Original Article

Oral health condition among tobacco users and non users attending the Outpatient Department of Pioneer Dental College

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Abstract:

This cross sectional comparative study was carried out to compare the oral health condition among 150 tobacco users and non-users in the out patient department of Pioneer Dental College and Hospital, Dhaka. Majority 104 (69.3%) of the respondents were male, among them nearly two thirds were tobacco users and 46(30.7%) were female, majority were tobacco non users. Age distribution showed that majority of the tobacco users were above 26 years; where as majority of the non users were below this age. Tobacco users were found less among more educated respondents. About 33(22.4%) had stained teeth, most of them were tobacco users. Gingival was found more inflamed, tooth was more stained and loose, and tongue was found more coated among tobacco users. Dental caries was present in 83% and majority was from tobacco users. In majority of the non users periodontal pocket was absent, no white spot in buccal mucosa and condition of palate was normal.The study findings showed that oral health condition is better among tobacco non users than among users.

Introduction:

A public health approach to tobacco addiction should include preventing initiation of use, facilitating smoking cessation, and promoting abstinence from all tobacco products by current users. Any product that delivers nicotine confers health risks, yet smoked tobacco clearly confers far greater risks than smokeless tobacco. However, whereas scientists and public health experts acknowledge a gradient of harmfulness, the public may dichotomize products and behaviors as "harmful" or "safe." Applying the "harmful but safer" concept to the use of smokeless tobacco in comparison with active smoking poses a challenge to health educators and advertisers. Overstatement of harm could prevent smokers from switching to smokeless tobacco.[1]

The intense promotion of smokeless tobacco products to young men is clearly intended to foster initiation of use among this population. The legitimacy of harm reduction is predicted on effective targeting of *active* smokers and users of smokeless tobacco high in nitrosamine content. Ideally, a product should not be promoted or adopted among either nonusers of tobacco or active smokers capable of quitting. The Swedish experience indicates that *snus* does not serve as a gateway to smoking and appears to have contributed to dramatic declines in smoking as its use increased,[2] but the response to such products may well differ in the United States. If it is not possible to isolate and market to the group of smokers who could benefit, there may be net harm from these products.

If a harm reduction strategy is adopted, it will require a clear definition of relative health risks associated with low-nitrosamine smokeless tobacco products, perhaps coupled with further limitations on advertising of more dangerous products. A comprehensive strategy is needed from the outset to ensure that the product is marketed solely as a harm reduction tool. The ultimate test of any regulatory approach to these new tobacco products is its impact on public health; thus, careful documentation of patterns and consequences of use is required.

Materials and Methods:

It was a cross-sectional comparative study. The study lasted for a period of three months-April to June 2009. A work schedule has been prepared and followed it accordingly to complete the study in time. The study was conducted in the outpatient department on both male and female patients attending the Pioneer Dental College and Hospital, Dhaka. Due to shortage of time and resources the sample size of this study was limited to 150 respondents. Purposive sampling technique was

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followed to minimize time constrain. All the data were checked and edited after collection. Then data entered into computer, with the help of SPSS for Windows' XP program version 12.0. An analysis plan was developed keeping in view with the objectives of the study.

Result:

The cross sectional comparative study was carried out to compare the oral health condition among tobacco users and non-users in the Pioneer dental college and hospital in Dhaka city.

Total 150 respondents were interviewed and were selected purposively.

The findings of the study have been presented below in tables.

Table: 1. Distribution of the respondents by age group and habit of tobacco

Age group	Habit of tobacco uses				Total	
	Yes		No			
	N	%	N	%	N	%
<=25 yrs	7	4.7%	34	22.7%	41	27.3%
26-29 yrs	29	19.3%	9	6.0%	38	25.3%
30-32 yrs	12	8.0%	9	6.0%	21	14.0%
33-38 yrs	12	8.0%	9	6.0%	21	14.0%
=> 39 yrs	15	10.0%	14	9.3%	29	19.3%
Total	75	50.0%	75	50.0%	150	100.0%

Majority 41(27.3%) of the respondent's age was below 26 years, among them majority 34(22.7%) were tobacco non users. About 38(25%) respondents belonged to 26-29 years group, among them majority were tobacco users. The mean age of the respondents was 28.32 (SD±.365) years.(Table: 1).

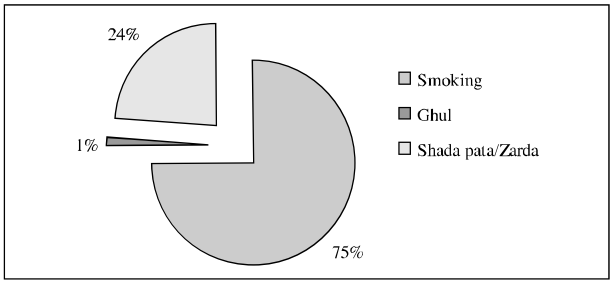
Table: 2. Distribution of the respondents by habit of tobacco and sex

Sex of the respondent	Habit of tobacco uses				Total	
	Yes		No			
	N	%	N	%	N	%
Male	61	40.7%	43	28.7%	104	69.3%
Female	14	9.3%	32	21.3%	46	30.7%
Total	75	50.0%	75	50.0%	150	100.0%

$^{2}1=0.158$ P=.001

Table 2 shows majority104 (69.3%) were male, among them 61(41%) were from tobacco users. About 46(30.7%) were female, among them majority were tobacco non users. Chi-square test was done(X^2=10.1588, P=.001) and found highly significant association w

Fig: 1. Distribution of respondents by type of tobacco



Majority 56(75%) used tobacco by smoking, 18(24%) by chewing shada/ jarda, about 1(1.3%) used as ghul (Fig: 1).

Table: 3. Distribution of the respondents by educational status and tobacco habit

Educational status	Habit of tobacco uses				Total	
	Yes		No			
	N	%	N	%	N	%
Illiterate	9	6.0	0	.0	9	6.0
Upto class 5	3	2.0	6	4.0	9	6.0
Upto class 8	5	3.4	8	5.4	13	8.7
Upto class 10	25	16.8	13	8.7	38	25.5
12 class and above	33	22.1	47	31.5	80	53.7
Total	75	50.0	75	50.0	150	100.0

Distribution of the respondents by educational status and tobacco habit shows that majority 80(54%) were 12 class and above educated, among them majority were non users and rest of the respondents 69(46%) were illiterate to educated up to class x, among them majority were tobacco users.

Chi-square test was done(X^2=35.2488, P<.001) and found highly significant association with tobacco use and education (Table: 3).

Table: 4 Distribution of respondents by condition of gingival

Condition of gingival	Habit of tobacco uses				Total	
	Yes		No			
	N	%	N	%	N	%
Normal	23	15.3%	29	19.3%	52	34.7%
Inflammation	41	27.3%	21	14.0%	62	41.3%
Elevation	3	2.0%	2	1.3%	5	3.3%
Gingivitis	8	5.3%	23	15.3%	31	20.7%
Total	75	50.0%	75	50.0%	150	100.0%

The table showed condition of respondent's gingival, majority 62(41%) were inflamed, among them majority were tobacco users. 52(34.7%) gingival was normal, among them majority were non users (Table: 04).

Table: 5. Distribution of respondents by tooth staining

Tooth staining	Habit of tobacco uses				Total	
	Yes		No			
	N	%	N	%	N	%
Yes	68	45.3%	37	24.7%	105	70.0%
No	7	4.7%	38	25.3%	45	30.0%
Total	75	50.0%	75	50.0%	150	100.0%

The table showed 105(70%) had staining of tooth, among them majority were in tobacco users (Table: 05).

The distribution by dental caries showed that 125(83%) was present, majority was from tobacco users. 25(17%) there was no caries, majority were in non users (Table: 06).

Table: 6. Distribution of respondents by dental caries

Dental carries	Habit of tobacco uses				Total	
	Yes		No			
	N	%	N	%	N	%
Yes	66	44.0%	59	39.3%	125	83.3%
No	9	6.0%	16	10.7%	25	16.7%
Total	75	50.0%	75	50.0%	150	100.0%

Table: 7. Distribution of respondents by periodontal pocket

Periodontal pocket	Habit of tobacco uses				Total	
	Yes		No			
	N	%	N	%	N	%
Yes	41	27.3%	21	14.0%	62	41.3%
No	34	22.7%	54	36.0%	88	58.7%
Total	75	50.0%	75	50.0%	150	100.0%

The distribution by periodontal pocket showed that 88(59%) was absent, majority was from tobacco non users 62(41%) had majority were from tobacco users (Table: 07).

Table: 8. Distribution of respondents by white spot in buccal mucosa

White spot in buccal mucosa	Habit of tobacco uses				Total	
	Yes		No			
	N	%	N	%	N	%
Yes	15	10.0%	5	3.3%	20	13.3%
No	60	40.0%	70	46.7%	130	86.7%
Total	75	50.0%	75	50.0%	150	100.0%

The distribution by white spot in buccal mucosa showed that 130(87%) was absent, majority was from tobacco non users. 20(13%) had and majority were from tobacco users (Table: 08).

Table: 9. Distribution of respondents by condition of palate

Condition of palate	Habit of tobacco uses				Total	
	Yes		No			
	N	%	N	%	N	%
Normal	75	50.0%	74	49.3%	149	99.3%
Ulceration	0	.0%	1	.7%	1	.7%
Total	75	50.0%	75	50.0%	150	100.0%

The distribution by condition of palate showed that 149(99%) was normal, and they were equal from both groups(Table: 09).

Discussion:

This cross sectional comparative study was carried out to compare the oral health condition among tobacco users and non-users in a selected hospital in Dhaka city. Total 150 respondents were interviewed and were selected purposively. Majority 104 (69.3%) of the respondents were male, among them nearly two thirds were tobacco users. About 46(30.7%) were female, majority were tobacco non users. This finding similar with our national statistics[3], where tobacco smoking for ladies is not a custom till now, most of the females take smokeless tobacco only.About one thirds respondent's age was below 26 years, majority were tobacco non users. About 38(25%) respondents belonged to 26-29 years group and majorities were tobacco users. About 56(75%) used tobacco by smoking, 18(24%) by chewing shada/ jarda, about 1(1.3%) used as ghul. This finding similar with our national statistics [3] Where majority of the tobacco users are smokers.About 62(41%) respondent's gingival were found inflamed, majority were tobacco users. 52(34.7%) gingival was normal, among them majority were non users. These

findings similar with the studies.[7,9,10] More than two third had staining of tooth, among them majority were in tobacco users. Loose teeth was absent in 60% of the respondents, majority was from tobacco non users. About 52% had normal tongue, majority was from tobacco non users, and 47% had coated tongue majority were in tobacco group. These findings similar with the studies. [7,8,] Dental caries was present in 83% and majority was from tobacco users and 17% had no caries majority was in non users. These findings similar with the study result.[4] About 59% respondents periodontal pocket was absent, majority was from tobacco non users. These findings similar with the findings.[5,5,6]

In 87% respondents there was no white spot in buccal mucosa, majority was from tobacco non users. The distribution by condition of palate showed that 99% was normal, and they were equal from both groups. Tooth decay was absent in 62%,of the respondents, equal numbers were from tobacco users and non users.

Conclusions:

This cross sectional comparative study was carried out to compare the oral health condition among 150 tobacco users and non-users.About two thirds of the respondents were male majority were tobacco users and rest one third were female, majority were tobacco non users. Age distribution showed that majority of the tobacco users were above 26 years; where as majority of the non users were below this age. Tobacco users were found less among more educated .Among the tobacco users, gingival was found more inflamed, tooth was more stained and loose, and tongue was found more coated. Dental caries was present in majority among the tobacco users.Among the non users, in majority of the cases periodontal pocket was absent, in buccal mucosa white spot was absent and condition of palate was normal.

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