A STUDY TO ASSESS THE EFFECTIVENESS OF AUDIO VISUAL TEACHING PROGRAMME ON PREVENTION OF ORAL CANCER IN TERMS OF KNOWLEDGE AND ATTITUDE AMONG STUDENTS OF SELECTED GOVERNMENT HIGHER SECONDARY SCHOOLS OF GUJARAT STATE

Mrs. Siddhi D. Parmar

Assistant Professor, L.N Nursing College, Bhopal, Madhya Pradesh, India.

ABSTRACT

"By any reasonable code, freedom from the pain should be a basic human right limited only by our knowledge to achieve it"

- Liebeskind & Melzack (Pain - 1987)

Background of the study:

Oral cancer is the tenth most common type of cancer contributing to death worldwide (Cheng & Blumenthal, 2008; Jemal et al., 2011). Oral Squamous Cell Carcinoma (OSCC) is a type of oral cancer and subgroup of head and neck squamous cell carcinoma (HNSCC). OSCC is the sixth most common malignancy with an incidence of more than 300,000 cases yearly, of which 62% are from developing countries (Kumar et al., 2013; Parkin et al., 2005). Smoking tobacco and drinking alcohol are regarded as major risk factors for oral cancer (Petersen, 2003). Despite significant efforts committed by oral cancer researchers and advanced treatments in surgery, radiotherapy, and chemotherapy, the overall 5-year survival rate has remained less than 50% for the last decades. There is also a rising incidence of oral cancer in developed countries and among the younger population (Scully & Bagan, 2007; Warnakulasuriya, 2009). Therefore early diagnosis and treatment remain the main keys in improving the overall survival rates of patients diagnosed with this disease.

Key Words: *Higher secondary school students, Knowledge, Attitude, Audio visual teaching programme*

ABOUT AUTHOR:

Author Mrs. Siddhi D. Parmar is working as Assistant Professor in L.N Nursing College, Bhopal, Madhya Pradesh, India. She has attended various National and International conferences.

INTRODUCTION

Nightingale Nursing Times (2007): According to Global Cancer Facts and Figures, the world at present is heading towards various types of non-communicable diseases which are also known as modern epidemics. Among the modern epidemics cancer is second largest non-communicable disease and it has a sizable contribution in the total number of deaths. There were more than 12 million new cancer cases and 7.9 million cancer deaths world-wide in 2007, the majority in developing countries. This amounts to 20,000 cancer deaths a day this year.

WHO (2011): The majority of these cases and deaths will occur in developing countries, with 6.7 million cases and 4.7 million deaths versus 5.4 million cases and 2.9 million deaths in developed countries, according to the report. The World Health Organization documents that cancer rates are set to increase at an alarming rate globally and it is projected by the WHO that cancer burden would increase to 20 million by2020 with 70% in the developing world. The burden of cancer is increasing in developing countries as deaths from infectious diseases and childhood mortality are declining and more people live to older ages when cancer most frequently occurs.

Al – Ansari J Honkala E, Honkala S et al (2003) reported that several factors may affect oral health behaviour of an individual, among which are, acquisition of Western education, values and cultures. Oral diseases are related to behaviour, and that the prevalence of dental caries and periodontal disease decrease with improvements in oral hygiene and a decrease in the consumption of sugar.

Gupta PC, Ray CS (2003): In some parts of India, such as the states of Bihar and Maharashtra, smokeless tobacco use is more common than smoking. Apart from regional preferences due to differing socio-cultural norms, the preference for smokeless tobacco is inversely related to education and income.

OBJECTIVES OF THE STUDY

1. To assess the Knowledge of the students on prevention of Oral Cancer before and after administration of Audio Visual Teaching Programme in selected Government Higher Secondary schools of Gujarat State.
2. To assess the Attitude of the students on prevention of Oral Cancer before and after administration of Audio Visual Teaching Programme in selected Government Higher Secondary schools of Gujarat State.
3. To find out correlation between pre-test Knowledge and pre-test Attitude of students on prevention of Oral Cancer in Selected Government Higher Secondary Schools of Gujarat State.
4. To find out the association of pre-test Knowledge and pre-test Attitude of students on prevention of Oral Cancer with the Demographic Variables in selected Government Higher Secondary schools of Gujarat State.

HYPOTHESIS

The following hypotheses were tested at 0.05 level of significance —

H1: There will be significant increase in mean post-test Knowledge Score of the students after administration of Audio Visual Teaching Programme on prevention of Oral Cancer as evident from the Structured Knowledge Questionnaire, at 0.05 level of significance.

H2: There will be significant increase in mean post-test Attitude score of the students after administration of Audio Visual Teaching Programme on prevention of Oral Cancer as evident from the Summated Attitude Rating Scale at 0.05 level of significance.

H3: There will be positive correlation between pre-test Knowledge scores and pre-test Attitude scores of Students on Prevention of Oral Cancer.

H4: There will be significant association of pre-test Knowledge Scores and pre-test Attitude Scores on prevention of Oral Cancer with the Demographic Variables of the students.

OPERATIONAL DEFINITIONS

1. **Assess :** It refers to determining effectiveness of Audio Visual Teaching Programme and is measured in terms of significant gain in the post-test Knowledge scores and post-test Attitude scores of the samples
2. **Effectiveness:** It refers to bringing about a change in the Knowledge and Attitude of Government Higher Secondary school Students on prevention of Oral Cancer after administration of Audio Visual Teaching Programme as determined by significant difference in pre-test and post-test Knowledge and Attitude scores.
3. **Audio visual Teaching Programme:** It refers to use of Audio and Visual aids in the form of Video tape recording on the topic of Prevention of Oral Cancer to provide increase in knowledge and improvement in the Attitude of Government Higher Secondary school students on prevention of Oral Cancer.
4. **Oral Cancer:** It is a group of disease that characteristically grow in an uncontrolled manner with the spread of abnormal cells with using tobacco, smoking and drinking.
5. **Knowledge:** Knowledge refers to correct responses of Government Higher secondary School students on a Structured Questionnaire on prevention of Oral Cancer as evident from Knowledge scores.
6. **Attitude:** Attitude refers to the opinion and behaviour of students on prevention of Oral Cancer which is measured by Likert's Attitude Rating Scale
7. **Higher Secondary School student:** Higher Secondary School student refers to students studying in a Higher Secondary School belonging to the age group of 15-18 years, included in my study.

REVIEW OF LITERATURE

Sinha DN, Gupta PC (2001): A survey conducted among medical and dental students in Patna, Bihar, India had revealed high levels of tobacco use, especially of smokeless forms, such as *Khaini* and *gutka*. Chewing of *pan masala* is also common. Current use was higher among senior students, even though their awareness was much higher; this is believed by the researchers to be due to the students being already addicted before learning about the associated diseases. Assessment of the use of tobacco and areca nut products among medical and dental students is important because of the impact of the example they will set for their patients as future caregivers and the unlikely prospect that they would counsel their patients against using tobacco, a major determinant of oral health status.

Peker I, Alkurt MT.(2010) conducted a study on Public awareness level about Oral Cancer in a group of dental patients at the department of Oral Diagnosis and Radiology, faculty of Dentistry at Gazi University in Ankara, Turkey. This study included 1022 participants. Socio-demographic information of patients was obtained. A questionnaire about awareness and knowledge about oral cancer and early signs and risk factors related to the disease was completed by two examiners. Data was statistically analysed with descriptive analyses and chi-square tests. In total 60.7% of the participants had never heard of oral cancer. While79.2% of the participants were unaware of the early signs related to oral cancer, 29.9% of them were unaware of risk factors of the disease.

Friel et al.(2002) reported that positively influencing the knowledge, attitudes and behaviours toward sustainable proper oral health requires combining the school based programmes with mass media, community and individual interactions . On its own a dental television campaign was found to increase knowledge and reinforce attitudes, but without sustained understanding and behaviour effects.

METHODS

The research approach adopted for this study was quasi-experimental research approach. The research design selected for the study was quasi-experimental one group pre- & post-test design. Data was obtained from 200 school children. The sample was selected using probability sampling technique. Data was collected with the help of Structured Knowledge Questionnaires and Likert's Attitude Rating Scale on prevention of Oral Cancer The obtained data was analysed by using descriptive and inferential statistics in terms of Mean, Standard Deviation and 't' value.

RESEARCH DESIGN

The research design is the overall plan for obtaining answers to the questions being studied and for handling some of the collection of data, often including the steps the researcher took to minimise biases and enhance the interpretability of the results by instituting various controls.

A Quasi-experimental study with one group pre- test and post-test design was used to evaluate the effectiveness of the Audio Visual Teaching Programme for the present study.

The research approach adopted for this study was experimental approach. The research design selected for the study was quasi-experimental one group pre- & post-test design. Data was obtained from 200 school students from government higher secondary schools of Gujarat state and the sample was selected using probability sampling on random selection technique. Data was collected with the help of a demographic proforma and structured questionnaire. Data obtained was analysed by using descriptive and inferential statistics. A pilot study was conducted to test the reliability of the tool. The reliability of tool was r = 0.8

RESULTS

Table – 1.1: Distribution of samples based on their socio-demographic characteristics

(N=200)

Sl. No.	Demographic characteristics		Frequency (n)	Percentage (%)
1.	Age in years	15 – 16 yrs	12	6.0
		16 – 17 yrs	48	24.0
		17 – 18 yrs	140	70.0
2.	Gender	Male	100	50.0
		Female	100	50.0
3.	Education	Standard 11	100	50.0
		Standard 12	100	50.0
4.	Total income of family	Below 5000	130	65.0
		5001 – 10000	50	25.0
		10001 – 15000	20	10.0
		Any other	0	0
5.	History of oral cancer in family	No	160	80.0
		Yes	40	20.0
6.	Source of knowledge regarding oral cancer	Friends	10	5.0
		Newspaper and magazines	35	17.5
		Radio & Television	150	75.0
		Medical person	5	2.5
7.	Parent's occupation	Government job	103	51.5
		Private Sector job	7	3.5
		Own business	30	15.0
		Any other	60	30.0

Table – 1.2: Analysis and interpretation of the data collected on Structured Knowledge Questionnaire on prevention of Oral Cancer

(N=200)

Knowledge Score	Mean	Mean Difference	S.D	Calculated 't' test	Tabulated 't' test	Level of Significance
Pre-test	7.63	9.68	5.05	24.43	1.960	0.05
Post-test	17.31		4.93			

Table 1.2 shows that the mean post-test knowledge score (17.31) was higher than the pre-test knowledge score (7.63). The computed "t" value (t 199 = 24.43) was higher than table value (t 199 =1.96) at 0.05 level of significance. Hence the research hypothesis H1 is accepted and it was inferred that the mean difference between pre- and post-test knowledge score was statistically significant, revealing that audio visual teaching programme was effective.

Table – 1.3: Analysis and Interpretation of the data collected on Structured Attitude Rating Scale

(N=200)

Attitude Score	Mean	Mean Difference	S.D	Calculated 't' test	Tabulated 't' test	Level of Significance
Pre-test	64.03	4.07	8.63	27.91	1.960	0.05
Post-test	68.10		8.32			

Table 1.3 shows that the mean post-test attitude score (68.10) was higher than the pre-test knowledge score (64.03). The computed "t" value (t 199=27.91) was higher than table value (t 199=1.96) at 0.05 level of significance. Hence, the research hypothesis H2 is accepted and it was inferred that the mean difference between pre- and post-test attitude score was statistically significant, revealing that audio visual teaching programme was effective.

Table – 1.4: Analysis and Interpretation of the data related to correlation between Pre-test knowledge and Pre-test attitude of samples on prevention of Oral Cancer

(N=200)

Variables	Mean	Standard Deviation (SD)	'r' value
Knowledge	7.63	5.05	r = 0.6
Attitude	64.03	8.63	

Table 1.4 shows that pre-test knowledge mean score and SD are 7.63 and 5.05 respectively, whereas pre-test Attitude mean score and SD are 64.03 and 8.63 respectively and correlation (r) value is 0.6. There is a positive correlation between pre-test knowledge and pre-test Attitude scores of samples.

Table – 1.5: Analysis and Interpretation of the data related to association of Pre-test knowledge with demographic variables

(N=200)

Sl. No.	Personal Data		Frequency (n)	Percentage (%)	χ^2	Df	P value	Significance
1.	Age in years	15 – 16 yrs	12	6.0	6.291	4	9.490	Not significant
		16 – 17 yrs	48	24.0				
		17 – 18 yrs	140	70.0				
2.	Gender	Male	100	50.0	2.554	2	5.991	Not significant
		Female	100	50.0				
3.	Education	Standard 11	100	50.0	6.800	2	5.991	Not significant
		Standard 12	100	50.0				
4.	Total income of family	Below 5000	130	65.0	17.430	6	12.960	Significant
		5001 – 10000	50	25.0				
		10001 – 15000	20	10.0				
		Any other	0	0				
5.	History of oral cancer in family	No	160	80.0	2.514	2	5.991	Not significant
		Yes	40	20.0				
6.	Source of knowledge regarding oral cancer	Friends	10	5.0	19.450	6	12.960	Significant
		Newspaper & magazines	35	17.5				
		Radio & Television	150	75.0				
		Medical person	5	2.5				
7.	Parent's occupation	Government job	103	51.5	11.940	6	12.960	Not significant
		Private Sector job	7	3.5				
		Own business	30	15.0				
		Any other	60	30.0				

Table 1.5 shows the association of the demographic data and the pre-test knowledge scores of samples at significance level of 0.05. Regarding association of age groups with the pre-test level of knowledge, the calculated value of χ^2, 6.291 is found lesser than the P value, 9.49. Hence it can be inferred that age has no significant effect on the knowledge of samples and the other demographic variables such as gender, education, history of oral cancer in family and parent's occupation also have no significant effects on knowledge of samples

As regards the association of Total income of family with the pre-test level of knowledge, the calculated χ^2 value, 17.432 is more than the P value, 12.96. Thus it can be inferred that total income of family has significant effect on the pre-test knowledge of samples. In respect of the association between Source of knowledge regarding oral cancer and the pre-test level of knowledge, the χ^2 value, 19.45 is more than the P value, 12.96. Therefore, the inference is that Source of knowledge regarding oral cancer has significant effect on the knowledge of samples.

Table – 1.6: Analysis and Interpretation of the data related to association of Pre-test attitude with demographic variables

(N=200)

Sl. No.	Personal Data		Frequency (n)	Percentage (%)	χ^2	Df	P value	Significance
1.	Age in years	15 – 16 yrs	12	6.0	0.447	2	5.991	Not significant
		16 – 17 yrs	48	24.0				
		17 – 18 yrs	140	70.0				
2.	Gender	Male	100	50.0	3.428	1	3.841	Not significant
		Female	100	50.0				
3.	Education	Standard 11	100	50.0	2.380	1	3.841	Not significant
		Standard 12	100	50.0				
4.	Total income of family	Below 5000	130	65.0	4.230	3	7.815	Not significant
		5001 – 10000	50	25.0				
		10001 – 15000	20	10.0				
		Any other	0	0				
5.	History of oral cancer in family	No	160	80.0	2.379	1	3.841	Not significant
		Yes	40	20.0				
6.	Source of knowledge regarding oral cancer	Friends	10	5.0	8.013	3	7.815	Significant
		Newspaper & magazines	35	17.5				
		Radio & Television	150	75.0				
		Medical person	5	2.5				
7.	Parent's occupation	Government job	103	51.5	6.024	3	7.815	Not significant
		Private Sector job	7	3.5				
		Own business	30	15.0				
		Any other	60	30.0				

Table 1.6 shows the association of the demographic data and the pre-test Attitude scores of samples at significance level of 0.05. As regards association of age groups with the pre-test level of Attitude, the calculated value of χ^2, 0.447 is lesser than the P value, 5.991. Hence it can be inferred that age has no significant effect on the Attitude of samples.

In relation to the association between Source of knowledge regarding oral cancer and the pre-test level of Attitude the χ^2 value, 8.013 is more than the P value, 7.815. The inference, therefore, is that Source of knowledge regarding oral cancer has significant effect on the Attitude of samples.

IMPLICATIONS

The findings of the study have definite implications for Nursing Practice, Nursing Education, Nursing Administration and Nursing Research.

Nursing Practice

As nursing practice is just not finished within clinical setting but is also extended to reach the people in the community, the study findings can be used to build awareness among the parents of the children, as well as their

school teachers. There is much scope for improving nursing care beyond the management of patients in hospital. The staff, school teachers and head nurses can also develop a teaching programme for parents of children, workers of the company and rickshaw pedallers on Prevention of Oral Cancer

Nursing Education

Nursing education must emphasise the primary health care approach focussing more on prevention than cure and thus empowering the prospective nurses to be well prepared to assist clients and the community at large, to help develop self care potentialities.

Within the scope of the curriculum, the leaning experience should provide opportunities to the students, to plan and prepare health education materials on health hazards of smoking and chewing things like tobacco and areca nuts and preventive aspects of cancer for the family, community, hospital, and the other agencies.

Nursing Administration

Necessary administration support should be provided for the development of such educational materials, nursing personnel should be motivated and helped to devote their time for development of a Planned Teaching Programme or Health Education Programme.

Provision should be made for easy access of the clients to these educational materials like A.V. Aids etc, which are already developed. This will make client teaching more effective.

Nursing Research

There is a need to conduct further research in the field of Oral Cancer and ill effect of tobacco and smoking on health to find out which area has greater need of further knowledge on Oral Cancer and prevention education.

The nurse researcher should be able to conduct the research on various aspects of preventive measures of Oral Cancer, so as to generate more scientific data. The result of the study contributes to develop knowledge and build attitude among students of Government Higher Secondary schools of Gujarat State. In future, the Investigators can use the findings and the methodology as reference material. The Suggestions and recommendation can be utilised by other researchers, conducting further studies in the same field.

LIMITATIONS

1. A sample of 200 school children for one group pre- and post-test only was considered.
2. The setting was limited to students of selected Government Higher Secondary schools of Gujarat state.
3. The study period was limited to four weeks.

RECOMMENDATION:

1. Descriptive survey may be carried out to find the knowledge and attitude of the community regarding prevention of Oral Cancer.
2. A study to evaluate the effectiveness of Structured Teaching Programme about tobacco abuse on the knowledge and attitude of Basic B.Sc Nursing students at College/s of nursing
3. A study can be conducted by using an information guide sheet to assess the knowledge regarding prevention of Oral Cancer among working men.

BIBLIOGRAPHY

BOOK REFERENCES:

1. Abdellah, F.G. Better patient care through nursing research. 2nd edi. New York: MacMillan Co; 1979.
2. Anderson KN, Anderson LE. Mosby's. Medical, nursing and allied health dictionary. 5th edi. Philadelphia: Mosby publisher; 2005
3. Basavanthappa B.T. Essentials of medical surgical nursing. New Delhi: Jaypee Brothers Publishers; 2011.
4. Basavanthappa B.T. Fundamentals of nursing. 1st edi. Kundali: Jaypee Brothers Publishers; 2004.
5. Basavanthappa B.T. Nursing education. New Delhi: Jaypee Brothers Publishers; 2003.
6. Basavanthappa B.T. Nursing research. 1st edi. Bangalore: Jaypee Brothers Publishers; 2003.
7. Bharat Prateek, Shivani Sharma. A textbook of nursing research & statistics. 3rd edi. Jalandhar: S. Vikas & Company; 2011.
8. Black JM, Hawks JH. Medical surgical nursing, clinical management for positive outcome. 7th edi. vol 2. India: Elsevier Saunders publication; 2005.
9. Gerard J. Tortora, Grabowski SR. Principles of anatomy and physiology. 10th edi. USA: John Wiley & Sons.Inc; 2003.
10. International Council of Nurses. Notes on nursing, a guide for today's caregiver. Geneva: Elsevier Bailliere Tindall; 2009.

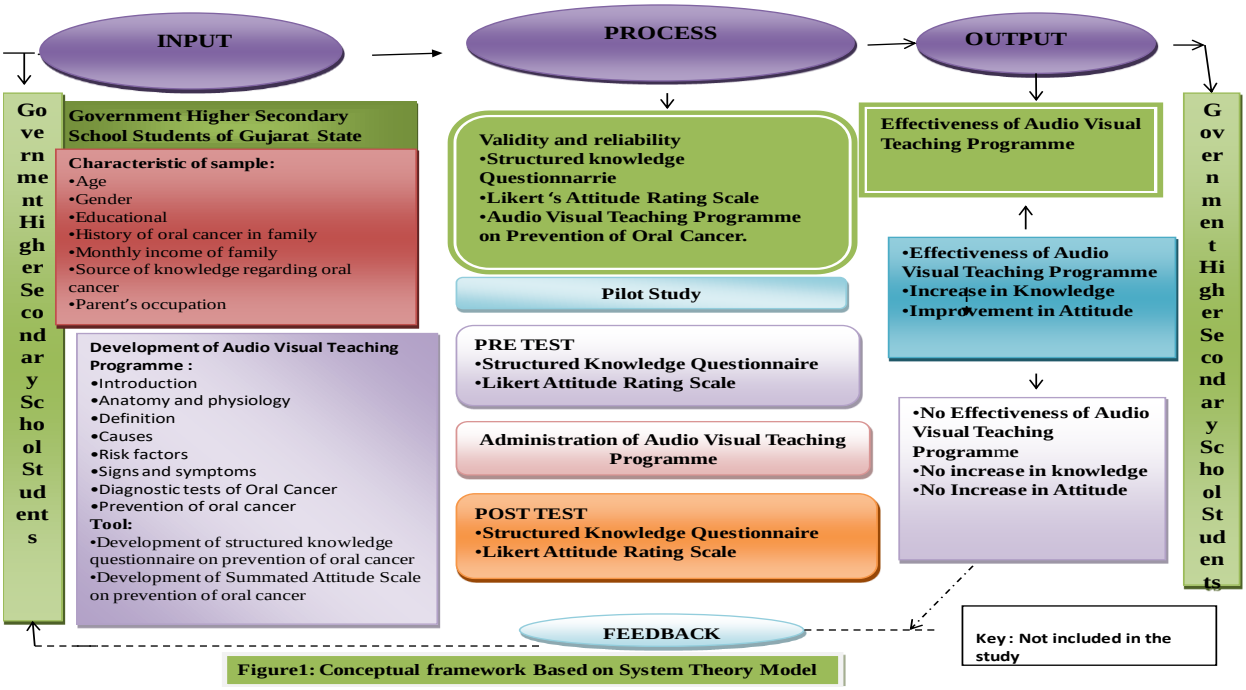

Figure1: Conceptual framework Based on System Theory Model