Oral Hygiene Practices, Smoking Habits and Self-Percieved Oral Malodor among Dental Students

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Abstract

Objective: 1.To assess the oral hygiene practices of dental students. 2. To assess the smoking habits among dental students. 3. To assess the self-perception of bad breath. 4. To determine the differences of self perception of halitosis and oral hygiene practices among male and female students.

Materials and Method: This descriptive study contains a questionnaire to assess the self perceptionof bad breath, tooth decay, dryness of mouth, bleeding gums, prevelance of smoking habits, oral hygiene practicesamong the dental students of saveetha dental college, Chennai. 386 students were randomly involved in the study to achieve the sample size. The data was collected and statistically evaluated using SPSS software.

Results and Conclusion: The response rate was 92.5%. Smoking was prevalent among 8% of male students, out of which 83% have been smoking for the past 5 years. Almost 94% had a desire to quit tobacco. 68.7% brushed twice daily while 4.7% students brushed more than two times. 93.3% dental students are found to be using other oral hygiene aids. 42.7% students used mouthwash whereas 23.3% use tongue cleaner. Dental caries was prevalent among 25.6% of students, bleeding gums among 7.5% and dryness of mouth among 6.7%. 27% students could perceive oral breath, whereas only 5% students experienced interference at their work. Morning breath was common among 64.5% of students, both male and female. The correlation between tobacco usage and its effect on oral cavity was assessed. 17.2% of students who use tobacco have reported bleeding gums and 20.7% smokers reported dryness of mouth.

Keywords: *oral malodor, smoking habits, oral hygiene practices, halitosis*

Introduction

Oral diseases are related to the behavior of an individual, and its prevelance has been found to decrease with improvements in oral hygiene.[1] Oral health knowledge is considered to be an essential prerequisite for health-related behavior.[2]Oral health is as such an integral part of general health.[3]

Halitosis is a term used to describe any unpleasant or disagreeable odor in the expired air. Many researches and reviews have put forth that persistent halitosis is more commonly associated with several intrinsic factors of oral cavity such as tooth decay, periodontal diseases, poor oral hygiene, oral mucosal diseases and disorders of other systems of the body such as gasterointestinal disorder, respiratory disorder, renal disorder and also certain medications.[4][5][6][7]

In healthy individuals, the most frequent sources of halitosis include bacterial reservoirs such as dorsum of the tongue, saliva and periodontal pockets.[8][9] Oral malodor is not considred a disease per se but rather a social stigma that can cause personal discomfort and embarrassment among other people.[6][9]

Tobacco use is a major risk factor for many health related problems.[10] The World Health Organisation

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(WHO) estimates that over one billion individuals are smoking tobacco currently, and approximately five million deaths are attributed to tobacco in a year.[11] Tobacco use has many oral adverse effects.[10] Despite the knowledge that tobacco use contributes to serious health problems, the prevelance of tobacco use continues to be increasing.[12] Physicians are generally considered as role models for their patients.[13] They also play a major role in encouraging the patients to quit tobacco use.[14]Oral health care providers are considered more responsible to enhance oral health.[3] They can do so only if they have a sound oral health themselves.

The purpose of this study was to estimate the prevalence of oral hygiene practices, oral malodor and smoking habits among the dental students. This study also aims in determining if there is any difference betweenself perception of halitosis and oral hygiene practices among the male and female dental students.

Materials and Method

This descriptive study was carried out on 386 male and female dental students from saveetha dental college and hospitals, Chennai. Aself administered questionnaire was distributed among 58 male and 328 female students to assess the self-perception of oral health, awareness of bad breath, treatment received for bad breath, prevelance of oral hygiene practices, dental caries, bleeding gums, dryness of mouth and smoking habits.aprevalidated and pretested[9] questionnaire was developed.

The questionnaire was distributed to the above mentioned dental students. The identity of the students was not disclosed and the confidentiality of the identity was assured to them. Prior to the start of the study, Ethical approval was obtained from the Scientific Review Board of Saveetha University. A written informed was obtained from every participant and their personal identity were masked during data processing and analysis. Sufficient amount of 15minutes was provided for filling up the questionnaire. Following this, data was statistically analyzed using Statistical Package for Social Sciences(SPSS) for windows software. Descriptive statistics using percentage and N and inferential statistics done using chi square test. A p value of <0.05 was to be considered significant.

Results

A total of 386 dental students from year 1 to 4, dental interns and post graduates responded to the questionnaire,(figure 1) of which 58 were male and 328 were female. The sample consisted of male and female students from first year(78 students), second year(77 students), third year(73 students), fourth year(91 students), dental interns (39 students) and PG's (28 students).The sample size was calculated based on the study conducted by Setia et al. Approval from SRB prior to the study was granted by the college. Pre-tested and prevalidated questionnaire referred from the study conducted by Setia et alwas used. The incomplete questionnaires were not included in the study and only those duly filled were considered valid and included in the study. All the respondents were in the age group of 17-31 with a mean age of 20.47 years.

Only 8% (31 out of 386) of the total respondants reported with the habit of smoking of which all of them were males(31 out of 58) and no one was found to use smokeless tobacco. Most of these cigarette smokers have been smoking for the past 5 years(83%) and 16% for the past 5 to 10 years. 30 out of 31 cigarette smokers smoke less than 5 cigarettes per day. 96.7% students reported that they initiated smoking during college whereas 3.2% initiated smoking during their schooling. Most smokers indicated that they smoke because of pressure(N=11, 35.4%), as a reward(N=8, 25.8%), leisure/boredom/ lonliness(N=8, 25.8%) and as experimentation(N=4, 12.9%). Almost everyone(N=30, 96.7%) expressed a desire to quit tobacco in the future.

The results revealed that all participants brush their teeth daily. 26.7% of individuals brushed only once a day, 68.7% brushed twice a day and only 4.7% brushed more than twice a day. 42.7% changed their brush once in 3months, 48% changed once in 3 to 6 months and 8.5% changed after 6 months. 81% students reported with rinsing habit after every meal. Only 8.8% students used dental floss whereas 1.6% used interdental brushes. 42.7% dental students used mouthwash as additional oral hygiene aids and 23% used tongue cleaners. Self assessed oral malodor, dryness of mouth, dental caries and bleeding gums were assessed among the dental students.(Table 1) 26.9% dental students reported with self reported halitosis of which, early morning bad

breath was reported by 64.5% . (figure 2)

The correlation of tooth decay and bad breath with tobacco usage was assessed and there was no statistically significant difference between the two groups whereas the correlation between bleeding gums and dryness of mouth with tobacco usage was assessed and was found to be statistically significant.(Table 2) It was found that, out of 104 students who reported with bad breath, 55% were those students who brush twice a day and 35% students who brush only once a day. This result showed statistical significance.(Table 3)

FIGURE1: distribution among UG/PG students

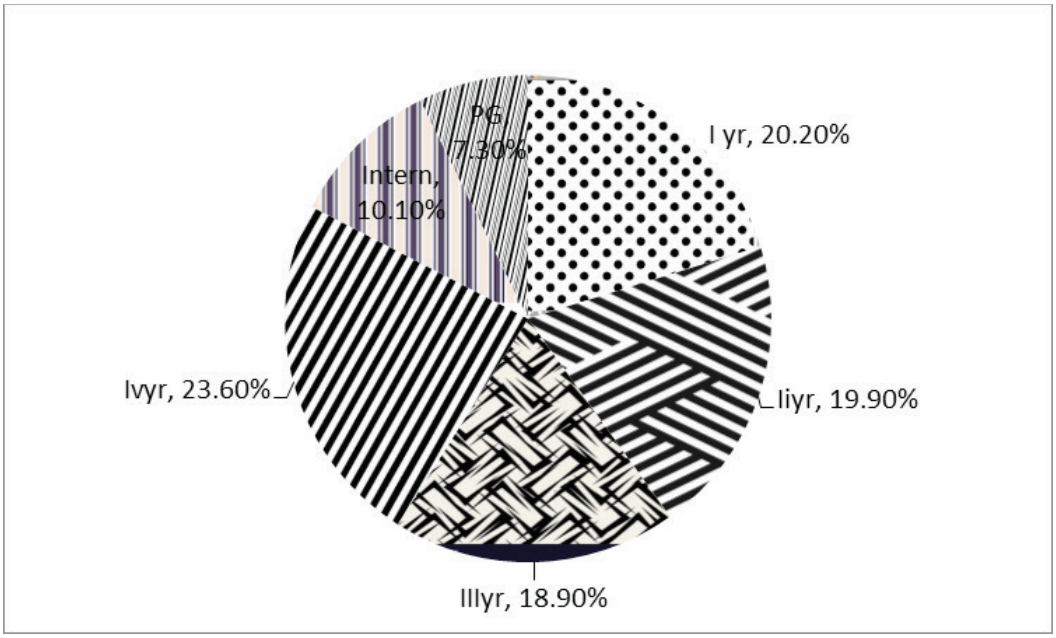

Figure 2: time of bad breath

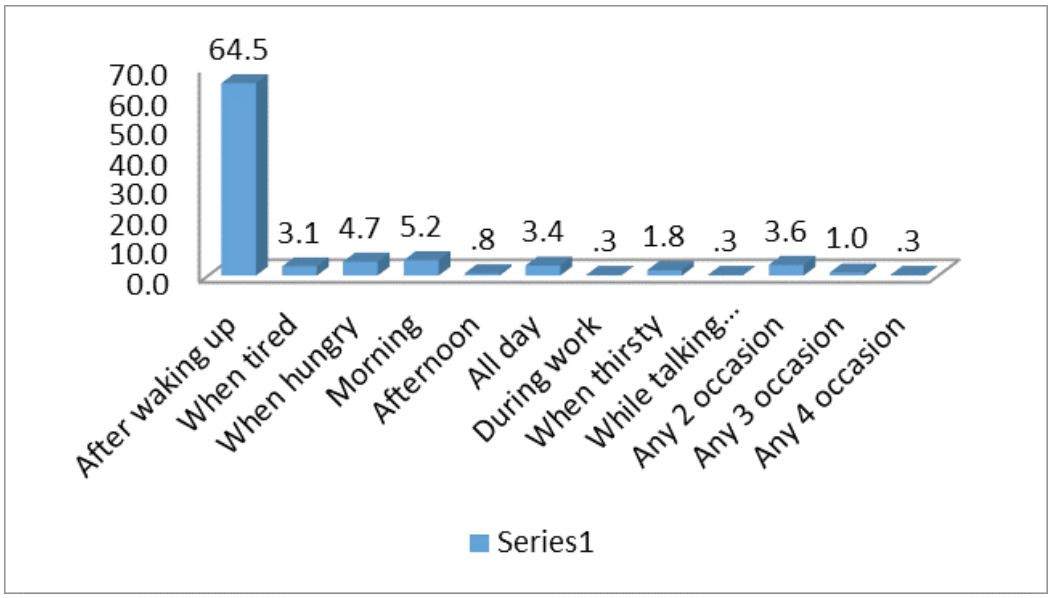

Table 1:prevalence of oral hygiene practices among dental students

					Total	
	MALE		FEMALE		n	%
Brushing using toothpaste and toothbrush	58	15%	328	84.9%	386	100%
brushing once daily	18	4.6%	85	20%	103	26.70%
Students brushing twice daily	38	9.8%	227	58.8%	265	68.70%
Students brushing more than twice daily	2	0.5%	16	4.14%	18	4.70%
Students changing their brush within 3 months	28	7.2%	137	35.4%	165	42.70%
Students changing their brush within 3-6 months	29	7.5%	159	41.1%	188	48.70%
Students changing their brush after 6 months	1	0.25%	32	8.2%	33	8.50%
Students having rinsing habit after meal	46	11.9%	268	69.4%	314	81.30%
Students using dental floss	5	1.2%	29	7.5%	34	8.8.%
Students using mouthwash	16	4.14%	149	38.6%	165	42.70%
Students using interdental brushes	0	0%	6	1.5%	6	1.60%
Students using tongue cleaner	15	6.47%	75	19.4%	90	23.30%
Students using any two oral hygiene aids	16	4.14%	38	9.8%	54	14%
Students using any three oral hygiene aids	1	0.25%	8	2%	9	2.30%
Students having tooth decay	20	5.18%	79	20.4%	99	25.60%
Students having bleeding gums	9	2.3%	20	5.1%	29	7.50%
Students having dry mouth	9	2.3%	17	4.4%	26	6.70%
Students who smoke	29	7.5%	0	0%	58	15.00%

Table2: Correlation between tobacco usage and bleeding gums

	TOBACCO USAGE				TOTAL	
	YES		NO			
	n	%	n	%	n	%
BLEEDING GUMS	5	17.2%	24	82.8%	29	100%
DRYNESS OF MOUTH	6	20.7%	23	79.3%	29	100%

Table3: Correlation of brushing techiques and oral malodor

BRUSHING FREQUENCY	ORAL MALODOR				TOTAL	
	YES		NO		N	%
	n	%	n	%		
ONCE A DAY	36	34.6%	67	23.8%	103	26.7%
TWICE A DAY	58	55.8%	207	73.4%	265	68.7%
MORE THAN TWO TIMES A DAY	10	9.6%	8	2.8%	18	4.7%

Discussion

The sample size calculated based on the study conducted by Setia et al was 417. Only questionnaire which were duly filled with all details and those which was returned back were considered valid. The response rate was found to be 92.5% (N=386) The rationale behind this study was to assess the oral hygiene practices, smoking habits and self perception of bad breath among the dental students.

In 2003, Almas el at conducted a study to determine the prevelance of oral hygiene practices and halitosis among undergraduate students from King Saud University, College of Dentistry. The results revealed that female students had better oral hygiene practices , significantly less self-reported oral bad breath and smoked less compared to male students.[9]

In as similar study conducted by Setia et al in 2014, the prevelance of oral hygiene practices, smoking habits and halitosis among undergraduate dental students and correlation between oral hygiene practices, oral health conditions to the prevelance of self perceived oral malodor was determined. They proved a direct correlation between oral hygiene practices and oral health conditions with halitosis. Females exhibited better oral hygiene practices and less prevelance of halitosis as compared to male students.[3]

Though the response rate is high we were not able to cover all the students into this study. The sample was based on convenience. This was found to be a limitation of this study. Being a questionnaire study, there are high chances of socially desirable answers being given by the participants. The expected outcome of tobacco usage was found to be very less and this could be one of the reasons.

Conclusion

Within the limitations of this study, the following conclusions can be drawn regarding oral malodor:

- Smoking was prevalent among 8% of male students, out of which 83% have been smoking for the past 5 years. Almost 94% had a desire to quit tobacco.

- Most of the students (68.7%) brushed twice daily while 4.7% students brushed more than two times.

- 93.3% dental students are found to be using other oral hygiene aids. 42.7% students used mouthwash whereas 23.3% use tongue cleaner.

- 27% students could perceive oral breath, whereas only 5% students experienced interference at their work.

- Morning breath was common among 64.5% of students, both male and female.

- 17.2% of students who use tobacco have reported bleeding gums and 20.7% smokers reported dryness of mouth.

- 34.6% of students who brushed once daily reported with oral malodor whereas it was reported by 55.8% of students who brushed twice daily.

Ethical Clearance- Taken from Ethical committee of Saveetha University.

Source of Funding- Self

Conflict of Interest- Nil

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