

Substance Abuse, Nicotine Dependency & Intentions to Quit among Dental Students in Delhi-NCR

Abstract

INTRODUCTION: Tobacco use among young people has been referred to as both a "paediatric disease" and a "paediatric epidemic." Since vast majority of smokers begin using tobacco products well before the age of 18 years. It was predicted that if the same pattern of Tobacco use continues it would result in 250 million deaths among children and young adults, most of them living in developing countries. The study was carried with the aim to screen the dental students on the basis of substance abuse, nicotine dependence & quitting intentions among the abusers. **MATERIAL AND METHODS:** 18 Item questionnaire was constructed using three domains: Screening for Substance Abuse (socio-demographic and personal), Nicotine dependence using Fagerstrom Test of Nicotine Dependence and Intentions to quit. **RESULTS:** The results indicated that a total of 147 students were screened out of which 77 (52%) were smokers predominantly of age group (18-21). Most of the smokers were found to be hostlers. Many of them were smokers who were consuming cigarettes 50 (65%) among other forms of smoking. It was seen that 63 (82%) were also alcoholic in addition to smoking. Almost 29 (38%) drug abusers were involved in one or the other type of smoking. Majority of the drug substance abusers were Marijuana followed by Charas. It was found that pleasurable experience (32.4%) emerged as major reason for smoking. Nicotine dependence was observed in around 61 (79.2%) who were highly dependent (>8). Most of them 55 (71.4%) have at least thought once about quitting smoking predominantly due to personal willingness and 22 (28.5%) never thought even once to quit smoking due to enjoyment they derive from smoking. **CONCLUSION:** Preventive strategies, education and psychological counselling is urgently needed to reduce the burden of substance abuse, nicotine dependency among youths.

Key Words

Nicotine dependence; smoking; substance abuse; intention to quit

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INTRODUCTION

Substance Abuse has often been regarded as a personality disorder by many scholars, yet the manifestations of this abuse can be also be seen as a worldwide epidemic with evolutionary genetic, physiological and environmental influences that control the behaviour regarding its use.^[1] Our

society, in recent years has been plagued by the menace of substance abuse (tobacco, alcohol and drugs) especially in the younger generation aged less than 15 years.^[2] Infact, innumerable deaths occurring per year are due to this menace which could have been entirely controlled if proper attention had been paid on the younger population

Table 1: Prevalance of smoking habit with age

Age	Smoker	Non Smoker	Total
Less than 18 years	15 (48%)	16 (52%)	31 (100%)
18-21 years	41 (50%)	41 (50%)	82 (100%)
>22 years	21 (62%)	13 (38%)	34 (100%)
Total	77 (52%)	70 (48%)	147 (100%)

Table 2: Relation between Smoking & Living Arrangement

Living Arrangement	Smoker	Non Smoker	Total
Hosteler	51 (61%)	32 (39%)	83 (100%)
Day Scholar	13 (76%)	04 (23%)	17 (100%)
Living with family/guardian	08 (19%)	34 (81%)	42 (100%)
Living all alone	05 (100%)	00	05 (100%)

Table 3: Age of onset of smoking

Age of started smoking	Smokers
Less than 15 years	05(6.5%)
Less than 18 years	65(84.4%)
19-22 years	07(9.09%)
Total	77(100%)

Table 4: Reasons for smoking among university graduates

Reasons for smoking	Number	%
Pleasurable experience	25	32.4
Adds to intimacy in social gathering	20	26
Friends demand / Peer pressure	13	16.8
Just as a Habit without reason	11	14
Helps to deal with pressure	6	7.7
Time availability and boredom	2	2.5

Table 5: Relation between smoking and alcohol

Substance Abuse	Smokers	Non smokers
Alcohol	63(82%)	20(28%)
Non-Alcohol	14(18%)	50(72%)
Total	77(100%)	70(100%)

(aged 15-25 years) through proper education and counseling in schools and colleges they attend. The prevalence of substance abuse varies throughout the country, ranging from lowest of 13.9% in Punjab to the highest of 49.4% in Mizoram and it should be noted that these patterns are notorious for their ability to change over time.^[3,4] Although studies done on physicians and medical interns report a prevalence of substance abuse ranging from 32.5% to as high as 81.2% in North India.^[5] There is considerable evidence available to state that both licit and illicit substance use cause serious public health problems in the Indian population burdening the already overburdened health care sector.^[4] As studies on prevalence of substance abuse, nicotine dependence and intentions to quit amongst dental students are scarce and hence, this study is conducted.

MATERIALS AND METHOD

Data was collected from the time period of 1st January 2014 to 31st March 2014 through a pre-

tested and pre-validated questionnaire tested for its content and criterion validity. A total of 200 questionnaires were distributed amongst various dental students in different Dental Colleges in Delhi NCR. An Ethical clearance was obtained from the corresponding institution. The questionnaire consisted of 15 questions that assessed for various aspects regarding tobacco, alcohol and drug abuse amongst the dental students. Participation in the study was voluntary and anybody who did not wish to be a part of the study was excluded. The Chi Square test was used to find out the associations, if any. Data was tabulated and subsequently analysed using SPSS Version 21.06.

RESULTS

Of the 200 questionnaires distributed to dental population of Delhi NCR, around 147 dentists adequately filled & returned the questionnaires (response rate 73.5%). The study comprised of a total of 98 males and 49 female populations belonging to different age groups. Upon assessing

Table 6: Relation between drugs and smoking

Substance Abuse	Smokers	Non Smokers
Drugs	29 (38%)	10 (14%)
Non Drugs	48 (62%)	60 (86%)
Total	77 (100%)	70 (100%)

Table 7: Prevalence of different types of drugs

Types of Drug Abuse (Single or in Combination)	Total
Marijuana	24
Bhang	11
Charas	17

Table 8: Nicotine dependency assessed by Fagerstorm Test

Score of Nicotine dependency	Number	%
Less than 4	0	0
5 to 7 points	16	20.7
8 to 10 points	61	79.2

Table 9: Intention to quit/ Non-quitting smoking

Intention to quit	Yes	No
Number	55	22
%	71.4%	28.5%

Reasons for quitting smoking

	Number	%
Personnel willingness to quit	35	63.6%
Pressure and support of family/friends	10	18.10%
Taking counseling/NRT	10	18.10%

Factors which restrained from quitting smoking

	Number	%
Craving for cigarettes	05	22.7%
Enjoyment of smoking	10	45.4%
Handling stress/bad moods/Exams	06	27.4%
Disrupt social relations	01	4.5%

the level of tobacco abuse across different age groups, it was found out that (52.38% n=77) were smoking (47.62% n=70) were non-smoking (Table 1). Most of the population who were into smoking belonged to the age group of 18-21 years (50% n=41). After this age group, it was found out that the young generation aged less than 18 years had the second highest number of smokers (48% n=15) which is quite alarming (Table 1). The data revealed that out of 77 students who were smokers were predominantly hostellers (61% n=51). The population living with their Parents/ Local Guardian showed a less frequency of smoking with only (19% n=8) of the population being smokers (Table 2). Upon asking the population about the age at which they started smoking, most of the responses belonged to the age group of less than 18 years (85.4% n=65) (Table 3). When asked about the reasons as to why did they start smoking, most of them (32.4% n=25) cited pleasurable experience as the main reason followed by (26% n=20) of the

population agreed to have done it because they think it “adds to intimacy in social gathering” (Table 4). The use of cigarettes was the highest amongst students (65% n=50) followed by bidi (19% n=15) & hookah (13% n=10). In terms of different adverse habits associated with smoking, statistics revealed that 63 students (81.9% n=63) out of 77 smokers were alcoholics and (71.4% n=50) were non-alcoholics out of 70 non-smokers as they did not consume any tobacco related product or alcohol. We observed a significant association between tobacco and alcohol use amongst students ($p=0.02$) (Table 5). Amongst the 39 drug users, 29 (74.6%) people consumed tobacco as compared to 60(85.6%) of non drug, non tobacco consumers. No significant difference was seen amongst drug use associated with tobacco (Table 6). The study also tried to assess the different types of drugs used by the population (single use, or in combination) and identified a total of 52 drug users along with forms of drug consumed. As the study data puts the

number of drug users to be 39, it can be assumed that 13 people use certain drugs in combination which can have a more lethal effect than using a single drug in combination with tobacco (Table 7). Nicotine dependence was observed in around (79.2% n=61) who were highly dependent (>8) on tobacco (Table 8). When questions were asked related to the intention to quit habit, most of them 55 (71.4%) have at least thought once about quitting smoking predominantly due to personal willingness and 22 (28.5%) never ever thought of quitting even once due to enjoyment they derive from smoking (Table 9).

DISCUSSION

The use of Tobacco, Alcohol and Drugs is being a major risk factor to many diseases. In spite of this being known to the dental profession, it is very alarming to observe that dentists in Delhi NCR are habituated to these substances. It was found that a total of 52.4% people consumed tobacco were associated with alcohol dependence in 81.9% students and drug dependence in 37.66% students. The high prevalence rate of smoking is contradictory to the findings of various authors who quoted that smoking in India to be 28.5% and 30.6% respectively.^[3,7] Living arrangements of the students was considered as an important factor to determine their smoking habits as, students living alone or in hostels had a greater prevalence of smoking due to “no restrictions” imposed over them as compared to students who lived with their Parents/ Local Guardians who provide a “smoke-free environment” in their homes as observed in similar studies.^[8-10] Also, the fear of getting caught by their parents/ Local guardians leads to a lesser prevalence of smoking in such populations. In this study, the majority of smokers belonged to the age group of 18-21 years (50%); followed by the age group of less than 18 years (48%). It is an alarming issue as this is the time when the students are particularly in school and become dependent on tobacco and other substances and later find it difficult to quit the habit.^[11-13] This is a grim picture as the prevalence of tobacco uptake varies from 1.9% in Delhi to 75.3% in Mizoram leading to various serious health consequences.^[14,15] The main reasons to take up smoking in the first place by students had been “Pleasurable experience”, followed by it “adding to intimacy” in social gatherings & peer pressure. This is in agreement to certain authors who state that, the peers especially in younger population form an important part and

they tend to do things that help them socialize with them.^[16,17] This may be one of the reasons, that a knowledge based tobacco cessation programme may not be entirely successful as it is equally important to include, educate and motivate the peers to quit the habit as a whole.^[16] Amongst the various forms of smoked tobacco product used, cigarette (65%) was the most common, followed by bidi (19%), hookah (13%) and other forms (3%). It has been generally found that prevalence of bidi consumption is higher in rural areas and cigarette consumption is seen more in urban areas.^[3,7] The prevalence of substance abuse & alcohol dependence in the present study was reported as alcoholism in 63 (81.9%) students and drug dependence in 29 (37.66%) students. It is low as compared to a similar study comparing tobacco smoking, alcohol and drug abuse patients and found out that 89.6% of the alcohol abusers and 90% of the drug users reported smoking cigarettes.^[18] In the year 2004, a systematic effort was made through the National household survey of drug use which found that 21.4% of the population consumed alcohol and cannabis, which is termed as “Bhaang” and “Charas” in India is consumed by 3% of the population.^[19] In Uttar Pradesh, a prevalence of 22.8 per 1000 were dependent on alcohol or drugs was reported in Lucknow alone, a prevalence of 18.55 per 1000 was reported.^[20,21] The results of this study indicate a steep rise in the use of alcohol and drugs among students. In our study, it was observed that the probability of alcohol intake increases with increasing amounts of tobacco smoked which is in conjunction with the various studies.^[22,23] It was also observed that Nicotine dependence is more likely to exist among students consuming alcohol than among non-alcoholics. This finding is synonymous with the study done by Hashimoto *et al.*^[24] It was also observed that there was more alcohol consumption among smokers than among non-smokers as the same picture was also seen in study done by Carmody *et al.*^[25] Common reasons may be active both in the relationship between smoking and nicotine dependence, and between smoking and alcohol intake. A high consumption of one substance may entail a high consumption of the other one. From this, it can be hypothesized that dependence on both substances is probable.^[26,27] The univariate data analysis reveals a clear relationship between smoking and the alcohol consumption. It was observed in the present study that 70 students were smoking before the tender age

of 18 years. The data supports that smoking onset at a young age is particularly harmful. Those individuals who started smoking at the age of 15 or younger were more likely to be dependant than individuals with an older onset of smoking age. Those who start smoking early in life might be a subgroup prone to becoming co-dependent.^[27] This subgroup might consist of individuals who are vulnerable to severe dependence and prevention methods practiced so far as among youth that might be inappropriate for this subpopulation. Early onset of smoking probably aggregates a large part of tobacco and alcohol attributable diseases. In all, the data supports the findings^[28,29] which show comorbidity between nicotine dependence and alcohol intake. It was also observed that pleasurable experience adds to intimacy in social gathering and peer pressure were the main reasons behind smoking which was in accordance with the study done by Kakodkar VP, Bansal SS.^[30]

LIMITATIONS

Some of the limitations of the present study are that it is conducted in Delhi NCR with particularly low preventive efforts and high tobacco/alcohol consumption compared to countries with large preventive efforts, where more quitters are to be expected. All the information has been gathered from self-statements and no biochemical verification was made. There may have been underreporting of dependence symptoms, although other evidence suggests that in population-based studies no risk of denial of smoking exists which would significantly change the results.

CONCLUSION

This study reports a high percentage of tobacco and alcohol abuse among dental students. Most of the students picked up the habit in their adolescence years, i.e. while they were in school. More studies need to be done to assess the nature of substance abuse in the present population and emphasis on prevention strategies now needs to be focused in schools to prevent further abuse of these substances. This shall in turn, help us reduce the burden of various diseases that occur as a result of substance abuse and provide a much healthier, and abuse free youth in Delhi NCR.

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