

STATUS OF ORAL HEATH AMONG ADULT TOBACCOO AND NON TOBACCOO

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ABSTRACT

Introduction: Tobacco dependence is a major public health problem that results in significant morbidity and mortality. Approximately, 5 million people are killed annually by tobacco use. **Aim:** To assess the oral health status among adult tobacco and non-tobacco users **Methods:** A cross sectional study was conducted on 800 subjects visiting the outreach activities. A pre-tested questionnaire was used to assess the demographic variables and oral hygiene practices. Oral health status was assessed using WHO (World Health Organization) 2013 Oral Health Assessment Form and the Smith and Knight Tooth wear index was used to assess the degree of tooth wear. Statistical analysis was done by the Statistical Package for Social Sciences (SPSS) version 20.0. **Results:** The mean age of the tobacco users in the study was 40.94 (13.83) years. The prevalence of dental caries and tooth wear was 88.0% and 89.2%, respectively. Majority of tobacco users consumed a smokeless form of tobacco 67.5%, followed by smoke 21.5% and followed by both form 11.0%. **Conclusion:** The present study concluded that adult population lack the knowledge and awareness regarding consumption of areca nut, gutka, and tobacco smoking. Hence, there is an urgent need to take effective steps, especially on launching community awareness programs for the adult population and public to educate them about the consequences of tobacco use, and on assessing their effectiveness in curbing the problem

Keywords: Tobacco, Adults, smokeless tobacco, oral health

1. INTRODUCTION

The tobacco epidemic is one of the major public health threats the world has ever faced, killing 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 nonsmokers being exposed to secondhand smoke.^[1] It is the foremost preventable cause of mortality all over the world, even above high blood pressure and obesity. Tobacco accounts for about one in five deaths annually. It kills one person every 6 s. Tobacco users die approximately 15 years prematurely, and 1 billion that is 100 crore cigarettes are smoked everyday in India.^[2] In India, different forms of tobacco are being consumed. Cigarettes and bidis (hand rolled cigarettes that contain unprocessed tobacco) are the two most common forms of tobacco smoked. The most common form of Smokeless tobacco (ST) used is misri, a black powder obtained by roasting and powdering tobacco, which is then applied to the gum by using fingers. Another most common form of ST is chewing of betel quid, a combination of betel leaves, areca nut, slaked lime, tobacco, and condiments; combination of ingredients is altered according to individual preferences.^[1]

As per Global Adult Tobacco Survey 2, more than one-thirds (35%) of adults in India use tobacco in some form. The use of ST is much more prevalent than smoking tobacco. The prevalence of ST use (26%) is almost twice or the prevalence of smoking (14%).

Worldwide tobacco use among the adult is associated with a high risk of oral health problem. The adult groups are conceded as the important population of the country and prevalence of tobacco use particularly, in recent year, had an increasing trend in this age group especially among the adult population.

2. METHODOLOGY

A Descriptive cross-sectional study was performed among Patients attending the outpatient department of Kripadashini advanced hospital, Imphal

A total sample of 800 adult patients aged above 18 years were selected randomly from the outpatient department of the hospital

Sampling methodology

Sampling method: Simple random Sampling

And will be recruited patients attending the outpatient department kripadashini advanced hospital, Imphal

Selection criteria

Inclusion criteria

1. All the subjects who were in the age group of 18 years or above and willing to participate in the survey.

2. Tobacco users were considered as the one who were current users of the tobacco for the period of more than 6 months or had quit the habit for last 3 months.

3. Age and Gender matched study subject's not taking tobacco in any form were included as the non-users.

Exclusion criteria

1. Patients with chronic systemic diseases like diabetes, hypertension, and epilepsy.

2. Pregnant or lactating females.

3. Alcohol users or any other drug abuse.

3. METHOD & TOOL FOR DATA COLLECTION

A structured proforma will be used to collect the data. A pretested questionnaire was interviewer-administered to the tobacco and non-tobacco users to know the demographic variables and oral hygiene practices. An assessment of per capita income classified according to Modified Kuppaswamy socioeconomic scale[10] for the socioeconomic status was used.

Tobacco and non-tobacco users were examined for oral health status and degree of tooth wear. Oral health status was assessed using the WHO Oral Health Assessment Form (2013)[11] Tooth wear was assessed using Tooth Wear Index and was recorded according to the criteria given by Smith and Knight in 1984.[9]

Data was analyzed using SPSS 20.0 software package. Descriptive statistics such as mean, standard deviation, and percentage were used. Association was evaluated using Chi-square. Any P value less than 0.05 was considered significant.

4. RESULT

Demographic characteristics

The studied population was primarily classified into two groups as tobacco users, who used smoking, chewing or both tobacco and non-tobacco users, who never used tobacco in any form. The majority 89.8% of the respondents were male tobacco users. The mean age of the tobacco users was 40.94 ± 13.83 years and that of non-tobacco users was 42.10 ± 12.86 years.

Majority of the tobacco users, 33.5% belonged to upper lower class, whereas among non- tobacco users, 43.0% belonged to upper-middle class. Majority of the tobacco users, 44.8% were not using any aid to clean their teeth, whereas non-tobacco users, only 18.8% were not using any aid to clean their teeth. Among tobacco users, 38.5% were underweight, whereas, among non-tobacco users, only 9.5% were underweight.

Among 400 tobacco users 270 consumed a smokeless form of tobacco, followed by 86 smokes and followed by 44 both forms. Of the 270 tobacco chewers, 58.5% were highly dependent on the smokeless form of tobacco followed by 33.7% who had moderate dependence and only 7.8% had low dependence. Of the 86 Smokers, majority 52.3% had high dependence followed by 31.4% who had moderate dependency and 16.3% had low dependence on smoking form of tobacco. Among 44 dual users, the majority of the 54.5% had high dependence [Table 1].

Table 1 Distribution of study population according to different parameters with tobacco and non-tobacco users

	Tobacco users n (%)	Non-tobacco users n (%)
Gender		
Male	359 (89.8)	342 (85.5)
Female	41 (10.2)	58 (14.5)
Age Group (Years)		
18-27	100 (25.0)	70 (17.5)
28-37	73 (18.2)	60 (15.0)
38-47	69 (17.2)	88 (22.0)
48-57	88 (22.1)	81 (20.2)
	70 (17.5)	101 (25.3)
Socioeconomic status		

	Tobacco users n (%)	Non-tobacco users n (%)
Upper (I)	2 (0.5)	2 (0.5)
Upper Middle (II)	108 (27.0)	172 (43.0)
Lower Middle (III)	85 (21.2)	114 (28.5)
Upper Lower (IV)	134 (33.5)	109 (27.2)
Lower (V)	71 (17.8)	3 (0.8)
Oral hygiene practices		
No aid	179 (44.8)	75 (18.8)
Neem Stick	26 (6.5)	33 (8.2)
Charcoal	19 (4.8)	17 (4.2)
Finger &tooth Powder	95 (23.7)	44 (11.0)
Tooth Brush &Tooth Paste	81 (20.2)	231 (57.8)
Location		
Urban	57 (14.2)	85 (21.2)
Rural	343 (85.8)	315 (78.8)
BODY MASS INDEX (BMI)		
Underweight	157 (38.5)	38 (9.5)
Normal	150 (37.9)	180 (45.0)
Overweight	64 (16.0)	110 (27.5)
Obesity Class I	6 (1.5)	21 (5.3)
Obesity Class II	16 (4.0)	26 (6.5)
Obesity Class III	8 (2.1)	25 (6.2)
Tobacco Consumption		
Smokers	86	21.5
Smokeless	270	67.5
Dual-Users	44	11.0
Level of Nicotine Dependence		
Smokeless		
High Dependence	158	58.5
Moderate Dependence	91	33.7
Low Dependence	21	7.8
Smokers		
High Dependence	45	52.3
Moderate Dependence	27	31.4
Low Dependence	14	16.3
Dual-Users		

	Tobacco users n (%)	Non-tobacco users n (%)
High Dependence	24	54.5
Moderate Dependence	12	27.3
Low Dependence	8	18.2

Oral health

High prevalence of oral mucosal lesions was found among tobacco users. Among these, 41.5% users had leukoplakia followed by tobacco pouch keratosis seen in 20.5% of the subjects and among non-tobacco users only 6.2% had oral mucosal lesions (leukoplakia). Prevalence of caries, periodontal disease, loss of attachment, and tooth wear was found to be significantly higher among tobacco users when compared to non-tobacco users ($P \leq 0.05$).

Among tobacco users, 88.0% had dental caries, whereas, among non-tobacco users, 81.2% had dental caries. Among tobacco users, 92.5% had gingival bleeding, whereas, among non-tobacco users, 45.2% had gingival bleeding. Furthermore, among tobacco users, 58.2% had periodontal pocket, whereas among non-tobacco users, 49.8% had periodontal pocket, and 32.0% tobacco users had loss of attachment seen, whereas among non-tobacco users, 26.5% had loss of attachment were found. Among tobacco users, 89.2% had tooth wear, whereas among non-tobacco users, 69.0% had tooth wear [Table 2].

Table 2 Distribution of study population according to oral health status

	Tobacco user present n (%)	Non-tobacco user present n (%)	Chi-square	P
Oral mucosal lesion				
No abnormal conditions	96 (24.0)	375 (93.8)	4.074	<0.001
Leukoplakia	166 (41.5)	25 (6.2)		
Smokerpalate	16 (4.0)	0 (0)		
Leukoplakia with Smokerpalate	26 (6.5)	0 (0)		
Tobacco pouch Keratosis	82 (20.5)	0 (0)		
Oral Sub mucous Fibrosis	14 (3.5)	0 (0)		
Dental Caries	352 (88.0)	325 (81.2)	7.004	<0.001
Periodontal Status				
Gingival Bleeding	370 (92.5)	181 (45.2)	2.083	<0.001
Periodontal Pocket	233 (58.2)	199 (49.8)	5.817	<0.001
Loss of Attachment	128 (32.0)	106 (26.5)	2.923	<0.001
Tooth Wear Index	357 (89.2)	276 (69.0)	49.65	<0.001

5. RESULTS AND DISCUSSION

The data will be analysed by biostatistician by using statistical package for social service (SPSS) Software Program (VERSION 22.0). Descriptive statistics will be used to summarize the demographic information and the survey data will be analysed by using the chi square test. Multiple logistic regression analysis will be carried out to check association between parental and participant's tobacco usage. Level of significance will be set at $p < 0.05$.

Results suggested that parental tobacco usage habits had a direct effect on participant's tobacco habits. Moreover, parental bonding was also associated with participant's tobacco usage. The fact that parenting style was highly associated with adult tobacco usage might suggest that they are useful target for preventive intervention. Rather intervention should focus on both parental tobacco specific practices and parental behaviour. These findings suggest that interventions targeted solely at tobacco-specific parenting practices may not be sufficient to deter adolescent

tobacco usage and that attempts to change more general parent acceptance and behavioural control may be warranted, even though they may be more difficult to achieve.

The prevalence of tooth wear in the present study was high (89.2%) as compared to non-tobacco users (69.0%). The finding is in accordance with the study by Patil et al.[19] the mechanism through which tobacco cause tooth wear lesion may be through local frictional and vascular effects.

Within dentistry, clear links exist between tobacco and health (both general and oral). Dentists routinely come into contact with patients who use tobacco in order to provide the primary care in dental issues; they can contribute to tobacco control programmes through a range of public health interventions.

Dentists have a 'potential target' while carrying out work on a patient, and as such have an excellent opportunity to advise patients and encourage tobacco cessation. Dentists are the only healthcare professionals who frequently see 'healthy' patients and therefore are in a very good position to identify possible tobacco-related problems early. The links between tobacco and oral health provide an ideal opportunity for the dental team to become involved in tobacco cessation strategies. Tobacco use is as much an issue for dentists as it is for other healthcare professionals but, if dental patients are to benefit from tobacco cessation interventions, dentists need to be clear about their roles nationally, locally and within the team in their own practice. If dentists truly want to care for the oral health of their patients, they must take tobacco cessation seriously. According to Final Operational guidelines TCC 2018 the dental health care provider can play an important role in indentifying and motivating the individuals while providing the primary care and later can collaborate with an interdisciplinary team to assist the Individual to quit the habit.

6. CONCLUSION

The present study concluded that adult population lack Knowledge and awareness regarding tobacco consumption. Therefore, the awareness programmes should be planned to educate general public to discourage such habits. It is very important to develop preventive strategies to reduce tobacco consumption. Preventive strategies especially focused towards adult population need to be initiated on emergent basis. This is more important for the developing countries like India, which have become the main targets of advertisement and promotional propaganda of various multinational tobacco companies. Here is a need to collect nationwide data on the use of different forms of tobacco by adult population and the factors leading to initiation of such harmful habits.

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