

ORAL-HYGIENE PRACTICES IN STUDENT POPULATION IN SKOPJE AND OSLO

ОРАЛНО-ХИГИЕНСКИТЕ НАВИКИ И СТАВОВИ НА СТУДЕНТСКАТА ПОПУЛАЦИЈА ВО СКОПЈЕ И ОСЛО

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Abstract

Objective: The purpose of this study was to draw a comparison between the oral-hygiene practices and attitudes among dental students and students studying at other faculties in Skopje and Oslo. **Material and method:** For the purpose of this study, 200 students were surveyed, of which 50 students from the Faculty of Dentistry in Skopje, 60 students from other faculties in Skopje, 50 students from the Faculty of Dentistry in Oslo and 40 students from other faculties in Oslo. The students were surveyed using a questionnaire which consisted of 9 questions, adequate for this type of survey. Data collected from the survey were statistically analyzed. **Results:** We have recorded a statistically significant difference in responses among all student groups from the four education centers. Significance was also found in the responses between dental students in Skopje and Oslo due to differences in the educational systems. **Conclusion:** We believe that the results obtained from our study are due to inequalities in the socio-economic statuses, the living standards, the educational systems and the preventive measures taken to improve the oral health status. Due to their awareness of oral health problems as well as knowledge of preventive measures, students of dental medicine could positively contribute to the oral health of people living in communities by opening education centers for increasing overall oral health. **Keywords:** oral-hygiene practices, student population, oral health, preventive measures, survey.

Апстракт

Целта на овај труд: беше да се направи споредба на орално-хигиенските навики и ставови кај студентите по стоматологија и студентите на другите факултетски институции во Скопје и Осло. **Материјал и метод:** За реализација на ова истражување беа анкетирани вкупно 200 студенти од кои 50 студенти од Стоматолошкиот факултет во Скопје, 60 студенти од други факултети во Скопје, 50 студенти од Стоматолошкиот факултет од Осло и 40 студенти од други факултетски институции во Осло. Студентите беа анкетирани врз основа на прашалник составен од 9 прашања. Податоците добиени од анкетата беа анализирани и соодветно обработени. **Резултати:** Регистриравме статистички сигнификантна разлика во одговорите кај студентите од четирите едукативни центри. Сигнификантност постоеше во одговорите помеѓу студентите стоматолози во Скопје и Осло, како резултат на разликите во системот на едукација. **Заклучок:** Сметаме дека добиените резултати се должат на разликите во социо-економскиот статус, стандардот на живеење, разликите во едукативниот систем како и нивото на превентивните мерки кои се превземаат за подобрување на оралното здравје. Поради свесноста за проблемите поврзани со оралното здравје, како и познавањето на основните превентивни мерки, студентите по стоматологија треба позитивно да делуваат во општеството преку едукативни центри за унапредување на оралното здравје во целост. **Клучни зборови:** орално-хигиенски навики, студентска популација, орално здравје, превентивни мерки.

Introduction

The term oral health does not exclusively convey the presence of healthy teeth in the mouth. Oral health is an integral part of the general health and acts as the foundation for the individual's wellbeing. The same includes absence of craniofacial pain, absence of oral and pharyngeal carcinoma, absence of oral mucosal lesions, absence of congenital anomalies, as well as absence of other diseases that may affect the oral, dental and craniofacial tissues¹. Good oral health enables the individual to speak, eat and socialize without problems, discomfort or embarrassment.

A number of factors have a strong impact on oral health. The nature of the key factors may be economic, psychosocial and behavioral. Individuals with low socio-economic status, who live in a rural area and maintain a poor lifestyle have insufficient dental care, do not maintain oral hygiene on a regular basis, rarely visit a dentist and have more lost teeth, compared to individuals with high socio-economic status². The most vulnerable population are young individuals, as they are prone to experimenting with alcohol and cigarettes, and also have poor hygiene practices in the process of maturation, increased caries presence and gingival-periodontal diseases³. Therefore, there are three main reasons for investing in

young people's health: health benefits (better health and prolongation of generations), economic benefits (improved productivity, return on investment and avoidance of future health costs) and human rights (right to the highest possible degree of health).

Dentists play an important role in improving health education, and therefore, it is important for students to gain knowledge on prevention, control and treatment of oral diseases during their studies⁴. The professional upgrading of dental students should create stable patterns of behavior towards one's own oral health^{5,6,7}. Unlike dental students, students from other faculties do not have such extensive knowledge of oral diseases which could lead to poor oral hygiene, that could in turn result in a higher incidence of cavities, periodontal disease and a larger number of extracted teeth. In addition, cultural differences in the areas in which they live can contribute to building different practices and attitudes towards oral health⁸.

Purpose of the paper

The purpose of our research was to compare the oral hygiene practices and attitudes of dental students and students studying at other faculties in Skopje and Oslo.

Material and methods

In order to respond to the set objective, a total of 200 students were surveyed, of which 50 students from the Faculty of Dentistry in Skopje, 60 students from other faculties at the Ss. Cyril and Methodius University in Skopje, 50 students from the Faculty of Dentistry in Oslo and 40 students from other faculties in Oslo. Students were surveyed using a questionnaire. The questionnaire consisted of nine questions related to the subjects' attitudes regarding oral health, as well as their oral hygiene practices. Prior to completion of the questionnaire, the students were informed about the importance of their participation in this research and were asked to provide relevant responses to the questions asked. The results of the answers to the questions are expressed as a percentage, shown in tables and compared between different groups of students.

Results

Table no. 1 shows the views of the students regarding oral health. It can be seen from the table that dental students from Skopje and Oslo are more likely to visit a dentist (52% of dental students and 48% of dental students in Skopje visit a dentist twice a year) than students

Table 1. An outline of students' attitudes regarding oral health

		Faculty of Dentistry - Skopje	Faculty of Dentistry - Oslo	Other Faculties - Oslo	Other Faculties - Skopje
How frequently do you visit a dentist?	Sometimes	15 (30%)	3 (6%)	6 (15%)	32 (53.3%)
	Not regularly	2 (4%)	12 (24%)	14 (35%)	16 (26.7%)
	Once a year	9 (18%)	9 (18%)	7 (17.5%)	7 (11.7%)
	Twice a year	24 (48%)	26 (52%)	13 (32.5%)	5 (8.3%)
Reason for dental visit?	Due to tooth ache	8 (16%)	2 (4%)	14 (35%)	49 (81.7%)
	Control check up	42 (84%)	48 (96%)	26 (65%)	11 (18.3%)
What action will you take if you experience toothache?	I will extract it	0 (0%)	0 (0%)	8 (20%)	0 (0%)
	I will restore it	50 (100%)	50 (100%)	32 (80%)	60 (100%)
Do you think you brush your teeth properly?	Yes	47 (94%)	49 (98%)	35 (87.5%)	54 (90%)
	No	3 (6%)	1 (2%)	5 (12.5%)	6 (10%)
Who showed you how to brush your teeth?	Parent	17 (34%)	29 (58%)	9 (22.5%)	21 (35%)
	Dentist	33 (66%)	18 (36%)	25 (62.5%)	39 (65%)
	Educator or teacher	0 (0%)	3 (6%)	6 (15%)	0 (0%)
What will you do if you notice gum bleeding?	I stop brushing	0 (0%)	0 (0%)	2 (5%)	33 (55%)
	I brush them more gently	17 (34%)	8 (16%)	29 (72.5%)	5 (8.3%)
	I brush the thoroughly	12 (24%)	41 (82%)	7 (17.5%)	0 (0%)
	I seek dental help	21 (42%)	1 (2%)	2 (5%)	22 (36.7%)

Table 2. An outline of the student population's oral hygiene practices

		Faculty of Dentistry - Skopje	Faculty of Dentistry - Oslo	Other Faculties - Oslo	Other Faculties - Skopje
Do you use additional oral hygiene products?	No	7 (14%)	2 (4%)	8 (20%)	32 (53.3%)
	Dental floss	39 (78%)	26 (52%)	22 (55%)	5 (8.3%)
	Interdental brushes	1 (2%)	9 (18%)	0 (0%)	0 (0%)
	mouthwashes	3 (6%)	13 (26%)	10 (25%)	23 (38.4%)
How frequently do you brush your teeth?	I never brush my teeth	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	Not regularly	0 (0%)	0 (0%)	2 (5%)	10 (16.7%)
	Once a day	10 (20%)	10 (20%)	4 (10%)	30 (50%)
	Twice a day	32 (64%)	35 (70%)	28 (70%)	15 (25%)
	Several times a day	8 (16%)	5 (10%)	6 (15%)	5 (8.3%)
How long do you use the same toothbrush?	Less than 3 months	7 (14%)	6 (12%)	5 (12.5%)	5 (8.3%)
	From 3 to 6 months	35 (70%)	39 (78%)	32 (80%)	22 (36.7%)
	More than 6 months	8 (16%)	5 (10%)	3 (7.5%)	33 (55%)

from other faculties (35% of students from other faculties in Oslo do not visit a dentist regularly, while the majority (53.3%) of students from Skopje sometimes visit a dentist). However, the reason for visiting a dentist differs between the student population from Skopje and Oslo. Namely, dental students from Skopje and Oslo, as well as the students from other faculties in Oslo, usually go to the dentist for control check-ups, while the student population from other faculties in Skopje most often visits the dentist because of pain present in the orofacial region (81.7%).

The majority of the students from Skopje and Oslo, in the case of a toothache, think that it would be best to have the tooth restored rather than extracted. Only 20% of students from other faculties in Oslo think it would be best to extract the tooth. Students believe that the tooth is in such bad shape that it cannot be repaired and should inevitably be removed.

We also received a similar response to the question of students' subjective opinion about their proper tooth brushing. About 90% of all subjects in Skopje and Oslo think they brush their teeth properly.

The dentist plays a major role in the techniques and the way of maintaining oral hygiene for the student population in Skopje. Namely, about 65% of dental students in Skopje and students from other faculties in Skopje stated that it was the dentist who showed them how to brush their teeth. Unlike the student population in Skopje, Oslo parents and dentists play a major role in tooth brushing in Oslo student population (in 58% of Oslo dental students, the parent showed them how to

brush their teeth, while in 62.5% of students from other faculties, the dentist is the one who explained the proper brushing technique).

When bleeding from gingivitis, the highest percentage of students from Skopje (42%) consider that dental assistance is necessary, while 55% of students from other faculties in Skopje stop brushing their teeth. Unlike the student population in Skopje, Oslo students continue to brush their teeth. Namely, 82% of Oslo dental students brush their teeth more thoroughly when bleeding from gingivitis and 72.5% of Oslo students from other faculties brush their teeth more gently.

Table no. 2 shows the practices of the student population for maintaining oral hygiene. It can be seen from the table that the majority of the dental students from Skopje and Oslo, as well as students from other faculties in Oslo, use additional products for maintaining oral hygiene. The percentage of students from other faculties in Skopje who use only a toothbrush is 53.3.

The answer to the question of how frequently they brush their teeth is similar. Namely, 64% of dental students from Skopje, 70% of dental students from Oslo and students from other faculties in Oslo brush their teeth twice a day. In contrast, 50% of students from other faculties in Skopje brush their teeth once a day.

It can be seen from the table that 70% of dental students from Skopje, 78% of dental students from Oslo and 80% of students from other faculties in Oslo use the same toothbrush for 3 to 6 months. In contrast, 55% of the students from other faculties in Skopje have used the same toothbrush for more than 6 months.

Discussion

Most individuals do not make conscious and logical decisions every day about the regularity of their tooth brushing and diet. It is something that they have grown up with, a habit they continue to have, unless they employ active measures to change their behavior. The solution to this problem lies in a process known as socialization. Only a small number of people's habit patterns are instinctive, while the most human behavior is learned. Each society or social group has its own culture or set of separate values, norms and beliefs. Socialization is the process by which the culture of behavior is transferred to a separate unit of the group and the individual learns the rules and practices that are characteristic of the particular group. Socialization begins in the early years of life in the family. The mother, during this period of the child's development is the most responsible agent for preparing and teaching the child manners. This early teaching is known as primary socialization. During primary socialization, a number of attitudes and practices are formed that follow the individual throughout their lives. During the school period of the child's development, teachers and pupils have a significant impact on socialization. During adolescence, the young individual increasingly develops into an independent person and begins to define attitudes, beliefs and behaviors. This continuous process of adaptation to different environmental conditions is called secondary socialization⁹.

The attitudes and habits acquired during primary and secondary socialization can have a significant impact on oral health. This is the reason why we set the goal of our paper - to determine the attitudes and practices of the student population related to oral hygiene. But the challenge was to compare the oral hygiene practices and attitudes of the student population of our country and of the student population of a highly developed country such as Norway.

The oral health of the population in Norway, unlike the population in the Republic of Macedonia, is at a much higher level. It can be deduced from the data on caries prevalence, expressed through the DMFT index (which we refer to as KEP index). This index in Norway was 1.7¹⁰ in 2004, while in Macedonia it was 6.88 in 12-year-olds in 2007, which is considered high compared to WHO recommendations for oral health (KEP <3)¹¹. Oral health is an essential component of general health and affects the quality of life of each individual in the community. The student population is part of the society that is expected to play a leading role in adopting appropriate measures in prevention and education of the population. During their studies, dental students further modify and

develop their attitude towards oral health but can also contribute to the education of the general population, especially students from other faculties. Dental students should serve as role models to their colleagues from other faculties and educate them on the importance of oral hygiene, and the measures that should be implemented (tooth brushing, carbohydrate intake, and fluorides use) and regular dental check-ups.

Our research shows that dental students from Skopje and Oslo are more regular patients in dental practices than students from other faculties in Skopje and Oslo.

This indicates that dental students are more aware of individual preventive measures for preservation of oral health (regular plaque control, removal of tartar, etc.), unlike students from other faculties. Dental students regularly go to dental check-ups, unlike students from other faculties who visit a dentist after certain symptoms. However, the percentage of students from other faculties in Oslo (32.5%) who visit the dentist twice a year is significantly larger compared to students from other faculties in Skopje (8.3%). Similar data was obtained in a survey conducted in Croatia where 70.9% of dental students visit a dentist twice a year¹², as opposed to students from other faculties (27.8%).

This study confirmed the differences in the practices and attitudes between dental students from Skopje and Oslo and their colleagues from other faculties. Dental students brush their teeth more often, use oral hygiene products compared to students from other faculties. In addition, there is evidence that gingival bleeding is more common among students from other faculties, and if it occurs they do not take immediate actions. We believe that these data are a result of less developed awareness of hygiene preventive measures among students from other faculties.

Oral hygiene practices of the student population have been studied in a large number of studies in China¹³, India¹⁴, Japan¹⁵ and Greece¹⁶. Dental students from the UK and China in 13% of cases, or 54%, visit a dentist due to symptoms, as opposed to dental students from Skopje and Oslo who visit a dentist for regular check-ups. In India, 50% of dental students visit a dentist when they experience pain, but this percentage declines in the fourth and fifth year (33%). The data suggests that education during college affects their thinking and behavior. Our dental students, in terms of how often they visit the dentist, are getting closer to Western European countries.

Conclusion

A large difference in oral-hygiene practices is noted in this survey, which allows us to conclude that dental

students maintain better oral hygiene, are less likely to have gingival bleeding and regularly attend dental check-ups compared to students from other faculties in Skopje and Oslo.

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