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A Study to Evaluate the Effectiveness of Self Instructional Module on Oral Health Hazards among Smokeless Tobacco Users in Selected Rural Area of Karad Taluka

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Abstract: ***Aim & Objectives: To assess the knowledge of oral health hazards among smokeless tobacco users in selected rural area of Karad. To evaluate effectiveness of Self Instructional Module [SIM] of oral health hazards among smokeless tobacco users. Material & Methods: Evaluative study was conducted on 60 tobacco users from Kale rural population by using interview schedule method. The data was collected tabulated and analyzed in terms of objectives of the study, using descriptive and inferential statistics. Results: After the administration of SIM the pre test and post test analysis revealed that, in pre test majority 31(51.7%) subjects had average knowledge, 14(23.3%) had good knowledge and 15(25.0%) had poor knowledge in total knowledge score where as in post test majority of 39(65%) had average knowledge 16(26.7%) good knowledge and 5(8.3%) had poor knowledge. The pre test mean knowledge score of Standard deviation of smokeless tobacco users was 12.91±3.34 which was increased in post test to 22.19 ± 2.45. The paired t value is 22.8 and p value is < 0.0001 which is considered extremely significant and paired t test showed a significant gain in knowledge.***

Keywords: Self Instructional Module (SIM), Oral health hazards, smokeless tobacco.

1. Introduction

"You cannot change your future but, you can change your habits, and surely your habits will change your future" Abdul Kalam Today, tobacco use is growing the fastest in low-income countries that are least equipped to deal with the disease and early death that accompanies smoking-related disease. Between population growth and tobacco marketing campaigns that target these areas with little or no legislation in place to restrict advertising, millions of new addicts are emerging every year. According to the WHO report, more than 80 percent of global tobacco-related deaths will be in low and middle-income countries by the year 2030.[1]It is estimated that of the 10 million users of smokeless tobacco, 3 million are below the age of 21. Of these young users, about 25% start using ST by the 6th grade and the remaining 75% start by the 9th grade. It is also reported that 8% of youth between 9-12 grades use ST at least once every month and 2-3% consume it on a daily basis. It is suggested that those who consume smokeless tobacco are prone to smoke later.[3]In India 34.6 per cent of adults as tobacco users, it has become world's second largest tobacco consuming nation. "Around 274.9 million Indians use tobacco everyday", says the Global Adult Tobacco Survey. The survey also brings in some eye opening facts like; more than 15 per cent of children between the age group of 15-18 are tobacco users.[1] Using smokeless tobacco increases risk for oral cancer, gingivitis, periodontitis and tooth decay. It also contributes to bad breath and stains on ones teeth. A study on betal chewers found ultra structural features of blacks' stains on the teeth and they described the stain as having a composition akin to that calculus. In a community based study of 4640 individuals in Mumbai above the age of 15 years. 10% were using tobacco, mainly in smokeless form (Gutkha, quid, Khaini & mishri) 41% of users were below 29 years of age and 15% of users had oral precancerous lesions. Among them, leukoplakia, submucosal fibrosis and erythroplakia were predominant.[2]

2. Literature Survey

In present study, the research investigator has categorized the review of literature under the following headings. Review of literature related to, I. Knowledge and attitude towards hazards of tobacco consumption, II. Prevalence of tobacco consumption, III. Effects of tobacco consumption on oral health, IV Effectiveness of self instructional module

A cross sectional community based survey was carried out in province by interviewing 1029 subjects above 30 yrs of age, over a 1 year of period from Nov 2006. The level of public awareness of oral cancer was 84% but only 23% for OPMD. Awareness was especially poor in low socioeconomic groups. The majority of subjects were not aware of the symptoms of oral cancer and of OPMD. Thirty – two percent were unaware that chewing betel quid was risk factors for these diseases as were 65% for tobacco smoking and 81% for heavy consumption of alcohol. Overall, 76% were not aware of any of the dangers inherent in the frequent use of areca nut.[3]

A cross sectional study design total 1473 students participated in the study of which 79% were males (mean age 15.4 year). The overall prevalence of current tobacco users was 8%. A significant association between age and tobacco noted among tobacco habitués ($P < 0.05$). Awareness regarding legislation against smoking in public places the higher age groups ($P < 0.05$). Females were more

aware of the smoking ban than males (P < 0.05). Awareness regarding the hazards associated with tobacco use revealed that 41.5% of the students knew about between oral cancer and tobacco, with the awareness being greater among females than among males (64.35.4%).[4]

Prevalence of tobacco consumption among the adolescents of the tribal areas in Maharashtra. The study consisted of 502 adolescents of both the sexes. Overall, the prevalence of tobacco consumption among the adolescents of the tribal areas was 45.42%. 65.31% male and 26.46% female adolescents were habituated to it. All female and majority of the male adolescents predominantly consumed a smokeless form of tobacco. Most of them (89%) started chewing tobacco / Gutkha between 5-15 years of age. The females had started consuming tobacco at younger ages than the males. Social customs were the major influencing factor for the tobacco consumption, followed by peer pressure. The consumption of tobacco among the family members significantly ($p<0.001$) increased the tobacco use among the adolescents.[5]

This study investigated the impact of a booklet about chemotherapy on patient satisfaction, quality of life (QOL) and emotional distress, and assessed booklet use. A total of 145 Greek cancer outpatients prior to commencing chemotherapy completed a questionnaire and were randomized to receive (n = 72) or not receive (n = 73) the booklet Baseline characteristics were well balanced between the two groups. Experimental group patients reported being significantly more satisfied with the information received and care overall than those in the control group, felt significantly more and better informed, and perceived the information received as being clearer and detailed. The intervention produced no benefits in terms of anxiety, depression or QOL. The booklet was read by almost all patients and to a great extent by significant.[6]

3. Objectives Of The Study

1. To assess the knowledge of oral health hazards among smokeless tobacco users.
2. To evaluate effectiveness of Self Instructional Module [SIM] of oral health hazards among smokeless tobacco users.
3. To find the association between knowledge of oral health hazards with selected socio demographic variable

4. Materials and Methods

The investigator carried out the study in 60 subjects from Kale rural population by using interview schedule method. The study was conducted in year 2012 in month of October. Purposive sampling technique was used. Institutional ethics Committee approval and informed consent from the subjects were taken before the study. The tool consisted of structured questionnaire .The structured questionnaire was constructed by the investigator to assess the knowledge oral health hazards. SECTION I: Socio demographic data. (Total items were 11) SECTION II: Questionnaire on oral health hazards of Smokeless tobacco (Total items were 30) The SIM was titled "Self Instructional Module on oral health hazards of tobacco. The SIM was prepared to enhance the knowledge of smokeless tobacco users. Paired't' test and computation of 'p' values were used to determine the effectiveness of SIM. Chi-square (χ^2) test was used to determine association between pre-test knowledge scores with selected socio-demographic variables.

5. Result

Table 1: Frequency and percentage distribution of smokeless tobacco users according to sample characteristics. n = 60

Sr. No	*Characteristics*	*Category*	*Frequency*	*Percentage %*
1	Age	20 – 30	26	43.3
		31 – 40	14	23.3
		41 – 50	11	18.3
		51 – 60	9	15.0
2	Sex	Male	35	58.3
		Female	25	41.7
3	Education	No formal education	3	5
		Primary	20	33.3
		Secondary	20	33.3
		Graduate	14	23.3
		Post graduate	3	5
4.	Occupation	House wife	19	31.7
		Employed	9	15.0
		Self employed	8	13.3
		Farmer	20	33.3
		Non working	4	6.7
5.	Type of Family	Nuclear	28	46.7
		Joint	25	41.7
		Extended	7	11.7
6.	Religion	Hindu	44	73.3
		Muslim	13	21.7
		Christian	-	-
		Other	3	5.0
7.	Type Of Food	Vegetarian	9	15.0
		Non Vegetarian	5	8.3
		Mixed	46	76.7
8.	Income	Less than 2000	14	23.3
		2001 – 3000	15	25.0
		3001 – 4000	19	31.7
		4001 – 5000 above	12	20.0
9.	Marital Status	Single	11	18.3
		Married	46	76.7
		Separated / Divorced / Widows	3	5.0
10.	Type Of Tobacco Used	Tobacco chewing	24	40.0
		Mishri	21	35.0
		Gutkha	7	11.7
		Pan masala	8	13.3
11.	Habit Started	Self interest	12	20.0
		Peer group	27	45.0
		Influence of parents/	12	20.0
		elders in family	2	3.3
		Advertisement	7	11.7
		Other		

The data presented in **table 1** depicted that maximum number of 26 (43.3%) of adult people belongs to the age group of 20-30 yrs and minimum 9 (15%) were between 51-60 yrs of age , maximum people 35 (58.3%) were male and 25 (41.7%) were female, majority of people 20 (33.3%) had primary to secondary education minimum 3 (5%) were post graduate , majority 20 (33.3%) were farmer, majority 28 (46.7%) were belong to nuclear family, majority 44(73.3%) people were Hindu religion. Majority of people 19 (31.7%)

had income between Rs. 3001 – 4000 and minimum 12 (20%) were in 4001 – 5000 and above, majority people 24 (40%) were tobacco chewing, majority 27 (45%)were habituated due to peer group.

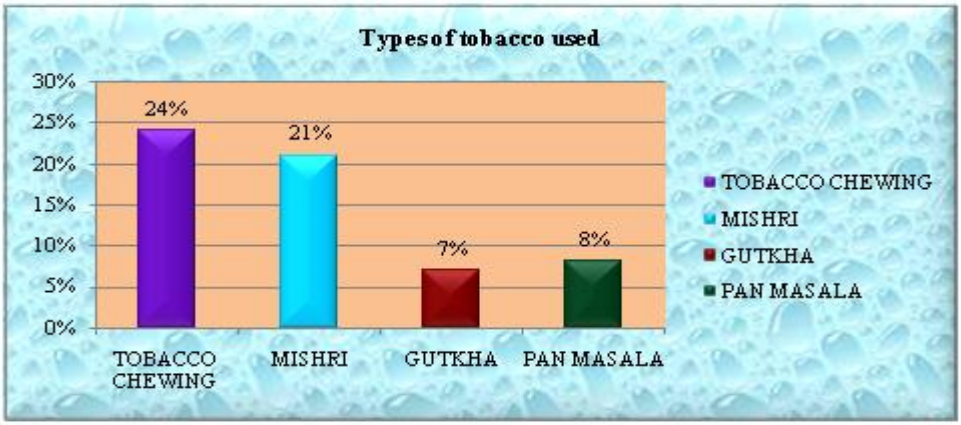

Table 2: Distribution of percentage of knowledge score of subject regarding oral health hazards of smokeless tobacco. n = 60

Sr. No	*Items*	*Total score*	*Mean % of Knowledge Score of subjects*		
			Pre test	*Post test*	*Gain in knowledge score*
1	Knowledge of oral health hazard of smokeless tobacco	30	43%	77%	34%

Data in table 2 reveals that, pre test knowledge percentage (43 %), and post test knowledge percentage (77%), and actual gain score percentage was (34%) respectively.

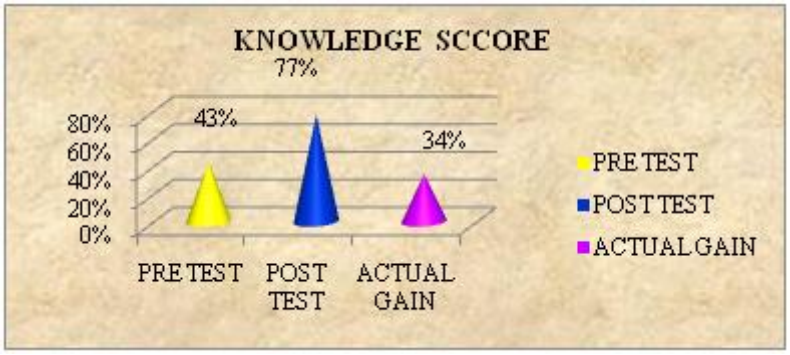

Table 3: Data showing difference between pre test and post test mean, SD and 't' value of knowledge scores, n = 60

S. No		*Mean*	*SD*	*df*	*'t' value calculated*	*'t' value tabulated*	*Inference*
1	Pre-test	12.9	± 3.34	59	22.8	2.00	S
2	Post-test	22.9	± 2.45				

μ (p<0.0001) S = Significant

Tables – 3 reveals that, the pre test overall Mean score was 12.9 with ± 3.341 SD and Median is 12.50 and post test overall Mean score was 22.91 with ± 2.415 SD and Median is 22.50. This shows tobacco users gained adequate knowledge regarding oral health hazards in pre and post test score. The value of t = 22.8 with 59 df which shows extremely significant increase in the knowledge about oral health hazards of smokeless tobacco. The difference in-between means is 9.98 which is highest it shows that people are more interested in reading Self Instructional Module. Paired t test was used to compute the significance of difference between pre tests and post test mean knowledge score. Computation of 'P' value with use of SPSS statistical software was done to test significance of knowledge gain on oral health hazards of smokeless tobacco. The calculated value of t test is higher than the tabulated value thus research **hypothesis H1 is accepted.** This reveals that the Self Instructional Module was very effective.

Table 4: Analysis and interpretation of association between pre test knowledge score with selected demographic variables
Chi square test was used to compute the association of the variables in relation to the knowledge score. **n = 60**

S.N.	VARIABLES	PRE TEST KNOWLEDGE						Chi-square	df	P value
		GOOD		AVERAGE		POOR				
		Frq	%	Frq	%	Frq	%			
1	AGE (YRS)									
	20 – 30	11	18.3	11	18.3	4	6.6	9.188	6	0.163
	31 – 40	4	6.6	6	10	4	6.6			

	41 – 50	-		7	11.6	4	6.6			
	51 – 60	1	1.6	6	10	2	3.3			
2	SEX									
	Male	11	18.3	17	28.3	7	11.6	1.14	2	0.563
	Female	5	8.3	13	21.6	7	11.6			
3	EDUCATION									
	No formal education	1	1.6	2	3.3	0	0	4.86	8	0.77
	Primary	8	13.3	8	13.3	4	6.6			
	Secondary	4	6.6	10	16.6	6	10			
	Graduate	3	5	8	13.3	3	5			
	Post graduate	-		2	3.3	1	1.6			
4	OCCUPATION									
	House wife	4	6.6	10	16.6	5	8.3	5.40	8	0.713
	Employed	1	1.6	5	8.3	3	5			
	Self employed	4	6.6	3	5	1	1.6			
	Farmer	5	8.3	11	18.3	4	6.6			
	Non working	2	3.3	1	1.6	1	1.6			
5	TYPE OF FAMILY									
	Nuclear	8	13.3	12	20	8	13.3	3.64	4	0.455
	Joint	5	8.3	14	23.3	6	10			
	Extended	3	5	4	6.6					
6	RELIGION									
	Hindu	7	11.6	24	40	13	21.6	10.79	4	0.029µ
	Muslim	7	11.6	5	8.3	1	1.6			
	Other	2	3.3	1	1.6	0	0			
7	TYPE OF FOOD									
	Vegetarian	3	5	4	6.6	2	3.3	2.18	4	0.701
	Non Vegetarian	2	3.3	3	5	0	0			
	Mixed	11	18.3	23	38.3	12	20			

*** This symbol indicates that, religion is associated with pre test knowledge score.**

Table 4 reveals that age, sex, education, occupation, type of family, type of food, income, marital status were no association was found between pre test knowledge score and selected demographic variables. The religion computed chi square value (10.79) at 4 degree of freedom was associated with the pre test knowledge.

6. Conclusion

Based on the analysis of findings of the study the following inference was drawn. There was evident increase in the knowledge scores in all the areas included in the study after administration of Self Instructional Module. The actual gain score was significantly higher. People accepted the things which are easily accessible through community participation.

7. Future Scope

Nursing Implications
The knowledge of oral health hazards of smokeless tobacco will reduce the hazards and related diseases. The findings of this study have implications for nursing practice, nursing education, nursing administration , and nursing research.

Implication of nursing practice.
Nurses has major role in the preventive aspects. Nurses should able to explore the knowledge of hazards of SLT consumption so that action can be taken to prevent and reduce the disease burden based on their knowledge. The study findings will help the nurse to organize community health education programme, school awareness' programme bringing out educational and audio – visual material regarding tobacco and its hazards.

Nursing administration
The findings of a study could be utilized by the nursing administrator to provide quality care to the clients in the community. They should encourage the staff and the students to carry out similar research in different population and different setting to find out the knowledge on oral health hazards due to SLT consumption so that necessary nursing interventions can be carried out and the problem can be tackled. Nursing administrator should organize periodic in service educational programs for staff and students in collaboration of both community and medical departments for importing knowledge on hazards of tobacco. The hospital should have a policy to provide health education material to all in patients and out patients. Nurses can encourage in the community to improve the knowledge of client regarding hazards of tobacco consumption on oral health.

Nursing research
The primary objectives of nursing interventions among the adult rural population is to enhance primary prevention and prevent complications of smokeless tobacco. The findings also emphasize in exploring the extent of the problem of tobacco consumption to reduce the prevalence rate of the manifestations. The area of life style modification of subject, promoting health behavior, quitting the habit could be also explored. There is also the need to detect the role of government in preventing tobacco consumption. More research could be conducted to develop better methods and technique in teaching, preparing effective health teaching material and better practices of nursing care.

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