India
[2] Guide, Mansarovar Global University Sehore, Madhya Pradesh, India

Abstract

Background: Carcinoma, also referred as cancer, cancer is abnormal growth of cells. It is most dangerous and it's also called as silent killer disease. Many people have misconception that, cancer is not curable. It is deadly now days but there are so many good treatment modalities been introduced in the hospital like chemotherapy and radiation therapy, Combination therapy & surgical intervention. Men to women ratio men are more affected. The reason s in men to get affected more is because of using of tobacco and its products .By chewing tobacco it affects oral cavity. All over the world around 14,10,0000 new cancer cases and 8.200000 deaths occurred in 2012. About 30% cancer cases are caused due to use of tobacco and its products and remaining 70% are because of environmental factors, hereditary. Chewing tobacco affects whole oral cavity including throat and lymph nodes, pharynx, voice box. But among all' oral cancer is most common and many people are very familiar with it. Even though it is life threatening condition people still prefers to use the products. cancer has its treatment like radiation & chemo therapies they are expensive and has their own side effects like oral mucositis burning sensation loosening of teeth's and etc.

To protect the young generation from this disease, the government of India have made many attempt to resolve this big burden from the country, Like tobacco and products are banned and smoking in public places are against the low and govt also punished people for breaking the rules of the government but still over peoples are not worried about the effects of tobacco on their own health as well as public health.

Objectives: To assess the knowledge regarding oral cancer among the adolescents in selected PU colleges. To evaluate the effectiveness of PTP on knowledge regarding oral cancer among the adolescents in selected PU colleges and to find out the association between posttest knowledge scores with selected socio demographic variables.

Methodology: An evaluative approach with pre-experimental one group pretest posttest design was adopted for the study. The 50 samples from the selected from selected PU colleges of Bengaluru district were selected using convenient sampling technique. Data was collected by structured knowledge questionnaire.

Results: The results of the study revealed that, in pretest shows that 9(18%) had low level knowledge, 31(62%) had medium level knowledge, and 10(20%) had high level knowledge compared with post est. knowledge scores i.e. no adolescents had low level knowledge, no adolescents had medium level knowledge 50(100%) had high level knowledge scores. The statistical paired 't' implies that the difference in the pretest and post-test value was found statistically significant at 5% level ($p < 0.05$) with a paired 't' value of 21.02. There was not statistically significant association found between post-test knowledge score with sociodemographic variables.

Conclusion: There is a need for the effective educational programs for the adolescents for prevention of oral cancer.

Keywords: Knowledge, oral cancer, adolescents

Introduction

Oral cancer is a malignant neoplasia which arises on the lip or oral cavity. Is traditionally defined as a squamous cell carcinoma (OSCC), because in the dental area, 90% of cancers are histologically originated in the squamous cells [1].

Carcinoma, also referred as cancer, cancer is abnormal growth of cells. It is most dangerous and it's also called as silent killer disease. Many people have misconception that, cancer is not curable. It is deadly now days but there are so many good treatment modalities been introduced in the hospital like chemotherapy and radiation therapy, Combination therapy & surgical intervention. Men to women ratio men are more affected. The reason s in men to get affected more is because of using of tobacco and its products. By chewing tobacco it affects oral cavity. All over the world around 14,10,0000 new cancer cases and 8.200000 deaths occurred in 2012. Oral cancer is a highly relevant problem of global public health, especially for dental surgeons [2].

In a present day every school going child also uses some tobacco products so the cancer have become very wide spread disease as compared to other disorders like coronary heart disease and DM, HTN and so on. Chewing tobacco affects whole oral cavity including throat and lymph nodes, pharynx, voice box. But among all' oral cancer is most common and many people are very familiar with it. Even though it is life threatening condition people still prefers to use the products. cancer has its treatment like radiation & chemo therapies they are expensive and has their own side

effects like oral mucositis burning sensation loosening of teeth's and etc. [3].

About 20% of deaths due to oral cancer in developed countries and 10% in still developing countries. It is assumed that by 2020, around 15. Million new cancer cases and 10million deaths yearly. In India (2010-2020) the total number of cancer cases are from. 979,786 in 2010 and 1,148,757. Cases in the year 2020. Among these cases 190,244 are results due to chewing of tobacco. The total 2,53, 223oral cancer patients found in the Karnataka according to 2020 census. In India total 135 929 (10.3%) oral cancer cases found [4].

The impediment to early diagnosis of oral or pharyngeal cancers, despite increased assiduousness on the part of dentists and oral physicians in their examination of patients at risk, stems from the persistence of archaic paradigms, and the lack of an easily available diagnostic adjunct. In order to increase the early detection of oral cancers, and by so doing increase the survival rates of oral cancer patients, there is therefore the need to identify diagnostic screening modalities that identify early oral malignant lesions with precision. About 95% of oral cancers are classified histologically as oral squamous cell carcinoma (Mashberg, 2000 [8]; Johnson, 2001 [9], Sargeran *et al.*, 2008) [10]. The remaining 5% include such histologic variants as oral verrucous carcinoma, adeno squamous carcinoma, adenoid squamous cell carcinoma, mucoepidermoid carcinoma, and basaloid squamous cell carcinoma. Mucoepidermoid carcinomas are malignancies of salivary gland origin and, within the oral cavity, arise from minor salivary glands, while adeno squamous carcinomas are currently believed to arise from the oral mucosa with subsequent glandular changes among the tumor cells. Often included in the remainders are metastatic carcinomas from regional sites distant to the oral cavity [5].

The survival for mouth and oropharyngeal cancer depends on where the cancer is. These statistics are for people diagnosed in England between 2009 and 2013. almost 80 out of 100 people (almost 80%) survive their cancer for 1 year or more after they are diagnosed. around 55 out of 100 people (around 55%) survive their cancer for 5 years or more after diagnosis.45 out of 100 people (45%) survive their cancer for 10 years or more after diagnosis, Factors affects survival includes your outcome depends on the stage of the cancer when it was diagnosed. This means how big it is and whether it has spread. The outlook for mouth cancers also depends on which part of the mouth or oropharynx is involved. Some oropharyngeal cancers are caused by the human papilloma virus (HPV). Oropharyngeal cancers that contain HPV tend to do better than oropharyngeal cancers that don't contain HPV [6].

Considering the above facts, the researcher felt the emphasis to assess the knowledge of adolescents regarding oral cancer so that it would help to bring awareness among the students of PU colleges regarding oral cancer and its prevention.

Objectives

1. To assess the knowledge regarding oral cancer among the adolescents in selected PU colleges.
2. To evaluate the effectiveness of PTP on knowledge regarding oral cancer among the adolescents in selected PU colleges.
3. To find the association between posttest knowledge scores with selected socio demographic variables.

Hypotheses

H_1: There will be significant difference between pretest and posttest knowledge scores regarding oral cancer.

H_2: There will be significant association between post-test knowledge scores regarding oral cancer with socio demographic variables.

Methodology

Research Approach: Evaluative Research Approach.

Research Design: Pre experimental one group Pretest-post-test design.

Sampling technique: Non-Probability; Convenient Sampling Technique.

Sample size: 50.

Setting of study: Selected PU colleges of Bengaluru district

Method of data collection: Structured knowledge questionnaire.

Tools Used

Section I: Socio-demographic variables of Participants

Section II: Structured Knowledge questionnaire

This section consists of 30 structured multiple choice items with the four options for each item to assess the knowledge of adolescents regarding oral cancer. The participant has to choose one right answer from given options. The right answer will be scored as 'one' mark and the wrong answer will be scored as 'zero' comprising the maximum score of 25. The total score is arbitrarily divided as -

- Low level Knowledge: 0-10
- Medium level Knowledge: 11-20
- High level Knowledge: 21-30

Procedure of data collection

Data was collected after obtaining administrative permission from selected PU colleges of Bengaluru district. The investigator personally explained the participants the need and assured them of the confidentiality of their responses. On day 1, pre-test was conducted by using structured knowledge questionnaire; on the same day planned teaching program was administered to them. On 8th day, the post-test was conducted by using same tools to evaluate the effectiveness of PTP.

Results

A. The findings related to socio-demographic variables of participants

Study comprised of 50 participants. The socio demographic variables are presented in following table.

Table 1: Frequency & Percentage Distribution of participants according to socio demographic variables

N=50

SL. No.	Socio- Demographic variables	Frequency (F)	Percentage (%)
1	**Age in years**		
	a) 15-18 Years	11	22
	b) 18 -20 Years	28	56
	c) 20 Years and Above	11	22
2	**Gender**		
	a) Male	28	56
	b) Female	22	44
3	**Religion**		
	a) Hindu	34	68
	b) Muslim	13	26
	c) Christian	03	6
4	**Family Type**		
	a) Joint family	09	18
	b) Nuclear family	41	82
5	**Family Income / Month**		
	a) Below 20,000/-	15	30
	b) 20,001- 30,000/-	09	18
	c) 30,001 & Above	26	52
6	**Sources of information**		
	a) Friends	09	18
	b) Health personal	10	20
	c) Mass media	31	62

B: Findings related to knowledge scores in pretest and post test

I. Distribution of pre-test and post-test knowledge scores of participants.

Table 2: Mean, Mean DIF, standard deviation and range of pre-test and post-test knowledge scores of participants

N = 50

Area of Knowledge	Number of Items	Mean	MD	Standard deviation	Range
Pre test	30	9.54	16.4	2.12	5-14
Post test	30	25.94		1.87	20-29

Table 2 reveals pre-test knowledge score of participants regarding oral cancer it shows that;

The pretest knowledge scores participants mean was 9.54, standard deviation 2.12 and score range was 5-14.

The post-test knowledge scores participants mean was 25.94, standard deviation 1.87 and score range was 20-29.

II: Distribution of Level of Knowledge of participants:

Table 3: Frequency and Percentage distribution of respondents according to level of Knowledge regarding oral cancer

N=50

Level of Knowledge					
Pre test			Post test		
Low Level (%)	Medium Level (%)	High Level (%)	Low Level (%)	Medium Level (%)	High Level (%)
09(18%)	31 (62%)	10(20%)	NIL	NIL	50 (100%)

The data presented in the Table 3 depicts the participants' level of knowledge during pretest and post-test regarding oral cancer;

With regard to pre-test level of knowledge it shows that, maximum 31(62%) participants were had medium level knowledge, 09(18%) respondents had low level knowledge and remaining 10(20%) of respondents were had high level knowledge.

During post-test maximum 50(100%) of respondents were had high level of knowledge.

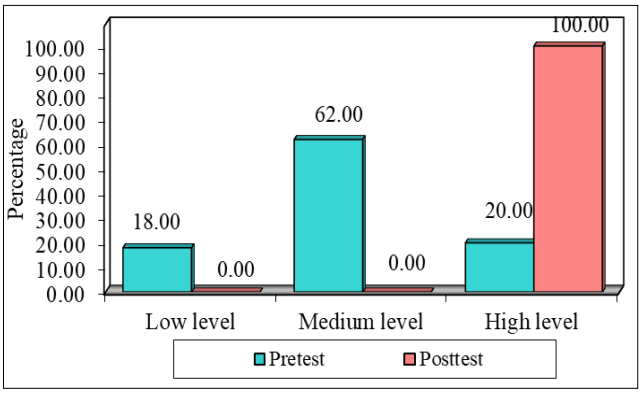

Fig 1: Levels of knowledge among participants during pretest and post test

III: Effectiveness of Planned Teaching Programme

Paired 't' value was computed to find out the significance of difference between means of pre-test and post-test knowledge scores of respondents. The data is presented in Table 4. To test statistical significance following research hypothesis were stated.

H_1: There will be significant difference between pretest and posttest knowledge scores regarding oral cancer.

Table 4: Mean, standard deviation and 't' value of pre-test and post-test knowledge scores

N: 50

Area	Aspects	Mean	Sd	% of effect	Paired t Test
Knowledge	Pre-test	9.54	2.12	171.91	21.02
	Post-test	25,94	1.87		

* Significant at 0.5% level

Table 4 indicates the overall mean knowledge scores of pre-test and post-test scores.

With respect to knowledge scores of participants, the findings reveal that the post-test mean knowledge scores was found higher [mean=25.94, SD of 1.87] when compared with pre-test mean knowledge score value which was 9.54 with SD of 2.12.

The statistical paired 't' implies that the difference in the pretest and post-test value was found statistically significant at 0.5% level ($p < 0.05$) with a paired 't' value of 21.02 There exists a statistical significance in the difference of knowledge score indicating the positive impact of planned teaching programme.

Hence, the research hypothesis H_1 is supported. This indicates that the enhancement in knowledge is not by chance and the adolescents who exposed to PTP on oral cancer, significantly improved in their knowledge.

IV: Association between level of knowledge and selected socio demographic variables

To find out the association between the levels of knowledge and selected personal variables, Chi square was computed and the following hypothesis are stated-

H_2: There will be significant association between post-test knowledge scores regarding oral cancer with socio demographic variables.

Table 5: Chi-square values between levels of knowledge of respondents and their selected demographic variables

N = 50

SL. No.	Demographic variables	DF	Table Value	Chi square value	Level of significance
1.	**Age in years**				
	a) 15 – 18 Years	2	5.99	3.56	NS
	b) 18 -20 Years				
	c) 20 Years and Above				
2	**Gender**				
	a) Male	1	3.84	1.88	NS
	b) Female				
3	**Religion**				
	a) Hindu	2	5.99	4.51	NS
	b) Muslim				
	c) Christian				
4	**Family Type**				
	a) Joint family	1	3.84	1.95	NS
	b) Nuclear family				
5	**Family Income / Month**				
	a) Below 20,000/-	2	5.99	3.77	NS
	b) 20,001- 30,000/-				
	c) 30,001 & Above				
6	**Sources of information**				
	a) Friends	2	5.99	5.04	NS
	b) Health personal				
	c) Mass media				

The data presented in the Table 5 shows that the computed Chi-square value for association between level of knowledge of adolescents regarding oral cancer and their selected demographic variables not found to be statistically significant at 0.05. Therefore, the findings reject the hypothesis.

H_2: There will be significant association between post-test knowledge scores regarding oral cancer with socio demographic variables.

Conclusion

The focus of the study was to evaluate the effectiveness of PTP on knowledge regarding oral cancer among adolescents in selected PU colleges of Bengaluru district. A pre-experimental pre-test and post-test design and evaluative approach were used. The overall pretest knowledge of adolescents regarding oral cancer was low and medium level during pretest and it was changed as high level during post-test. Thus, it can be concluded that educational intervention i.e. PTP was effective to increase and update their on knowledge regarding oral cancer.

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