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ASSOCIATION BETWEEN THE TOBACCO CESSATION TRAINING AND ORAL CANCER KNOWLEDGE LEVEL WITH TOBACCO USE RELATED BEHAVIOUR AMONG THE 4TH YEAR DENTAL UNDERGRADUATES- A CROSS SECTIONAL STUDY IN DHAKA, BANGLADESH

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Abstract:

Tobacco use is widespread in Bangladesh. Dental Professionals could act on different levels of tobacco control activities. AIM: to explore prevalence and attitudes towards tobacco and identified the association of tobacco use related behaviour with the level of tobacco cessation training and level of knowledge of oral cancer among 4th year dental undergraduates of Dhaka, Bangladesh.

***Methods**: This was a self reported cross-sectional questionnaire based survey. Global Health Professional Survey (GHPS) questionnaire and Humphris Oral Cancer Knowledge Scale questionnaire were used in this survey. Fourth year dental undergraduates studying in six dental colleges in Dhaka completed the questionnaire in April and May, 2007.*

***Results**: Response rate was 93%. Current prevalence of cigarette and chewing tobacco is 24% and 10% respectively. Male respondents were the predominant user of tobacco and had the less positive attitudes towards tobacco cessation than female. This study also shows that knowledge and training did not have any influence over tobacco related behaviour.*

***Conclusions:** In this sample of Bangladeshi dental students, high prevalence of tobacco use but strong positive attitudes towards tobacco cessation was reported. Review of policy and dental curriculum is needed as it is identified that training and oral cancer knowledge did not seem to have impact over tobacco use related behaviour.*

Introduction:

The use of chewing tobacco, cigarettes and biris are widespread in Bangladesh[1].A large scale population survey which was conducted by WHO in 2004 shows that prevalence of both smoking and chewing tobacco is substantially high amongst both men and women which is 58% and 42% respectively[2]. Tobacco is a common risk factor for many oral diseases which ranges from minor staining in the teeth to fatal oral cancer. This explicit relation between tobacco and oral diseases provide the rational basis of involvement of dental health professionals in tobacco control and cessation activities[3,4].

Health professionals who smoke usually give misleading information to patients to whom they used to urge for quitting smoking[5]. Evidence shows that, brief advice (up to 10 minutes) by clinician could contribute increase in 3% smoker stopped smoking cigarettes for 6 months or longer after intervention[6]. Dental Professionals could act on different levels of tobacco control activities. At individual level dentists could provide brief counselling for facilitating smokers to quit tobacco[6], at community level they could raise awareness about detrimental effect of tobacco and could promote

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establishment of smoke free public places[7] and at national level dental professionals and their organization could do advocacy by forming coalitions with NGOs and other professional groups to facilitate the passing of anti-tobacco legislations. In addition, dental professionals can influence to re-orient the health services-moving from individualistic tobacco cessation approach to holistic tobacco control activities[8].

Materials and methods:

This survey was done amongst the 4th year clinical dental students of all six dental colleges in Dhaka. All (237) 4th year students had the opportunity to take part. 221 fourth year students took part in this survey of whom 118 were female and 103 were male.

Two standardized validated self-administered questionnaires were used in this study as the foundation of data collection instrument which are Global Health Professional Survey (GHPS) questionnaire and Humphris Oral Cancer Knowledge Scale questionnaire.[9]

GHPS consists of a core questionnaire comprising six major topics which are covered by forty-three (43) questions. The six major topics are demographics, prevalence of cigarette smoking and other tobacco use, knowledge and attitudes towards tobacco use, exposure to environmental smoking, desire for smoking cessation, and training received regarding patient counseling on smoking cessation techniques.[10]

Before the commencement of the study, all the respected Principals of six dental colleges were sent a letter informing them the purposes of the survey and the data collection procedures emphasizing participator's anonymity and voluntary participation.

Students were also instructed beforehand how to complete the questionnaire. Data collection procedures were carried out in the months of April and May, 2007. Questionnaires were then checked to confirm that whether they are completed or not. There were finally two hundred and twenty-one completed questionnaires.

Data was entered in SPSS software, version 12. Before data entry, responses were coded as numeric expression for entry convenience. Response rate and demographics were calculated. Oral Cancer Knowledge scale questionnaires were recoded according to correct responses. Correct responses were weighed as one and wrong responses were weighted as zero. Following that, scores for individual module and whole score was computed. Oral cancer knowledge level was also recoded as below average (score 11-22) and above average (score 23-31).

Results:

The overall response rate is ninety-three percent (93.25 %). In the sample, there are more female respondents (53.39%, n=118) than male (46.61%, n=103).

Table I shows the current prevalence of both smoke and smokeless tobacco among the male and female 4th year dental undergraduates in Dhaka.

Table-I

Current tobacco use according to male and female respondents

Name of the dental college	Current use	
	Cigarette[1] n (%)	Other tobacco products (chewing tobacco, snuff etc)[2] n (%)
Female (n=118)	2(1.7)	3(2.5)
Male (n=103)	51(49.5)	19 (18.4)
Overall	53 (24)	22(10)

(1) P value=0.000

(2) P value=0.000

Females were predominantly other tobacco user (chewing tobacco, snuff etc) whereas males were the dominant cigarette user.

This wide difference of current prevalence of tobacco amongst male and female is highly significant (P value=0.000).

Table-II

Level of attitudes towards toward tobacco cessation according to male and female respondents

Gender	Types of attitudes towards tobacco cessation	
	Positive attitudes (score 10 and >10) n (%)	Negative attitudes (score <10) n (%)
Female(n=118)	83 (76.9)	25 (23.1)
Male(n=103)	49 (50.5)	48 (49.5)

P value=0.000

As the attitudes scores have a skewed distribution, responses were dichotomized either side of the median value of ten. A score of ten and above are considered as positive attitudes towards tobacco cessation and score below ten as negative attitudes. Nevertheless, more female respondents (76.9%) have positive attitudes compared to male (50.5%) respondents. This association is highly statistically significant (Table - II).

Table III demonstrates a higher proportion of users of tobacco (both smoking and smokeless) are observed in respondents who have higher level of training. This association in regards to both cigarettes and other tobacco products with the level of training is statistically significant.

Table IV demonstrates that proportion of current use of both smoking and smokeless tobacco is higher with high level of oral cancer knowledge level. However, this association between current use of tobacco and oral cancer knowledge level is not significant (P value higher than 0.05).

Table-III

Association between level of training and current use of tobacco

Level of training regarding tobacco cessation	Current use of cigarettes[1]		Current use of other tobacco products(Chewing tobacco, biris, snuff, pipe etc)[2]	
	Current smoker n (%)	Non smoker n (%)	Current user n (%)	Non user n (%)
Below average(score 0-2)	13 (15.1)	73 (84.9)	4 (4.7)	82 (95.3)
Above average (score 3-6)	36 (28.8)	89 (71.2)	16 (12.8)	109 (87.2)

[1] P value=0.021
[2] P value=0.047

Table -IV

Current user status of cigarettes and other tobacco products (chewing tobacco, snuff, bidis, pipes etc) according to oral cancer knowledge level

Oral Cancer Knowledge level	Current smoker/non-smoker of cigarettes[1]		Current prevalence of chewing tobacco, snuff, bidis cigars or pipes[2]	
	Non-smokern (%)	Smokern (%)	Non-usern (%)	Current usern (%)
Below average(score 11-22)	73 (80.2)	18 (19.8)	85 (93.4)	6 (6.6)
Above average(score 23-31)	87 (74.4)	30 (25.6)	103 (88)	14 (12)

[1] P value=0.320
[2] P value=0.192

*Valid data=208, Missing=13

Discussion:

According to Bangladesh Medical and Dental Council[11] , there are nine recognized dental colleges in Bangladesh. Therefore present study covered almost sixty-seven percent of the dental institutions of Bangladesh. In addition, the college response rate was hundred percent and the mean students response rate was ninety-three percent.

The study population was 4th year dental undergraduates, who are more likely to have higher interaction with the patients as part of their clinical dental training in comparison to other course years. Therefore, this study more resembles the results if conducted amongst practising dental professionals.

This study shows that Current prevalence of tobacco (smoking and other tobaccos, eg. Chewing tobacco, snuff, biris, pipes) are high among dental undergraduates in Bangladesh. Current prevalence of cigarette smoking and other tobaccos are twenty-four percent and ten percent consecutively. In four countries, GHPS Pilot Survey was conducted among dental students. Among these four countries, three of them reported higher current prevalence of cigarette smoking, ranging from 22% to 42% percent. In the present study, current prevalence of cigarette smoking lies within this range. Moreover, these findings are consistent with previous GHPS study among dental students in Bangladesh where current prevalence of cigarette use was 22.2%[12-15]. However, in regards to other tobacco (chewing tobacco, snuff, bidis, pipes) use, current prevalence (10%) whilst similar to Serbia (10.7%), lies higher than earlier findings reported for Bangladesh (3.4%).[14,15]

Overall; males are the predominant user of tobacco than female. However, males more likely to use cigarettes rather than other tobaccos whereas female are more likely to use other tobaccos, especially chewing tobaccos. The literature showed that males were the dominant users of cigarettes compare to their female counterparts, both in Bangladesh and in other countries with the exception of Serbian female dental students[5].

The current study demonstrates that respondents were inclined towards positive attitudes about tobacco cessation. However female respondents, who had a lower prevalence of tobacco use, had more positive attitudes towards tobacco cessation than male respondents. In GHPS Pilot Survey, in all participating countries health professional students had a significantly high level of positive attitudes towards tobacco[5]. Moreover, all studies conducted among dental students reported a similar trend[12-15].In Bangladesh, GHPS studies reported that dental students had more positive attitudes towards tobacco cessation and female students had the higher positive attitudes both in case of medical and dental students[16,17].

This survey also shows that knowledge and training did not have any influence over tobacco related behaviour. This is evidenced by the facts that respondents who had the high level of tobacco cessation training and knowledge about oral cancer tend to be more likely users of tobacco. This finding demonstrates that incorporation of more knowledge and training is not sufficient to control tobacco use among health professional students. This prioritizes the review the curriculum and policy for dental education in Bangladesh.

Currently in Bangladesh no dental colleges have any written official policy regarding banning tobacco in college buildings and hospitals and students are only verbally forbidden not to smoke in college premises. This study has identified that tobacco cessation training and oral cancer knowledge did not have any influence over respondents' smoking related behaviour. Therefore, providing only training and knowledge are not enough to control tobacco use among dental students. A rigorous tobacco control policy should be enforced both at local and national level. Thus, official written policy regarding banning tobacco use in college premises and in buildings of dental professional organizations should be adopted and enforced strictly. In addition, students should be well informed about this policy prior to enforcement and caution notices should be displayed in all important locations of the campus such as entrances. Moreover, selling of all kinds of tobacco products should be ban in college premises and this ban should be enforced by the college authority strictly.

However, tobacco control needs involvement of various sectors and organizations such as legislative, health, trade and commerce sectors and other important stakeholders related to tobacco. Evidence suggest that coalitions of different anti-tobacco organizations comprising people from different professional background could do advocacy effectively which might lead to passing anti-tobacco policy by government[18]. Therefore, dental and medical students should be trained in art of advocacy and to form coalitions with different professional group which would give them confidence and skills to involve actively in the anti tobacco activities.

In conclusion, this cross-sectional questionnaire based study identified that although respondents had a strong positive attitude towards tobacco cessation, the prevalence of tobacco is high. Training and oral cancer knowledge did not seem to have impact over tobacco use related behaviour. Therefore, it is very important to take measures to improve the dental curriculum which should include the adoption of a more holistic approach regarding tobacco control and cessation, reflecting the clear benefits of advocacy in an economically disadvantaged country.

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