

ORIGINAL INVESTIGATION

The Prevalence of Tobacco Use and the Factors Influencing in Students Studying at Two Dentistry Faculties in Turkey

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Abstract

OBJECTIVES: The objective of this study was to determine the pattern and effects of tobacco and tobacco products use among students of dentistry.**MATERIAL AND METHODS:** A cross sectional study was performed in the Dentistry Faculty of Ege and Dicle Universities between April and May 2013. All freshmen and senior year students receiving education in both universities were included into the study (n=321). A questionnaire consisting of 26 questions was used to determine the smoking habits of the students and the influencing factors regarding this habit. Students replied the questions under supervision.**RESULTS:** A survey was conducted among 298 students out of 321 who were attending both universities. 46.6% of the participants were female and 53.4% were male. Smoking prevalence of the students was 29.9%. It was 19.9% in freshmen students and 45.8% in senior students. According to the first class of students in the fifth grade students in the prevalence of smoking in was found to be highly statistically significant ($p < 0.001$). Among other tobacco products the following was identified as mostly used: waterpipe, also known as narghile (27.4%), cigarwraps (9.7%), cigar (9.4%) and smoking pipe (2.0%). While 22.5% of the students stated that they started smoking after the age of 15, 36.0% started between the ages of 15 and 18 and 41.5% after the age of 19. The rate of smoking in the house was significantly higher ($p < 0.001$) among smokers than non-smokers. While 78.7% of the students stated that they would like to quit, 64.3% tried once or more to quit.**CONCLUSION:** Smoking habit was found to be higher among medical students than the social average. Smoking is more frequent in higher classes. From early years onwards, students of dentistry should be intensively educated regarding the harmful effects of tobacco on health, and efforts should be made to prevent and control of tobacco epidemic.**KEYWORDS:** Dentistry, student, tobacco, cigar**Received:** 12.06.2015**Accepted:** 08.09.2015

INTRODUCTION

Tobacco use is a major public health problem in the world, and especially in developing countries [1-3]. It is estimated that there are 1.3 billion smokers worldwide, and if no intervention is carried out, this number will reach 1.7 billion in 2025 [4]. Tobacco and tobacco products rank first among the causes of preventable death. Standard cigarettes are the most commonly consumed tobacco type. 5.4 million people die of the use of these products every year, and it is expected that this number will rise to 8 million in 2030 [5]. Physicians, dentists and other health professionals socially play an increasing and vital role in diminishing the risk of tobacco-related health issues [6].

It has been reported in the studies conducted overseas that the prevalence of tobacco use among the health personnel is lower than that of the general population in the same age group [7-9]. However, it is seen Turkey that the prevalence of tobacco use is high in general and that health professionals have a similar rate of tobacco use with that of the general population [10]. It has been detected in various studies that health professionals usually start smoking in their years as students [8,9,11,12].

It is seen that physicians, dentists and nurses who are expected to contribute to the control of tobacco and tobacco products have a high prevalence of tobacco use and that this prevalence is not different from that of the general population [4,5,10]. It was reported that the prevalence of smoking among physicians was lower in countries that were successful in reducing the habit of tobacco consumption [13,14].



While Smith et al. have stated in a study they carried out among students of dentistry in 19 countries that the rate of tobacco use is under 10% in modern countries, such as Canada (3%), the United States of America (4%), Brazil (6%), and England, the same rate is under 20% in countries like India (10%) and Australia (13%) [15]. The same researcher has indicated that nearly half of the students of dentistry in countries like France (33%), Bulgaria (34%), Serbia (43%), and Greece (47%) use tobacco products.

The curriculum of many dentistry faculties in Europe include the telling of the harmful effects of tobacco products to students, and students are asked to take active part in the control of tobacco [16].

This study was conducted in two different dentistry faculties (Dicle and Ege Universities) of Turkey with the purpose of determining tobacco use among freshmen and senior year students of dentistry, who will have a vital part in the control of tobacco in the future and identifying the factors affecting its use.

MATERIAL AND METHODS

This cross-sectional study was carried out in the Faculties of Dentistry of Ege and Dicle Universities between April and May, 2013. All freshmen and senior year students of both faculties were included into the study ($n = 321$). The reason for choosing these two faculties was due to the fact that the researchers worked in these faculties, and thus, necessary permissions were easier to receive.

The Variables of the Research

Dependent variable: The state of using tobacco products. It was grouped as defined below.

Users of tobacco products: The students who stated that they smoked 5-10 cigarettes and/or cigarwraps a week, the ones that smoke waterpipe, pipe and cigar once or twice a week, and the ones that regularly smoked.

The ones that quit smoking: The students who had not smoked in six months.

The ones who tried smoking: The students who tried smoking but are not currently smoking.

Non-smokers: The students who had never smoked.

Independent variables: Age, gender, the age to start using tobacco products, the duration of use, the cessation of use, the state of tobacco use in the house, the presence of school policies regarding tobacco products.

The data were collected through a questionnaire consisting 26 questions, to which the students replied under supervision.

Statistical analysis: SPSS for Windows 15.00; SPSS Inc., Chicago, IL, USA package program was used to analyze the data. Continuous variables and rates were analyzed with t-test and chi-square test, respectively.

Written permission was obtained from the authorized committees of the faculties where the study was carried out.

Informed consent was taken from the students who wished to participate in the study, and the questionnaire was filled out by the students themselves.

RESULTS

Out of the 321 freshmen and senior year students between the ages of 17 and 28, who receive education in the dentistry faculties of Ege and Dicle Universities, 298 (92.8%) participated in the study. Mean age of the students was 20.93 ± 2.35 , and 184 (61.7%) of them were from the dentistry faculty of Ege University and 114 (38.3%) from Dicle University. The freshmen and senior year students of both faculties included 180 (60.4%) and 118 (39.6%) students, respectively, and 139 (46.6%) of these students were females and 159 (53.4%) were males.

Eighty-nine (29.9%) of the students included into the study were using tobacco products. 19.4% of these students were females and 39.0% were males, and a statistically significant difference was detected between gender and tobacco product use, which was higher in males ($p < 0.001$). 32.6% and 25.4% of the students using tobacco products were from Ege and Dicle Universities respectively, and a significant difference was not detected as regards the state of tobacco product use between the two universities ($p < 0.189$). 19.4% and 45.8% of the students of both faculties using tobacco products were freshmen and senior year students respectively, and it was determined that senior year students use more tobacco products significantly ($p < 0.001$). When the smoking state of the freshmen and senior year students of both universities were considered, the freshmen and senior year rates were found respectively as 21.6% and 49.3% ($p < 0.001$) for the Dentistry Faculty of Ege University, whereas the same rates were found respectively as 15.6% and 40.0% for the Dentistry Faculty of Dicle University. The difference was found statistically significant among the freshmen and senior year students of both faculties ($p < 0.001$, $p = 0.004$ respectively).

Presence of someone using tobacco and tobacco products in the houses or the places where students that use tobacco live was 48.3%, tobacco use of the guests with/without permission was 67.4% and tobacco use in every room of the house or in an exclusive place for tobacco consumption was 64.4%. The rate of tobacco use indoors in the school was detected as 12.1%. These rates were higher than the same circumstances of students who do not use tobacco, and a statistical difference was detected.

Seventy of the 89 students using tobacco (7.7%) stated that they were thinking of quitting. Forty-five of these 70 students (64.3%) had attempted to quit smoking once or more than once. Twenty-three of the students who attempted to quit smoking (51.4%) indicated that they had tried to quit smoking in the last one year. When factors affecting the decision of quitting smoking was considered, it was seen that 71.1% of the students attempted to quit smoking as a result of their own decisions, 17.9% as a result of the effect of family and friends, 4.4% as a result of medical issues, 2.2% as a result of indoor prohibition, and 4.4% as a result of

having been influenced by the public service advertisements shown on television. Twelve of the 70 students who were thinking of quitting smoking (17.1%) stated that they used a scientifically proven method (Table 1).

When students using tobacco products were assessed as regards the state of tobacco product use, the rate of the students who had never used tobacco products was 49.0%, the rate of regular users was 18.2%, the rate of occasional users (5-10 cigarettes a week) was 11.7%, the rate of the students who had tried tobacco was 18.5%, and the rate of quitters was 2.7%. The prevalence of use of other tobacco products besides cigarettes was as follows: waterpipe (27.4%), cigarwraps (9.7%), cigar (9.4%), and pipe (2.0%) (Table 2).

When the age to start using tobacco was considered, it was determined that 22.5% of the students started using tobacco before the age of 15, 36.0% between the ages of 15 and 18, and 41.5% after the age of 19. It was seen that the prevalence of tobacco use also increased with increasing age, which was statistically significant ($p < 0.001$). 25.8%, 66.3% and 7.9% of these students stated that they had been using tobacco for a year, 2-5 years, and for 6 years and more, respectively. 28.1%, 34.8% and 37.1% of the students stated that they preferred local, foreign and both brands, respectively (Table 3).

DISCUSSION

The rate of tobacco use among the students included into the study (29.9%) was higher than the rate of tobacco use in Turkey (27.1%)[17].

Keskinler et al. found in a study they conducted in 9 faculties of Atatürk University in 1999 that the rate of smoking of dentistry students was 43.9%, which was the highest rate among the students of other faculties [18]. Since our study found the rates of tobacco use lower than the study of Keskinler et al. which was conducted 14 years prior to ours, it was interpreted that there was a decrease in tobacco use among dentistry students parallel to the decrease in tobacco use in the society with the help of the tobacco control studies carried out until today. However, Kaptanoglu et al. detected in their study investigating the state of smoking of students of Marmara University in 2012 that the rate of dentistry students smoking regularly every day was 18.9% (19). The rate of dentistry students smoking regularly every day was found as 18.2% in our study, which is similar to that of Kaptanoglu et al.'s. It is seen that there has been no change in the rate of tobacco use among dentistry students in the last two years. According to Turkey 2012 Global Adult Tobacco Research report, regular tobacco use every day was 23.8%, which was a higher rate than that of the dentistry students determined in the study [17].

Table 1. The factors affecting the state of smoking of the students studying in both dentistry faculties

Characteristics	State of smoking				Total (n= 298)		p
	Smokers* (n= 89)		Non-smokers (n= 209)				
	n	%	n	%	n	% ^b	
University							
Ege	60	32.6	124	67.4	184	61.8	0.189
Dicle	29	25.4	85	74.6	114	38.2	
Gender							
Female	27	19.4	112	80.6	139	46.6	0.001 ^a
Male	62	39.0	97	61.0	159	53.4	
School year							
Freshmen	35	19.4	145	80.6	180	60.4	0.001 ^a
Senior	54	45.8	64	54.2	118	39.6	
Use of tobacco products in the house							
None	36	23.4	118	76.6	154	51.7	0.007
Existent	53	36.8	91	63.2	144	48.3	
The state of tobacco use of the guests in the house							
Not allowed	17	17.5	80	82.5	97	32.6	0.001
Smokes by receiving permission	37	28.0	95	72.0	132	44.3	
Smokes by not receiving permission	35	50.3	34	49.3	69	23.1	
Where it is smoked in the house							
Not smoked in the house	15	14.2	91	85.8	106	35.6	0.001
Private place in the house	38	28.8	94	71.2	132	44.3	
Everywhere	36	60.0	24	40.0	60	20.1	
Use of tobacco products in the school							
Not allowed indoors	72	27.5	190	72.5	262	87.9	0.004
Allowed in private places	17	47.2	19	52.8	36	12.1	

* The students stating that they smoke everyday and on occasion were accepted as smokers.

^a Chi-square test.

^b Column percentage.

Table 2. The range of students using tobacco and tobacco products as regards the type of tobacco and its prevalence of use

Tobacco product	The use of tobacco product				
	Never smoked n (%)	Constantly smoke n (%)	Smoke on occasion* n (%)	Tried n (%)	Quit n (%)
Cigarette	146 (49.0)	54 (18.2)	35 (11.7)	55 (18.5)	8 (2.7)
Waterpipe	165 (55.4)	1 (0.3)	81 (27.1)	51 (17.1)	-
Pipe	288 (96.6)	1 (0.3)	5 (1.7)	4 (1.3)	-
Cigar	260 (87.2)	-	28 (9.4)	10 (3.4)	-
Cigarwraps	261 (87.6)	3 (1.0)	26 (8.7)	8 (2.7)	-

* Cigarette-cigarwraps (5-10 times a week), waterpipe-pipe-cigar (1-2 times a week).

Table 3. The characteristics of cigarette use of students who use tobacco products

Characteristics (n= 89)		n	%
The age to start smoking	< 15	20	22.5
	15-18	32	36.0
	≥ 19	37	41.5
The duration of smoking (year)	< 1	23	25.8
	2-5	59	66.3
	> 5	7	7.9
Daily cigarettes	1-5	10	11.2
	6-10	31	34.8
	11-15	22	24.8
	16-20	15	16.8
	> 20	11	12.4
The type of cigarettes	Local	25	28.1
	Foreign	31	34.8
	Both	33	37.1

It was detected in the present study that one in every five freshmen year students (19.4%) and one in every two senior year students used tobacco products. It was seen in the dentistry students of these two faculties that tobacco use had risen over the years. This situation makes us think that they do not receive adequate education regarding the control of tobacco during their years in the faculty. In a review study of Tezcan et al. where they have investigated the state of smoking among physicians, nurses and medical school students in 22 health institutions in Turkey, they have specified that the smoking prevalence of medical school students in their first year is 10.4%, 27.9% in their fourth year and 29.1% in their last year. It is seen that just as in dentistry students, the rate of smoking has risen over the years in medical school students [10].

Another interesting finding in the literature is that the rate of smoking of dentistry students of Mediterranean countries like Italy (33%), France (33%) and Greece (47%) is higher than that of the dentistry students in other European countries (England (7%), the Netherlands (24%), Ireland (20%)) [4,15,20]. In a review study by Smith et al. where they have investigated the

rates of smoking in students of the dentistry faculty in 19 countries, they have indicated that male students smoke more than female students in all countries [15]. When studies conducted on medical school students in various universities in our country are evaluated, it has been shown that the rate of smoking in male students ranges between 18-48% and between 5-29% in female students [4,5,10,21]. In our study, the rate of smoking in female students was found as 19.4% and as 39.0% in male students. Male students smoked more than female students, and these findings were found similar to the data of the study. Moreover, according to the 2012 report of global adult tobacco research, the rate of smoking among the female gender was found as 13.1%. The rate of tobacco use in the female students in our study (19.4%) is higher than this rate [17].

Although cigarette is the most frequently consumed tobacco product, studies have shown that waterpipe use has increased in recent years [22-24]. The second most used tobacco product among the students in our study was also waterpipe. In a study by Özcebe et al. including 5221 students from various universities, the use of waterpipe has been found as 20.8% [22]. Korkmaz et al. have determined that the use of waterpipe among the students of Süleyman Demirel University is 26.9% [25]. The prevalence of waterpipe use among the students of our study was found as 28.1%. These rates are almost similar to those of smoking. Such a high rate of waterpipe use among university students is remarkable.

13.4% of the students participating in our study stated that they had smoked cigarwraps or tried at least once. It was seen that cigarwraps ranked third among the most used tobacco products. Hassoy et al. confirmed in a 2011 study conducted on students of vocational school of health that 17.5% of the participants to the study had tried cigarwraps at least once [26]. Similarly, although the students within the scope of the research stated that they did not smoke cigars constantly, it was detected that the rate of smoking cigars once or twice a week was 9.4%. One student said that he/she smoked pipe regularly and five students (1.7%) said that they smoked pipes on occasion. In the common question about smoking pipe-cigar, Korkmaz et al. have found the smoking rate as 7.5% and detected that this rate was lower when compared to the consumption of other tobacco products [25]. Similarly in our study, smoking pipe and cigar is lower among dentistry students when compared to other tobacco products.

It has been shown in various studies that the age to start smoking in our country ranges between 13-17 [2-5]. When the age to start smoking was evaluated in our study, it was detected that 22.5% of the students started using tobacco products when they were under the age of 15 and 36.1% of the students started using tobacco products between the ages of 15 and 18, which shows that one-third of the students started using tobacco products before they enrolled in the dentistry faculty and that two-third of the students started using tobacco products after they enrolled in the dentistry faculty. This situation is consistent with the study by Demirel et al., which shows that 41.3% of the female students, 16.9% of the male students and 24.3% of all students have started smoking in the freshmen and sophomore years in Erciyes University [27]. The impact of starting university on the use of tobacco products must be questioned and necessary measures must be taken in this regard.

Presence of another individual using tobacco products and the prevalence of another individual using tobacco products indoors in the settings where students using tobacco products lived were found statistically significantly higher when compared to the students not using any tobacco products. There are studies demonstrating that the presence of a tobacco product user in the house encourages the other members of the household to start using these products [28-30]. In this context, the data of the study support that the students using tobacco products live in settings where there are persons with similar habits.

Four (78.7%) of every five students using tobacco products in the study wanted to quit using tobacco. It was seen that 71.1% of the students attempted to quit smoking as a result of their own decisions, 64.3% of the students had attempted to quit smoking once or more, 51.4% had attempted to quit smoking in the last one year, and 17.1% had attempted to quit smoking with a scientifically proven method. The multitude of the dentistry students who wish to quit using tobacco products is remarkable. When the year the study was conducted is taken into consideration, it can be thought that tobacco control studies like smoke-free zone which has begun a while before this date have increased awareness. However, since only 17.1% of the students attempted to quit smoking with a scientifically proven method, it is our opinion that the familiarity of these methods among students is very low. Similarly, the study by Demirel where only 16 (4.5%) of the students who have wanted to quit smoking have considered receiving help from a professional institution supports our aforementioned opinion [27].

There are many studies within the scope of law no. 4207 regarding tobacco control in our country. According to this code, it is forbidden to use tobacco and tobacco products in schools, hospitals, public transportation vehicles, and indoors. The finding of our study suggesting that there is a 12.1% rate of tobacco product use indoors despite being forbidden shows that even indoor prohibition is violated.

CONCLUSION

The prevalence of tobacco use in students receiving education in the field of health is higher than that of the general public.

The prevalence of tobacco use increases with each school year. The students need to be thoroughly educated on the negative effects of tobacco use on health and control of tobacco use as of the first semester.

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