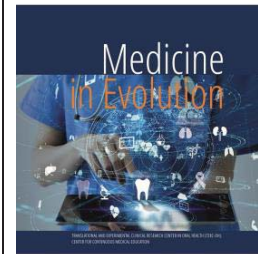


# Oral health related behaviour among dental students – a comparative study



**Sfeatcu R.<sup>1</sup>, Dumitrache M.A.<sup>1</sup>, Mihai C.<sup>2</sup>, Dumitraşcu L.C.<sup>1</sup>, Tănase M.<sup>2\*</sup>, Funieru C.<sup>3</sup>**

<sup>1</sup>*Oral Health and Community Dentistry Department, Faculty of Dentistry, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania*

<sup>2</sup>*Pedodontics Department, Faculty of Dentistry, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania*

<sup>3</sup>*Preventive Dentistry Department, Faculty of Dentistry, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania*

*Correspondence to:*

*Name: Tănase Mihaela*

*Address: Barajul Iezeru Street, no. 8, district 3*

*Phone: +40 722441121*

*E-mail address: mihaela.tanase@umfcd.ro*

## **Abstract**

The aim of the present study was to compare the oral health behavior of first year students with that of sixth year students from Faculty of Dentistry, University of Medicine and Pharmacy "Carol Davila", in Bucharest. A descriptive cross-sectional study was carried out on 293 undergraduates, divided into 2 groups: 156 students from the first year and 137 from the sixth year. The method used was the sociological survey based on an anonymous self-administered questionnaire. The results showed an unhealthy behaviour among first-year students and a correct one regarding oral hygiene, but also incorrect in other respects (dental attendance, diet with low consumption of fruits and vegetables, but frequent consumption of cariogenic foods, and smoking status). The oral health behaviors reflect the importance of the speciality knowledge accumulated during the years of study. The knowledge and habits of dental students are an important part of professional education.

**Keywords:** oral health, habits, knowledge, education

## INTRODUCTION

The level of knowledge and concern of individuals towards oral and general health are important and influence their healthy or unhealthy behaviour. Even more, the issue is of interest regarding students studying at Faculty of Dentistry. In order to ensure its continuity, society was conditioned to transmit the necessary knowledge, attitudes and behaviors to new generations [1,2]. The education process, specific to civilization, is initially informal, in the family; later formally in organizations (kindergartens, schools, high schools, faculties, colleges, doctorates) based on standardized programs and methods and with the help of dedicated personnel (educators, teachers, professors, university teaching staff) [1,3]. Concentrating high-potential human resources, educational institutions, especially university ones, are important factors of social progress, education itself being a factor of change.

Health promotion represents the mediation strategy between people and their living environment that summarizes personal choice and society's responsibility towards health [4,5]. The medical personnel behaviour towards their own health reflects the understanding of the importance of preventive approaches and of improving and preserving the health of patients. Dental students are models of behaviour for patients, family, and friends and why not, even for the whole society, in terms of obtaining and maintaining an adequate oral health status [1,6].

### *Aim and objectives*

The aim of the present study was to evaluate the behaviors towards oral health among the students of the Faculty of Dentistry from the University of Medicine and Pharmacy "Carol Davila" in Bucharest. The objective was to reveal the comparative description of the oral health habits of the undergraduates from the first and last year of study.

## MATERIAL AND METHOD

A descriptive cross-sectional study was carried out on 293 students, divided into 2 groups: 156 students from the first year and 137 from the sixth year. The method used was the sociological survey based on an anonymous, self-administered questionnaire. The questionnaire has common closed questions regarding the oral health behaviour, thus allowing the comparative assessment of this aspect in the two studied groups.

## RESULTS

The comparative evaluation allowed to highlight the degree to which the medical and dental knowledge accumulated during the faculty influenced the behavior towards oral health of the undergraduates.

*Preventive treatment before faculty.* According to the data presented in Figure 1, the percent of first-year students who benefited from preventive treatment before their university studies was significantly higher ( $p < 0.01$ ) than that observed among sixth-year dental students. Probably the behavior of individuals has changed over time and they visit more frequently the dentist for regular check-up, and also, the dental system is more oriented towards prevention, not just for curative treatment.

*Frequency of tooth brushing.* The rate of association with brushing teeth once a day was significantly higher in first-year students, who are not influenced by speciality information. Dentists probably do not give enough importance to the frequency of brushing in the sanogenic message they convey to patients (Figure 2).

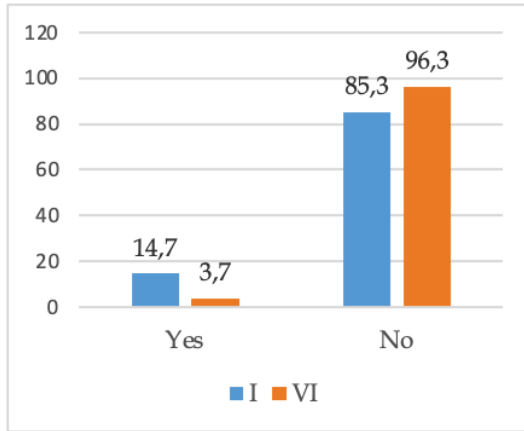


Figure 1. Preventive treatment before faculty (%)

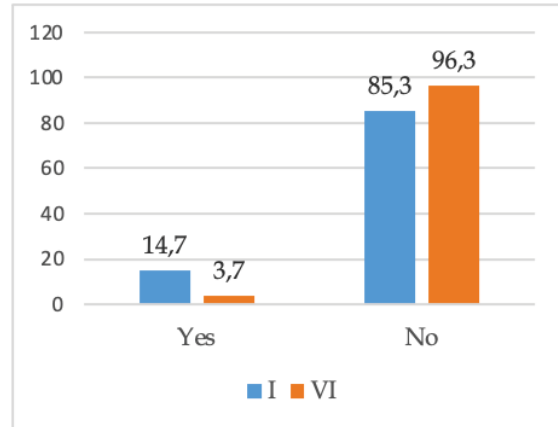


Figure 2. Toothbrushing once a day (%)

As expected, the association with brushing teeth 2 times a day (correct frequency) was significantly higher in final year students (Figure 3). The percentage of students from the 6<sup>th</sup> year who use mouthwash as an auxiliary means for oral hygiene was higher compared to that observed in the group of students from the 1<sup>st</sup> year, but not statistically significant ( $p>0.05$ ) (Figure 4).

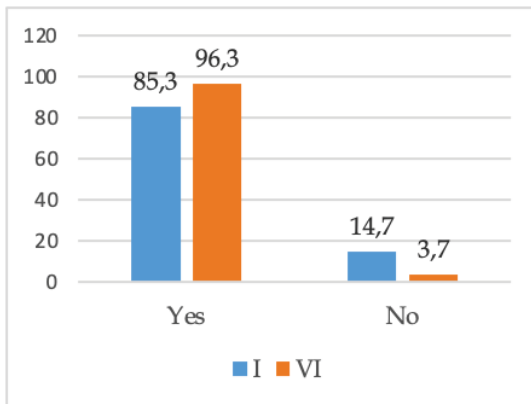


Figure 3. Toothbrushing twice a day (%)

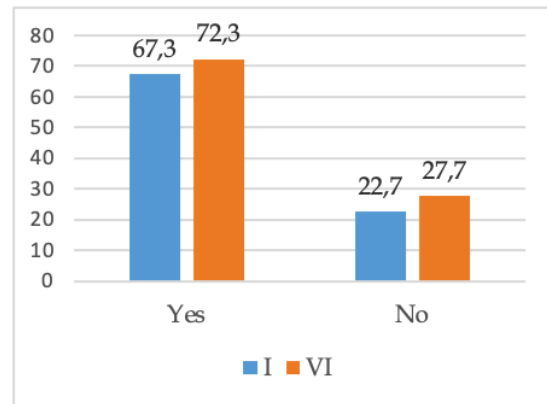


Figure 4. The use of mouthwash (%)

The rate of association with *the use of dental floss* was significantly higher ( $p<0.001$ ) among final year students, whose behavior is influenced by the medical and dental information received during the years of study (Figure 5).

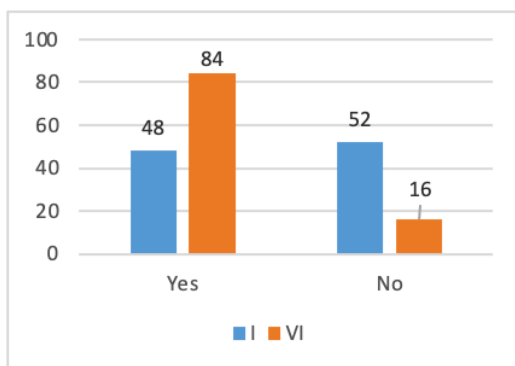


Figure 5. The use of dental floss (%)

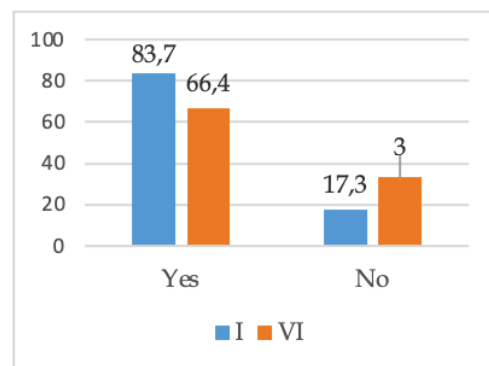


Figure 6. Consumption of cariogenic foods (%)

Regarding the content of the *diet*, the association with the consumption of cariogenic foods and carbonated beverages, is statistically significantly higher in first-year students than in sixth-year students ( $p < 0.05$ ), which indicates a healthy behavior of students in the last year, influenced, probably, by the knowledge obtained during the years of study (see Figure 6 and Figure 7).

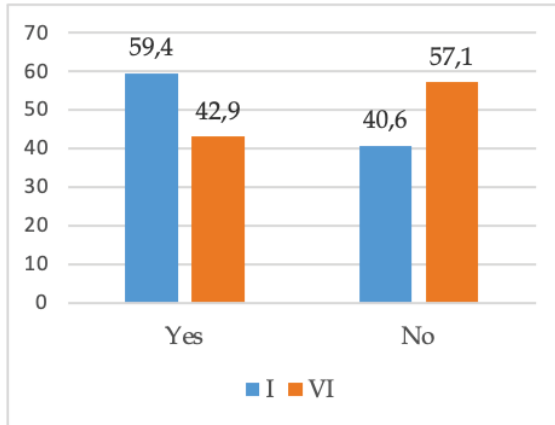


Figure 7. Consumption of carbonated drinks (%)

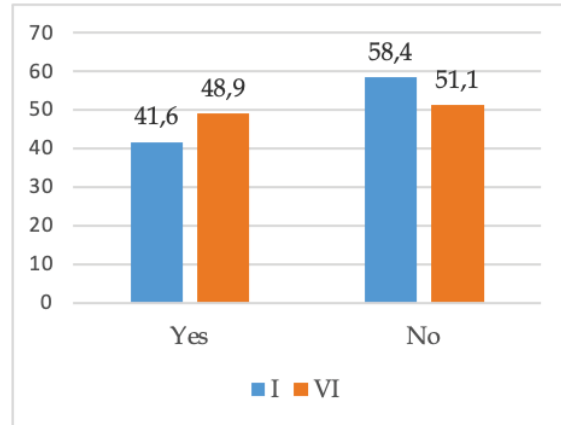


Figure 8. Smoking status of subjects (%)

*Tobacco consumption.* The frequency of smoking is higher among 6<sup>th</sup> year students, the observed difference not being statistically significant ( $p = 0.2$ ) (Figure 8).

Regarding the students' *behavior after meals*, the correct answer (using sugar-free chewing gum - Figure 9 and rinsing with water - Figure 10) was chosen by a higher proportion of students from the 6<sup>th</sup> year ( $p < 0.001$ ).

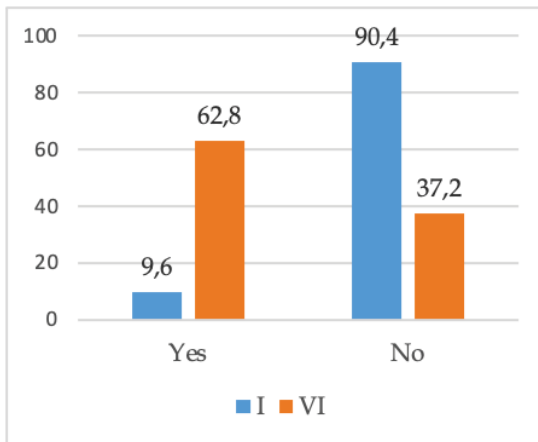


Figure 9. Using sugar-free chewing gum (%)

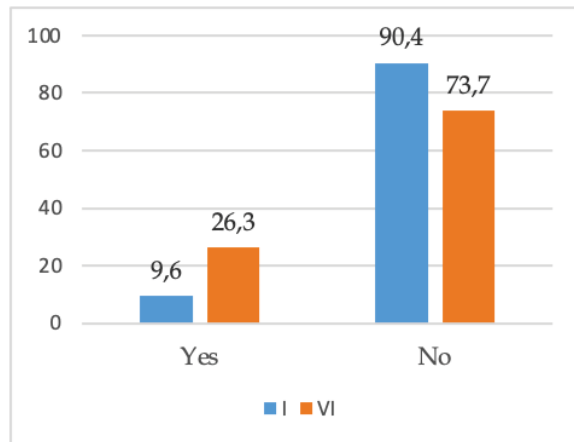


Figure 10. Rinsing with water after meals (%)

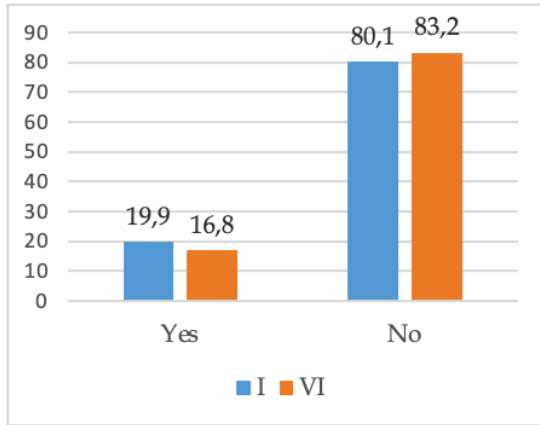


Figure 11. Toothbrushing after meals (%)

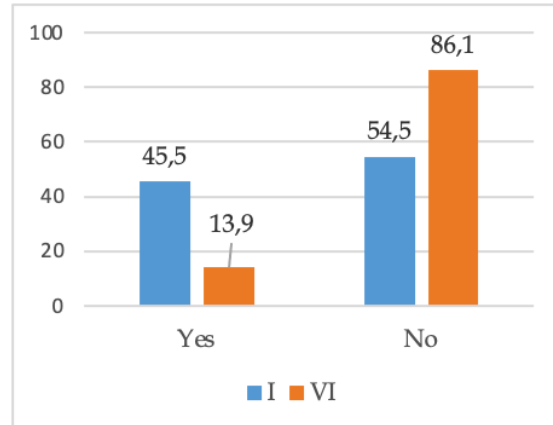


Figure 12. Lack of preventive behavior after meals (%)

The rate of association with tooth brushing after meals was not statistically significantly associated with the year of study ( $p=0.4$ ). Anyway, in everyday life, it is unlikely to carry out this action, although it would be desirable as a mechanism for dental caries prevention (Figure 11).

The association with the lack of any preventive action after meals was statistically significantly higher among first-year students ( $p<0.001$ ), a fact probably explained by the lack of knowledge in this regard (Figure 12).

## DISCUSSIONS

Oral health knowledge is a prerequisite for healthy behaviors, although cross-sectional studies seem to show a weak correlation between medical knowledge and healthy habits [7]. Moreover, in literature, no association between the level of knowledge and the proper oral health status has been demonstrated [8]. Studies from the 90s showed that the dentist is not motivated to adopt a healthy behaviour himself, with correct oral hygiene practices [9]. Recent data show that along with the education, the level of knowledge, attitudes and healthy habits also increases.

Dental students should be encouraged to be a model in promoting oral health education among family, friends and patients. The oral health behaviors of the sixth year students are generally correct, reflecting the importance of the speciality knowledge accumulated during the years of study. A comparative study carried out in 2006 showed that dental students changed their attitudes and behaviors towards oral health for the better, unlike their colleagues from general medicine [10] or unlike dental technician students or dental hygienists [11], probably also due to the clinical training and the educational curriculum.

The diet is not correctly chosen by the students, neither in terms of content (there is a frequent consumption of cariogenic foods and drinks), nor in terms of frequency of food intakes. Moreover, the behavior after meals and snacks during the day is not the healthy one, which could limit the effects of the acid attack on the teeth.

The behavior of students towards the habit of smoking is worrying, although there are national programs in Romania initiated by the Ministry of Health. Some of the students were smokers before their studies, but there are also students who started after [12]. Students are not receptive to the negative effects of tobacco consumption on oral health and implicitly on general health. Will they advise patients to quit smoking, at least if, through clinical examination, they detect lesions related to this habit? It is necessary to emphasize during the faculty, the role of dentist in preventing and motivating patients for quitting smoking.

Dental students should have oral health education in their curriculum prior to their clinical years, when they will come into direct patient contact. The authors consider that this is a key factor in developing the right attitudes and behaviors, allowing them to have a positive impact on the opinions and health habits of patients. It is desirable for the dentist to have an increased level of knowledge to confirm professional recommendations.

## CONCLUSIONS

The study revealed a healthy behavior regarding some aspects of oral health (frequency of personal tooth brushing, use of auxiliary means), but also incorrect in other aspects (frequency of check-ups, late presentation to the dentist, only in case of problems or pain, diet with reduced consumption of fruits and vegetables, but frequent consumption of cariogenic foods and drinks or fast food products, and smoking habit).

The level of knowledge and behaviors towards oral health have an important role for the students from the sixth year, because they are not only receivers of information, they are promoters of oral health messages as educators for patients. It is desirable that future dentists have a healthy behavior in order to succeed, in turn, in motivating patients to change unhealthy habits, in order to be able to influence those around them, the community and patients.

## REFERENCES

1. Dumitrache MA, Sfeatcu IR, Dumitraşcu LC, Cărămidă M, Lambescu DG. *Principii și metode aplicate în cercetarea clinică din sănătatea orală și stomatologia comunitară*. Curtea veche Publishing House, Bucharest, 2016
2. [2]. Grosu N. *Sentiințele sociologiei*. Dacia Publishing House, Cluj-Napoca, 2003.
3. [3]. Murariu AM. *Sănătate orală și comunitară*. Gr. T Popa Publishing House, Iași, 2021.
4. [4]. Murariu AM. *Aspecte sociale și comportamentale în sănătatea orală comunitară*. Gr. T Popa Publishing House, Iași, 2019.
5. [5]. Dumitraşcu L. *Schimbarea atitudinilor și comportamentelor față de sănătatea orală*. Carol Davila University Publishing House, Bucharest, 2012.
6. [6]. Sfeatcu R, Dumitrache MA. *Promovarea sănătății orale din perspectiva medicinei primare*. Curtea veche Publishing House, Bucharest, 2019.
7. [7]. Peker I, Alkurt MT. Oral health attitude and behavior among a group of turkish dental students. *Eur J Dent* 2009; 3: 24-31.
8. [8]. Shiraz U, Bhat SS, Sargod SS. Oral Health Knowledge and Behavior of Clinical Medical, Dental And Paramedical Students In Mangalore. *J Oral Health Comm Dent* 2007; 1(3): 46-48.
9. [9]. Kawamura M, Yip H.K, Hu D.Y, Komabayashi T. A cross-cultural comparison of dental health attitudes and behavior among freshman dental students in Japan, Hong-Kong and West China. *Int Dent J* 2001; 51: 159-63.
10. [10]. Rong WS, Wang WJ, Yip HK. Attitudes of dental and medical students in their first and final years of undergraduate study to oral health behavior. *Eur J Dent Edu*; 10(3): 178-181.
11. [11]. Wahadani AM, Al-Omiri MK, Kawamura M. Differences in self-reported oral health behavior between dental students and dental technology/dental hygiene students in Jordan. *J Oral Sci* 2004; 46(3): 191-197.
12. [12]. Didilescu A, Inagaki K, Sfeatcu R, Hanganu SC, Virtanen JI. Smoking Habits and Social Nicotine Dependence among Dental Students in Romania. *Oral Health and Dental Management* 2014; 13(1): 35-40.