

# Smoking Related Habits and Attitudes of Dental Students

Benedek (Bukhari) Csilla<sup>1</sup>, Kerekes-Máthé Bernadette<sup>2</sup>, Borş Andreea<sup>2</sup>, Kovács Mónika<sup>1</sup>, Pop M<sup>1</sup>, Fazakas Zita<sup>3</sup>, Székely Melinda<sup>2</sup>

<sup>1</sup> Department of Conservative Dentistry and Periodontology, Faculty of Dental Medicine, University of Medicine and Pharmacy, Tîrgu Mureş, Romania

<sup>2</sup> Department of Morphology of Teeth and Dental Arches, Technology of Dental Prosthesis and Dental Materials, Faculty of Dental Medicine, University of Medicine and Pharmacy, Tîrgu Mureş, Romania

<sup>3</sup> Department of Biochemistry, University of Medicine and Pharmacy, Tîrgu Mureş, Romania

**Objective:** It has been established that smoking causes four million deaths each year worldwide. The aim of this cross-sectional study was to assess the students' smoking habits and their attitude towards smoking cessation.

**Methods:** The survey conducted in 2011 was based on a questionnaire filled in anonymously by dental students from each year of study at the Faculty of Dental Medicine in Tîrgu Mureş. Six-hundred ninety-two students (454 female, 238 male) aged 18 to 30+ years were questioned. The statistical analysis was performed by analysis of variance and Mann-Whitney test.

**Results:** 35.25% of the participants were smoking. Statistically significant differences could not be observed in gender distribution of the smokers group ( $p=0.728$ ). The majority of subjects were smoking less than one cigarette/day, however significant differences were found in student's smoking habits ( $p=0.006$ ). 38.11% of the smokers have already tried to quit smoking more than five times without success and 32.37% never tried to quit smoking in the last year. 94% of the participants agreed that both the active and the passive smoking is harmful for the general health. The dental students explained very rarely the risks of tobacco smoking to their smoking patients: 30.78% ignored it and 15.17% of students did not respond this question.

**Conclusions:** The prevalence of smoking was high in the surveyed students, however the majority of the smokers had tried to quit smoking. The results call for relevant educational measures for smoking prevention and cessation.

**Keywords:** tobacco smoking, dental students, smoking habits, smoking cessation

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## Introduction

Smoking is a health risk behavior. According to a recent publication of the World Health Organization, at the present time there are around 1.25 billion smokers worldwide. This is an increase of 50 million compared to 2004 [1,2,3]. In Romania the prevalence of smoking is 40.6% among males and 24.5% among females, and it is 40% among those who work in the healthcare system, so therefore we are not dealing with a noticeable difference [1].

The aim of the present study was to evaluate the dental students' smoking habits, their attitude towards their patients who are smoking, and to find out their opinion about introducing smoking cessation techniques as a topic of their education.

## Methods

The participants in this cross-sectional study were dental students of the University of Medicine and Pharmacy of Tîrgu Mureş, from all years of study (Figure 1).

A total of 692 students accepted to fill in anonymously the questionnaire translated from English to Hungarian and Romanian. The questionnaire was identical to the one used in our pilot study conducted in 2010, having the same aim (Figures 2 and 3).

This questionnaire contains three main parts:

- In the first part we intend to find out if the subject is a smoker, if yes then why, how and how many cigarettes is he/she smoking (questions 1–7);
- The second part contains questions about the harmful effects of smoking, about the nature of the addiction caused by smoking and about the level of knowledge and attitude of the subject towards smoking (questions 8–13);
- The third part contains general questions related to gender, studying year, age, etc. (questions 14–16).

After collecting the information, the data were processed in the statistics software GraphPad InStat. For the statisti-

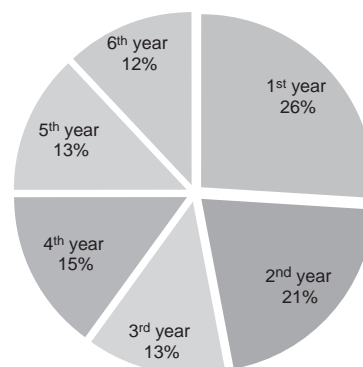


Fig. 1. The proportion of participants in the survey

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### **Study of smoking related habits of dental students**

Please, answer to all questions below and select only one answer (unless otherwise precised)

**1. Did you smoke until now at least 100 times?(cigarettes, cigar, pipe)?**

- ☐ No  
☐ Yes

**2. Did you ever smoke regularly (= almost daily, at least for one year)?**

- ☐ No  
☐ Yes, total \_\_\_\_ years.

**3. Do you smoke at present time (cigarettes, cigar, pipe)?**

- ☐ Not at all (go to question nr. 8)  
☐ Yes, daily  
☐ Yes, occasionally

**4. On average how many cigarettes do you smoke a day (package = 20 cigarettes)?**

- ☐ Less than one cigarette per day  
☐ Less than half package per day  
☐ Approximately half package per day  
☐ More than half package, but less than one package per day  
☐ One package  
☐ More than one package

**5. What kind of tobacco products do you use?**

- ☐ I prepare my own cigarettes  
☐ Cigarettes without filters  
☐ Cigarettes with filters  
☐ Pipe  
☐ Cigar  
☐ Tobacco ("snuff")  
☐ Other \_\_\_\_\_

**6. Did you try to quit smoking in the last 12 months and you managed to abstain for at least 24 hours?**

- ☐ No, I did not try  
☐ Once  
☐ Twice  
☐ Three times  
☐ Four times  
☐ Five times or even more

**7. How many days did you smoke in the last 30 days?**

- ☐ I did not smoke at all in the last 30 days.  
☐ I smoked 1–4 days in the last 30 days.  
☐ I smoked 5–9 days in the last 30 days.  
☐ I smoked 10–19 days in the last 30 days.  
☐ I smoked more than 20 days, but not each day.  
☐ I smoked each day in the last 30 days.

**8. Tick the box that best reflects your opinion on these statements.**

	1	2	3	4	5
	Not at all;	Not much;	No opinion;	Much;	Very much
How harmful is cigarette smoking for the health?					
How ambient cigarette smoke (passive smoking) harms health?					
How harmful is cigarette smoking for the oral health?					

**9. To what extent smoking causes addiction? Tick the box that best reflects your opinion on these statements.**

	1	2	3	4	5
	Not at all;	Not much;	No opinion;	Much;	Very much
Physical addiction					
Psychic (mental) addiction					
Social addiction					
Dependence of habit					

**10. Tick the box that best reflects your opinion on these statements.**

Fig. 2. The front page of the questionnaire

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	Completely agree	Agree	I do not know	Not agree	Do not agree at all
I have enough knowledge and skill to advise patients who want to quit smoking.					
Medical staff should receive special training to help patients who want to quit smoking.					
Smoking prevention should be an integral part of medical staff education.					
Is the responsibility and duty of dentists to try to help patients quit smoking.					
Even if the dentist is trying to help patients quit smoking, it will not increase the success of their attempt to quit smoking.					

**11. Statements regarding the smoking cessation: tick the box that best reflects your opinion for each statement.**

	Completely agree	Agree	I do not know	Not agree	Do not agree at all
To quit smoking is needed the help of medical staff.					
The major obstacles for patients to quit smoking are the insufficient informations about the risks of smoking.					
The major obstacles for patients to quit smoking are the insufficient informations about smoking cessation methods.					
The major obstacle to quit smoking is the lack in the willing.					
The patients need first of all practical advices about how to quit smoking.					

**12. During the last year (12 months) how often did you speak to your smoker patients about the risks of smoking on the oral health?**

- ☐ Always  
☐ Often  
☐ Sometimes  
☐ Never

**13. Tick the box that best reflects your opinion on these statements.**

	1 Not at all;	2 Not much;	3 No opinion;	4 Much;	5 Very much ;
Are you willing to show to your patients the harmful effect of smoking on oral health?					
Are you willing to show to your patients the harmful effect of smoking on general health?					
Are you willing to deny to your patients to smoke in the waiting room of the private practice?					
Are you willing to advise your patients to quit smoking?					
Are you willing to collaborate actively in anti-smoking programs in your community?					
Are you willing to use anti-smoking programmes in your private practice ? (eg. leaflets, brochures, etc)					

**14. Your gender:**

- ☐ Male  
☐ Female

**15. Your age:**

- ☐ 18-20                      ☐ 25-30  
☐ 21-22                      ☐ 30+  
☐ 23-24

**Study year:**

- ☐ 1<sup>st</sup> year.                      ☐ 3<sup>rd</sup> year.                      ☐ 5<sup>th</sup> year.  
☐ 2<sup>nd</sup> year.                      ☐ 4<sup>th</sup> year.                      ☐ 6<sup>th</sup> year.

Fig. 3. The second page of the questionnaire

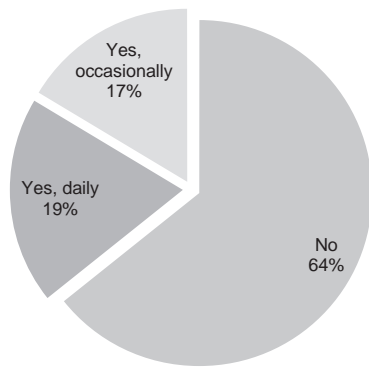


Fig. 4. Distribution of the occasional-, regular-, and non-smokers

cal analysis we used the following methods: Kruskal-Wallis with post test, Mann-Whitney test, analysis of variance (ANOVA), Tukey-Krammer test.

## Results

The distribution within genders was as follows: 238 males, (34.39%) and 454 females (65.60%).

We found the following distribution by ages: 255 (36.84%) students with ages between 18–20 years; 220 (31.79%) between 21–22 years; 174 (25.14%) between 23–24 years; 32 (4.62%) between 25–30 years and 11 students (1.58%) of 30 years or above.

Within the total number of students who participated 132 students (19.07%) were smoking every day, 112 students (16.18%) were smoking occasionally and 439 students (63.43%) did not smoke at all (Figure 4).

Among the non-smokers, the statistical analysis showed significant differences between the 1<sup>st</sup> and 2<sup>nd</sup> year of study ( $p < 0.05$ , 95% CI = 0.6620–0.7915 for the 1<sup>st</sup> year and 0.4809–0.6424 for the 2<sup>nd</sup> year), while the other differences were not significant. Among the daily smokers we found significant differences both between the 1<sup>st</sup> and 2<sup>nd</sup> year, and also between the 1<sup>st</sup> and the 6<sup>th</sup> year ( $p < 0.05$ , 95% CI = 0.5509–0.1416 for the 1<sup>st</sup> year, 0.1641–0.3017 for the 2<sup>nd</sup> year and 0.1616–0.3569 for the 6<sup>th</sup> year). The majority was represented by those who were not smoking at all, followed by the daily smokers and lastly the occasional smokers. Among those who were

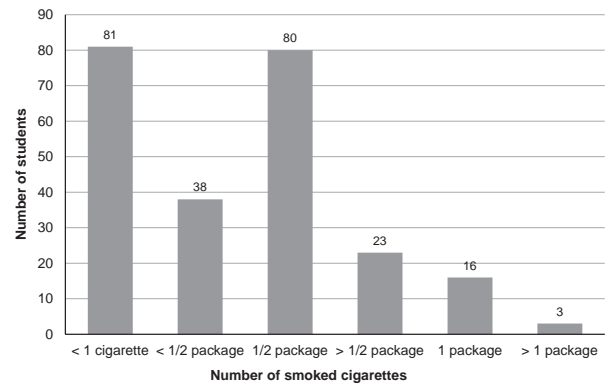


Fig. 5. The proportion of the smokers regarding the number of cigarettes smoked during one day

smoking occasionally, we found no statistically significant differences.

The ranking of smokers in relation with the number of cigarettes smoked during a day was:

- Under one cigarette/day – 81 students, 33.19%
- Less than half package/day – 38 students, 15.57%
- Over half package/day, but under one package – 23 students, 9.42%
- One package/day – 16 students, 6.55%
- Over one package/day – 3 students, 1.22% (Figure 5).

Regarding the number of cigarettes smoked daily, we found statistically significant differences among those who are smoking less than one cigarette/day, approximately half of a package/day and one package/day ( $p = 0.0066$ , 95% CI = 7.535–19.465 for less than one cigarette/day, 5.267–21.400 for half a package/day and 0.2126–5.121 for one package/day). The majority of students were smoking less than one cigarette/day, being followed tightly by those who were smoking approximately one package/day and finally, there were rare cases of students smoking an entire package/day.

From the total of 238 male participants 36.13% were smokers and from the total of 454 females 34.8% were smokers. Statistically significant differences could not be observed in the gender distribution of the smokers group ( $p = 0.728$ , 95% CI = 0.06185–0.08850).

According to our study, 95.90% of the smokers were smoking cigarettes with filters and a minor proportion cigarettes without filters, cigars, pipe, electronic cigarette, snuff or self-prepared cigarettes. Also, it is worth mentioning that one and the same student may smoke more types of cigarettes.

Approximately 94% of the participants were aware of the fact that active, as well as passive smoking, is harmful for the general health, and 95.52% considered that cigarette smoking is very harmful for the oral health.

As for the question regarding the addiction caused by smoking, the majority (between 65% and 87%) considered that smoking may cause physical, psychological, social dependence and these are culminating in addiction.

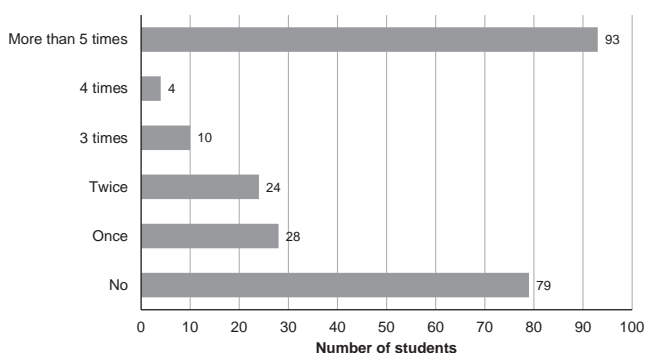


Fig. 6. The proportion of the smokers by number of attempts to quit smoking



When dealing with their smoking patients, the dental students hardly explained them the risks of tobacco smoking: 30.78% do not address this phenomenon, 38.29% only sometimes, while 15.17% of students did not answer this question.

During the six years of dental training, should the future dentists be sensitized about the major risk of tobacco smoking? Almost half (41.02%) of the subjects felt no sense of responsibility, or the knowledge to educate the smokers to quit, and 81.49% considered that smoking prevention should be included in the curricula of medical staff.

Most participants in this survey (91.03%) considered that will is the main factor which could lead to smoking cessation. Practical advices may also contribute to quitting (77.3%).

The majority (approximately 83%) of the future dentists are willing to use any available method to decrease the harmful effects of tobacco smoking on general and oral health. Between 66 and 81% of the students would like to take part in smoking prevention programs in the community or in a private dental practice.

## Discussion

The data suggest that the prevalence of tobacco smoking is high among dental students and the difference between genders is not significant. This might be due to the fact that student life is equally stressful both for male and female dental students [4,5,6].

It was reported in a study made in Constanța, Romania, that 58% of male students and 35% of female students were smokers, which are much higher values than those found in the current study [7]. It has been estimated that about a third of the male adult global population smokes [8]. This is in agreement with the results of our study: 36.13% of the male students were smoking.

Only 32.37% of the smokers have not tried or have failed to get rid of this risk behavior, the other students have achieved this several times (Figure 6), confirming that psychological dependence has a crucial role.

Probably due to the gaps of their medical training, 52.73% of the future dentists do not believe in the help that medical staff may provide in the process of smoking cessation. However, the subjects of our survey were conscious of the effects that tobacco smoking has on their and also on others health.

About one in five children are smokers worldwide. Between 80,000 and 100,000 children start smoking every day around the world [7]. Most of the participants started tobacco smoking at 18–19 years, which coincides with the beginning of the university years. Projecting this data on the statistical information regarding our country we notice that the students of University of Medicine and Pharmacy of Tîrgu Mureș started tobacco smoking later than the national average, which is 16–18 years. Among students, the youngest age to start smoking was 13 years. Nationwide, children may debut smoking at ages as low as 10–11 years.

During the six studying years the attitude of the students regarding the discussions with their patients about the risks of tobacco smoking seems to be subjected to variations: in the first three years, from the total of 416 students only 10.33% is treating this topic often with their patients. This percentage increases to 16.66% in the last three years, however it should be considered that there were 276 students. The results may suggest that the attitude of the students towards smoking patients changed as the end of the studying years approached.

The prevalence of smoking among dental students of the University of Medicine and Pharmacy from Tîrgu Mureș showed a decrease in the last year (35.25% in 2011) compared to the previous year (43% in 2010), however comparing these results with the year 2003, there is an increase in the number of smokers (30.76%) [9,10].

Tobacco consumption appears to be worldwide the most important personal behavior-based risk factor in the deterioration of oral health. According to most of the studies assessed, discontinuing tobacco use has a positive effect on oral health. This underlines the need for public health intervention to change a behavior which could be avoided completely. The impact of tobacco smoking among young people highlights the need for quick implementation of preventive programs [7,11]. A paradigm shift may be needed to train oral health professionals to tobacco use prevention and cessation for the support of public health policy measures in dentistry [12].

## Conclusions

- The results of this survey revealed a higher percentage of smokers in males compared to females, but the difference was not statistically significant.
- The prevalence of current smokers in investigated students was lower than the national average.
- It is alarming that 32.37% of smokers never tried to quit smoking and 19.7% smoke every day.
- The years spent as a dental student may be crucial for the adoption of attitudes toward smoking.
- The Faculty of Dentistry of the University of Medicine and Pharmacy of Tîrgu Mureș should introduce in the curricular program not only the education of the impact of tobacco on oral-dental health, but also practical training in counseling patients on smoking.
- In the 21<sup>st</sup> century, dentists should play a major role in controlling tobacco consumption, especially given the fact that on the regular periodic consultations patients are more receptive to the information regarding smoking cessation.

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