Original Research Paper

Volume - 13 | Issue - 06 | June - 2023 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Nursing

EFFECTIVENESS OF TOBACCO CESSATION PROGRAMME ON CHANGES IN ORAL HEALTH AMONG SMOKING TOBACCO USERS

Parimala. L* Associate Professor, Saveetha College of Nursing, SIMATS, Thandalam, Chennai – 602105 *Corresponding Author

Dr.Prasanna Baby

Dr.Maragatha Valli

ABSTRACT Quitting tobacco is a difficult task. As a person with oral disease, it is even more important for them to quit tobacco use. Quitting tobacco is important for smokers and their family. The great risks of smokers having oral disease; the benefits of quitting and how to improve their confidence in making a quit attempt. This study aim is to assess the effectiveness of Tobacco cessation programme on oral health symptoms among smoking tobacco users. One group pre test and post test design was adopted, in which only experimental with 50 smoking tobacco users chosen as per selection criteria using purposing sampling technique The study conducted in the villages of Mappedu, Thiruvallur districts. Administration of tobacco cessation program to the participants- on one to one basis by face to face for 3 months. This programme consists of Education related to ill effects of Tobacco use, Oral visual examination, quitting method by STAR method, Deep breathing exercise, coping strategies for the withdrawal and trigger symptoms due to tobacco cessation, and Follow up. The data was analyzed with descriptive & inferential statistics. The findings of the study evoke in reduction in symptoms of oral health after quitting the smoking. Integration of tobacco cessation programs into primary health care providers, screen and refer the patients who are highly dependent on tobacco to higher centers.

KEYWORDS : Tobacco cessation programme, oral health, smoking & Tobacco Users

INTRODUCTION:

Tobacco use, including tobacco smoking (Cigarettes, bidi, cigars, pipe, hookah) and smokeless tobacco (Chewing, Snuff and Snuff) use, causes a wide spectrum of diseases including oral diseases World Health organization (WHO) informed that, Tobacco kills more than 8 million people each year. More than 7 million of those deaths are the result of direct tobacco use while around 1.2 million are the result of non-smokers being exposed to second-hand smoke. Over 80% of the world's 1.3 billion tobacco users live in low- and middle-income countries. In 2020, 22.3% of the global population used tobacco, 36.7% of all men and 7.8% of the world's women. According to Centers for Disease Control and Prevention (CDC), Tobacco use is the leading cause of preventable disease, disability, and death in the United States.

In India, Global Adult Tobacco survey (2017) reveals that Khaii is the most commonly used tobacco product (used by 10.4 adults) followed by bidi (smoked by 7.2 crore adults).28.6% of adults aged 15 and above (26.7crore) use tobacco in any form. 19.9 crore adults in rural areas and 6.8crore adults in urban areas use tobacco. Every fifth adult (19.9 crore) uses smokeless tobacco and every tenth adult (10.0 crore) smokes tobacco.3.2 crore adults resort to duel use of tobacco.

A guide for oral disease patients to quit tobacco use (2017) explained that, Tobacco users have both health and non-health related impacts among them and those around the users Tobacco kills up to half of its users because tobacco products are made of extremely toxic materials. Tobacco smoke contains more than 7000 chemicals, of which at least 250 are known to be harmful and at least 69 are known to cause cancer. Here are some of the chemicals contained in tobacco smoke such as Stearic acid, Butane, Paint, Methanol, Acetic acid, Hexamine, Methane and Nicotine.

Quitting tobacco is a difficult task. As a person with oral disease, it is even more important for them to quit tobacco use. Quitting tobacco is important for smokers and their family. The great risks of smokers having oral disease; the benefits of quitting and how to improve their confidence in making a quit attempt. Every primary care provider should have some basic knowledge of tobacco use and tobacco dependence, the benefits of quitting, challenges in quitting tobacco and effective coping skills will help you deliver brief tobacco interventions. Nurses are in an ideal position to make a difference in smoking cessation and to improve the health of their patients

OBJECTIVES

This study aim is to assess the effectiveness of Tobacco cessation programme on oral health symptoms among smoking tobacco users

Hypothesis:

There was a significant difference in the symptoms of oral health before and after tobacco cessation programme among smoking Tobacco users

Methodology:

One group pre test and post test design was adopted, in which only experimental with 50 smoking tobacco users chosen as per selection criteria using purposing sampling technique The study conducted in the villages of Thiruvallur districts, namely Mappedu Permission was obtained to conduct the study in the setting. Mappedu is a village situated in Thiruvallur taluka of Thiruvallur district in Tamil Nadu. As per the Population Census 2020, there are a total of 1,083 families residing in the village Mappedu. The size of the area is about 14.84 square kilometre. The Mappedu totally covers 11 villages. The total population of Mappedu is 7452 out of which 3733are males and 3719 are females thus the Average Sex Ratio of Mappedu is 1.004.

After obtaining the informed written consent the pretest data will be conducted by using Socio demographic variables- prevalence oral health symptoms. Administration of tobacco cessation program to the participants- on one to one basis by face to face for 3 months. This programme consists of Education related to ill effects of Tobacco use, Oral visual examination, quitting method by STAR method, Deep breathing exercise, coping strategies for the withdrawal and trigger symptoms due to tobacco cessation, and Follow up. This programme is designed based on 5A model of Tobacco cessation programme framed by WHO. Participants will be issued a dairy to record the type and frequency of tobacco use-in any and withdrawal and trigger symptoms. Reminders for tobacco cessation will be planned via mobile and in person. The post-test I will be conducted on 7th day. Post-test II will be conducted on 15th day by using the same tool

Analysis of data:

Descriptive statistics used in terms of frequency, percentage, mean, standard deviation etc. Inferential statistics used in terms of Kruskal Wallis one-way ANOVA on ranks with post-hoc Dunn's test, SigmaPlot 14.5 version (Systat Software Inc., San Jose, USA) was used for statistical analysis and for graph plotting

RESULTS:

Table:1 Frequency and percentage distribution of sociodemographic variable among smoking tobacco users

(n-50)

S.No	Variables	Category	Frequency (F) Percentage (%)
1.	Age in years	Below 21	0 (0)
1.		21-30	18 (36 %)
1.		31-40	12 (24%)

		41-50	11 (55%)
		Above 50	09 (18 %)
2.	Sex:	Male	50 (100%)
3.	Education	Illiterate	11 (55%)
		Literate without formal education	03 (6%)
		Primary/secondary	12 (24%)
		Higher secondary	11 (55%)
		Graduate and above	13 (26%)
4.	Marital status	Unmarried	10 (20%)
		Married	39 (78%)
		Widowed/ Divorced / Separated	01(02%)
5.	Occupation	Professional and semi professional	07 (14%)
		Skilled, semiskilled and unskilled worker	22 (44%)
		Unemployed	04 (08%)
		Retried	02 (04%)
		Students	03 (06%)
		Others not specified	12 (24%)
6.	Income per month	<10,000	12 (24%)
		10,000-20,000	30 (60%)
		>20,000	08 (16%)
7.	Religion:	Hindu	39 (78%)
		Muslim	03 (06%)
		Christian	08 (16%)

Table 1 shows the frequency and percentage distribution of socio demographic variables among smoking tobacco users, out of 50 smokers 36% were in the age group of 21-30 years, and 18% were in the age group of above 50 years. Regarding sex 100% were men. With respect to educational qualification of smokers 26% educated up to Graduate and above and 03% had educated up to Literate without formal education. Considering the marital status 78% were married and 02% were Widowed/ Divorced / Separated. Regarding occupational status of the smokers 44% were Skilled, semiskilled and unskilled worker and 04% were retried as far as monthly income of the family 60% were earning Rs 10 000 -20 000 and 16% were earning above Rs 20 000. Out of 50 smokers 78% were Hindus and 06% were Muslim.

Table 2: Distribution of prevalence of oral health symptoms among smoking tobacco users (n-48)

S.No	Symptoms in the oral cavity	Pre Test		Post test I		Post test II	
		F	%	F	%	F	%
1.	Change in taste and smell	35	73%	05	10%	01	2%
2.	Tooth discoloration	30	63%	26	54%	16	33%
3.	Bad breath and dry mouth	39	81%	06	13%	01	2%
4.	Dental calculus	22	46%	06	13%	00	00
5.	Gingival abscess	10	21%	03	6%	02	4%
6.	Gingival melanin pigmentation	10	21%	08	17%	03	6%
7.	Inflammation of the salivary gland	11	23%	05	10%	00	00
8.	Increased loss of bone within the jaw	5	10%	05	10%	02	4%
9.	Leukoplakia	17	35%	14	29%	02	4%
10.	Premature tooth loss	08	17%	09	19%	04	8%
11.	Periodontal disease	12	25%	07	15%	02	4%
12.	Smoker's lip	36	75%	34	71%	31	65%
13.	Smoker's palate	29	60%	21	44%	04	8%
14.	Delayed healing process following tooth extraction, periodontal treatment, or oral surgery	08	17%	00	00	00	00
15.	Lower success rate of dental implant procedures	06	13%	00	00	00	00
16.	Increased risk of developing oral cancer	17	35%	06	13%	00	00

Table 2 Out of 48 smoking Tobacco users majority 81% developed Bad breath and dry mouth, in Pre-test ,13% and 2% in Post-Test I and Post-test II respectively, 10% were developed Increased loss of bone within the jaw in pre Test, 10% and 4% in post Test I and Post Test II respectively.

Table 3: Effectiveness of Tobacco Cessation Programme on symptoms in oral Cavity among Smoking Tobacco Users (n -48)

S.No.	Comparisons	Median	25th percentile	75th percentile	Kruskal Wallis one-way ANOVA
1	Pre-test	6	4	8	H = 88.828 P < 0.001
	Post-test 1	3	2	4	
	Post-test 2	1	1	2	

n = 48 each.
The 'F', 'Q' and 'P' values are by Kruskal Wallis one-way ANOVA on ranks

Table 4: Effectiveness of Tobacco Cessation Programme on symptoms in oral Cavity among Smoking Tobacco Users

S.No.	Comparisons	Difference of Ranks	Dunn's Method
1	Pre-test	41.002	Q = 4.790
	Post-test 1		P < 0.001
2	Pre-test	80.338	Q = 9.337
	Post-test 2		P < 0.001
3	Post-test 1	39.335	Q = 4.549
	Post-test 2		P < 0.001

n = 48 each.
The 'Q' and 'P' values are by Kruskal Wallis one-way ANOVA on ranks with post-hoc Dunn's test.

Table 3 and 4: The median and percentiles of symptoms in oral cavity is given in Table 1. The median symptoms in oral cavity in the pre-test, post-test 1 and post-test 2, were 6, 3 and 1 (score), respectively. The differences were statistically significant ($P < 0.001$). Comparing the pre-test with post-test 1, it was significant ($P < 0.001$). Comparing the pre-test and the post-test 2, was also significant ($P < 0.001$). The post-test 1 and the post-test 2 was also statistically significant ($P < 0.001$). This shows that the symptoms in the oral cavity decreased gradually. From the pre-test to the posttest 2, there was 5 score decrease in the symptoms, showing the beneficial effect of the intervention

DISCUSSION:

The community-based intervention was targeted at an urban population of Mappedu village at Thiruvallur district above 21 years of age who are widely affected by the smoking tobacco epidemic in India. The Periodontal disease predominance was 25% in pretest. After administering the Tobacco cessation programme it was 15% and 4% in post –Test I and Post test II respectively. Comparative outcomes were found in Goyal .J et.al. [2]

High in Leukoplakia was found among smoking tobacco user were 35% in Pretest. After 15 days of quitting smoking it was reduced to 4% in the present study which is comparable to the studies done on tobacco users by Mishra GA et al. [6]

The effect of the intervention was compared with the Pretest and post-I, Post-Test I and Post-Test II and Pretest , Post- test II. This shows that the symptoms in the oral cavity decreased gradually. From the pre-test to the posttest 2, there was 5 score decrease in the symptoms, showing the beneficial effect of the intervention. which is similar to the study done by Mishra GA, et al. [6] and Mall A [7]

CONCLUSION:

The findings of the study evoke in reduction in symptoms of oral health after quitting the smoking. Integration of tobacco cessation programs into primary health care providers, screen and refer the patients who are highly dependent on tobacco to higher centers.

REFERENCES:

1. A guide for oral disease patients to quit tobacco use. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.
2. Goyal J, Menon I, Singh RP, Gupta R, Sharma A, Bhagia P. Prevalence of periodontal status among nicotine dependent individuals of 35-44 years attending community dental camps in Ghaziabad district, Uttar Pradesh. J Family Med Prim Care. 2019 Jul;8(7):2456-2462. doi: 10.4103/jfmpc.jfmpc_315_19. PMID: 31463276; PMCID: PMC6691435.

3. Choudhary A, Saha S, Shivkumar S, Kumar S, Singh SK. Prevalence of tobacco habits and oral health status of adolescents in Lucknow district: A cross-sectional descriptive study. J Indian Assoc Public Health Dent 2023;21:66-71
4. Piplani A, Manjunath BC, Kumar A, Srivastava M, Kumar K, Kundu H. Effectiveness of smoking cessation interventions in dental settings: A randomized controlled trial. J Indian Assoc Public Health Dent 2022;20:131-6
5. Ahsan I, Menon I, Gupta R, Arora V, Ashraf A, Das D. Oral health-related quality of life among adult smokeless tobacco users and nontobacco users of Ghaziabad district, Uttar Pradesh: A cross-sectional study. J Indian Assoc Public Health Dent 2021;19:48-54
6. Mishra GA, Pimple SA, Kulkarni VY, Gupta SD, Mujmudar PV. Tobacco cessation program among cab drivers in Mumbai, India: An Interventional Study. Indian J Community Med 2022;47:347-51
7. Mall A, Vyas S. Community-based Interventional Study for Tobacco Cessation in Urban Slums of Ahmedabad City: A Cluster-Randomized Trial. Indian J Community Med. 2021 Oct-Dec;46(4):641-644. doi: 10.4103/ijcm.IJCM_1016_20. Epub 2021 Dec 8. PMID: 35068726; PMCID: PMC8729268.