Motivation to Follow a Career in Dentistry of Students in Three South-East European Countries

Motivacija za nastavak karijere u dentalnoj medicini među studentima triju zemalja jugoistočne Europe

Introduction

The choice of a professional career is a critical decision for adolescents as it impacts on their future life. It is influenced mainly by advice from parents, relatives, friends and teachers (1). Societal esteem for the chosen profession, the need for prestige and high social status and income are factors which may also influence an individual's career choice (2).

Students’ attitude to selecting their future profession is of great interest to educators and educational systems in many countries. Usually, the motivation and interests for choosing a career are intimately related with the performance of

Uvod

Izbor profesionalne karijere kritična je odluka za adolescence jer utječe na njihov budući život. Na njihovu odluku utječu uglavnom savjeti roditelja, rodbine, prijatelja i nastavnika (1). Društveno poštovanje odabrane profesije, potreba za ugledom te visokim socijalnim statusom i primanjima čimbenici su koji mogu utjecati na odabir karijere pojedinca (2).

Stajalište učenika o odabiru buduće profesije je i zanimanje za odabir karijere usko povezani s obavljajem odabrane profesije u društvu. No vrlo
the chosen profession in society. However, it is very important for society and its healthcare system to understand the motivations and expectations for choosing dentistry as a profession. The literature suggests that dentistry is still an attractive profession. The reasons for its popularity relate to a positive image for the dental profession and include high social status, self-employment, flexible working hours, financial rewards and others (1-8).

Studies into dental career motivation have reported that altruism is the main reason for choosing dentistry as a profession, since dentistry is a healing science. A study in Japan and Sweden reported that altruism was dental students' primary motivation, as did two other studies, one in Iran (4) and the other in Australia (9).

Many students worldwide are entering dental schools even though in their countries there are many unemployed dentists. For example, in the Republic of North Macedonia there are now four dental schools for a population of 2.1 million and many dentists are unemployed or underemployed with a low level of income. It is therefore curiously that despite this, students still wish to study dentistry. Furthermore, previous research has indicated that dentistry in North Macedonia is currently viewed by dentists as a stressful profession which provides a low level of career satisfaction (10). Notwithstanding this situation about 200 students still enroll in Macedonian dental schools each year (10, 11). On the other side, the situation in Croatia is different, the number of students of dentistry is similar (3 public Faculties and 160 new students each year), but the population is double, giving better chance to young colleagues to start their professional career. Apart from the fact that the public health still employs dentists, dental tourism is increasing and since the country joined EU it is possible to work in neighboring countries.

Apart from motivation, it is important to understand the socio-demographic backgrounds of those choosing to study dentistry. One study has reported that among Nigerian students a motive for choosing dentistry as a career was its image as a vehicle for the achievement of personal goals, which included good job opportunities abroad, financial independence, and prestige (12). An Australian study of first year dental students concluded that the majority of students came from middle class families, lived in highly developed socio-economic areas and had well educated parents in professional or white-collar occupations (13). Most of them lived at home with their parents, who had played a major role in influencing them to take up dentistry (13).

It has also been suggested that some dental students place great emphasis on the financial considerations, such as income and financial security. Factors such as wishing to help people are given a low priority (14).

Thus, it appears that dental student career choice may be motivated by very different factors and variations occur from one population to another (8, 15-17). The range of motivating factors may vary over time and between countries. From a sociological perspective, there is a growing recognition that the emerging dentists' workforce has very different expectations from those of earlier generations, with the greatest influence being generational or 'age-related' (18). Eastern Europe is currently viewed by dentists as a stressful profession. The reasons for its popularity relate to a positive image for the dental profession and include high social status, self-employment, flexible working hours, financial rewards and others (1-8).

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European countries have gone through economic and political changes that have influenced dental practice and education. Some of the countries are members of the European Union (EU) and the others are still making considerable legislative and economic reforms with a view to becoming members in the future. Even though up to 1990, these countries had almost the same political system there are differences in education, health care and their economies that might influence the prospective students’ choices and expectations. Furthermore, in many Eastern European countries several new dental schools have been established in the last ten years, without any central workforce planning.

No previous studies in South Eastern European countries have investigated students’ motives for choosing dental education and, if they have there would be the same pattern in the countries in the region.

Against this background, the aim of this study was to investigate and compare the factors that motivated students to study dentistry at one of the State-funded dental schools in three South East European countries (Albania - Tirana, Croatia - Zagreb and Republic of North Macedonia - Skopje) and to assess whether or not their motivation changed between years three and five of their studies. Furthermore, the results, that is, the differences and similarities between students from the three different countries could be compared to define the present differences between ex-socialist countries with similar background, Croatia in the process of transition and the other two countries that are at the beginning of that process. Therefore, the hypothesis was that the reasons to follow the career in dentistry would be similar.

Matherial and Methods

Participants

There are 5 dental schools (only one is public) in Albania. In Croatia there are 3 public schools and in North Macedonia there are 4 dental schools (three are public). In the academic year 2014/2015, simultaneous cross-sectional studies were conducted at the Schools of Dental Medicine in Tirana (Albania), Zagreb (Croatia) and Skopje (North Macedonia) to understand student views on their career motivation. These dental schools are the biggest dental schools in each country. All dental students from the first, third and final (fifth in some of the countries) years of study were invited to participate in this study. At the beginning of the questionnaire the students were informed about the aim of the study, that participation was voluntary and confidentiality was assured. Ethical approval was obtained from the Ethics Committee at the Faculty of Dental Medicine, University Ss. Cyril and Methodius in Skopje. The study was conducted in full accordance with the World Medical Association Declaration of Helsinki. All students who participated were over the age of 18 years.

Instrument

An instrument was developed for the purpose of this study by its authors. While the idea arose from the previous study (6), the questions were modified and adopted for the students from these three South – East European countries (Albania, Croatia and North Macedonia). The questionnaire was validated for dental students' responses and their comprehension was tested. The instrument was divided into two parts. The first part was composed of four items, which were included to determine student views on their motivation to work as dentists. The second part was composed of four items, which were included to investigate student views on their career motivation.

The questionnaire was translated into Albanian and Macedonian, and was adapted in a way that it could be understood by students from the above-mentioned countries. The time of completion of the questionnaire was not specified in order to avoid possible bias. The questionnaire was anonymous in order to ensure confidentiality of responses.

The questionnaire was presented in four different languages (Albanian, Croatian, Macedonian and English). The questionnaire was administered in all three countries during the second semester of the second, fourth and fifth year of study. The questionnaire was filled out during classes.

Materiał i metode

Ispitanici

U Albaniji djeluje pet stomatoloških fakulteta (samo je jedan državni), u Hrvatskoj su tri državna, a u Makedoniji četiri (tri su državna). U akademskoj godini 2014./2015. na stomatološkim fakultetima u Tirani (Albanija), Zagrebu (Hrvatska) i Skoplju (Sjeverna Makedonija) provedena su istodobno poprečno-presječna istraživanja (cross-sectional) tako da bi se analizirala stajališta studenata o njihovoj motivaciji za stvaranje karijere u području dentalne medicine. Istraživanjem su bili obuhvaćeni najveći stomatološki fakulteti u svakoj zemlji. Svi studenti stomatologije prve, treće i završne godine (pete u nekim zemljama i šeste u drugima) pozvani su da se uključe. Na početku sudjelovanja studenti su obavješteni o cilju istraživanja, da je sudjelovanje dobrovoljno i povjerljivo. Etičko odobrenje dobiveno je od Etičkog povjerenja Stomatološkog fakulteta Sveučilišta sv. Cirila i Metoda u Skoplju. Studija je u cijelosti provedena u skladu s Helsinskam deklaracijom Sjevernog liječničkog udruženja. Svi studenti koji su sudjelovali bili su stariji od 18 godina.

Instrument

U svrhu ove studije autori su razvili instrument. Iako ideja proizlazi iz prethodnog istraživanja (6), pitanja su promijenjena i prilagođena studentima iz ovih triju zemalja jugoistočne Europe (Albanija, Hrvatska i Sjeverna Makedonija). Upitnik koji se sastoji od dvaju dijelova (četiri pitanja odno-
which consisted of two parts: four semi-closed questions for career choice and one for satisfaction with dental education (Figure 1) was given to all the dental students who agreed to take part. The questionnaire was piloted by administering the questions to a small group (n=30) of second-year students from the dental school in Skopje. It has been concluded that it has excellent comprehensibility and time efficacy. The respondents were asked whether they had experienced any kind of difficulty with understanding or answering the questions after group administration. Such difficulties were not reported. The Croatian and Albanian language versions of the questionnaire were not piloted in such a way and they are translations in the respective languages from the Macedonian version of the questionnaire.

The original questionnaire was translated into the Croatian and Albanian language, using the backward-forward translation method, with the assistance of colleagues who have experience in questionnaire development. The professional translator, who is familiar with the dental vocabulary and semantics, worked together with the dentist who is an expert in the field of dentistry.

| Question                                                                 | Options                                                                 | Additional Information                                                                 |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. What motivated you to study dentistry? (1st year students, 3rd year, final (5th/6th) year) • | 1 – Parents pressure • Pritisak roditelja  
2 – Positive image • Pozitivna slika struke  
3 – Relatives’ recommendation • Preporuka rodbine  
4 – Friends’ recommendation • Preporuka prijatelja  
5 – Family business • Obiteljski posao  
6 – Financial advantages • Financijska prednost  
7 – Other • Ostalo _________________________________________________(please explain • molim, objasnite) |                                                                                         |
| 2. Are you still motivated to study Dentistry? (3rd and 5th year students) • | 0 – yes • da  
1 – no • ne  
2 – I don’t know • ne znam |                                                                                         |
| 3. Do you think that you have made an improper choice? (3rd and 5th year students) • | 0 – yes • da  
1 – no • ne  
2 – I don’t know • ne znam |                                                                                         |
| 4. Would you like to change your choice at this moment? (3 rd and 5th year students) • | 0 – yes • da  
1 – no • ne  
2 – I don’t know • ne znam | If your answer is YES, explain why you would like to change:  
A) It is not profitable any more (too much work for too little money) • Nije više profitabilan (previše posla za premalo novca)  
B) Low rating of dentists in the country • Stomatologija je loše rangirana u zemlji  
C) There are too many dentists • Previše je stomatologa  
D) There is no professional perspective • Ne postoji perspektiva u struci |
| 5. Is there a need for any of the following to improve your dental education and raise your motivation? (3rd and 5th year students) • | 0 – better organization • bolja organizacija  
1 – more clinical practice with patients • više kliničke prakse s pacijentima  
2 – special books for dental students • posebni udžbenici za studente  
3 – better theoretical lectures • više teoretskih predavanja  
4 – nothing • ništa  
5 – Other • ostalo _________________________________________________(please explain • molim, objasnite) |                                                                                         |

Figure 1. Questionnaire on Motivation to Become a Dentist
Slika 1. Upitnik o motivaciji za zvanje stomatologa
translation method, with the assistance of colleagues who had previously undertaken questionnaire studies. First, it was translated by a professional translator, familiar with dental vocabulary and semantics together with a dentist with an excellent knowledge of Macedonian. This translation was revised by four dentists with an excellent knowledge of Macedonian. All translators worked independently. The translations were merged into one version. The final version was then back translated into original language by another professional translator, together with the dentist with an excellent knowledge of Macedonian. The back-translation was then evaluated by a native speaker who compared it with the original version. Prior to back translation, a pilot study was performed within 30 patients to test the clarity of the questions in both languages.

The backward-forward method was used to try to eliminate any discrepancies between the content and the meaning of the original and translated versions. A few relatively insignificant inconsistencies were found when the initial translation was matched with back translation, and they were considered to provide reliable evidence of the robustness of the questionnaire.

The respondents were asked to identify factors influencing the choice for applying to the faculty and seven possibilities (parents pressure, positive image, relatives’ recommendation, friends’ recommendation, family business, financial advantages, other) were given. The students from the third and final years were asked if they were still motivated to study dentistry, if they feel that they had made the wrong choice concerning a profession and if they wish to move to another dental school. The questions were in various forms: the second, third and fourth questions offered three possible answers (yes, no, don’t know). The fifth question was about dental education and referred to any perceived need to improve it (Figure 1).

The resulting data were entered in SPSS version 17 and were analyzed using descriptive statistics. The differences between the countries and the study years among groups were tested by using the chi-square test.

Results

The response rates (numbers and percentages of students completing the questionnaire) are shown in Table 1. The total of all students who responded was 739 dental students. In Albania/Tirana (n=319), in Croatia/Zagreb (n=211) and in the Republic of Macedonia/Skopje (n=209). The sample structure is presented in Table 2.

The responses from first, third and the last year dental students to the question regarding their main motive for the career choice are presented in Table 3. The differences in the Chi square test results for independent groups for the responses of first-year students of all three schools were statistically significant ($\chi^2=82.65; p<.01$) suggesting that the first year dentistry students differed with regards to the motivation for choosing what to study when they started with their studies. There were significant differences between the schools in Zagreb and Skopje ($\chi^2=18.12; p<.01$, although their distri-

makedonski. Taj je prijevod revidiralo četvero stomatologa, izvršnih poznavatelja makedonskog jezika. Svi su prevoditelji radili neovisno. Prijevodi su spojeni u jednu konačnu verziju. Zatim je drugi profesionalni prevoditelj preveo na izvorni makedonski jezik, zajedno sa stomatologom s izvrsnim poznavanjem makedonskoga jezika. Nakon toga je povratni prijevod procijenio izvorni govornik koji ga je usporedio s izvornikom. Prije povratnoga prijevoda provedena je pilot -studija u kojoj je sudjelovalo 30 studenata radi provjere jasnoće pitanja na oba jezika.

Metoda naprijed-natrag korištena je za pokušaj uklanjanja razlika između sadržaja i značenja izvorne i prevedene inačice. Za nekoliko relativno beznačajnih nedosljednosti koje su pronađene kada se početni prijevod izjednačio s povratnim prijevodom, smatralo se da pružaju pouzdane dokaze o robusnosti upitnika.

Ispitanici su zamoljeni da utvrdi čimbenike koji utječu na njihov izbor fakulteta i ponuđeno im je sedam mogućnosti (pritisak roditelja, pozitivna slika, preporuka rodbine, preporuka prijatelja, obiteljski posao, financijske prednosti i drugo). Studente treće i završne godine dodatno se pitalo o njihovoj motivaciji za nastavak studija, smatraju li da su učinili pogrešan izbor u vezi s profesijom i žele li se prebaciti na neki drugi fakultet. Pitanja su bila u različitim oblicima: drugo, treće i četvrto pitanje nudilo je tri moguća odgovora (da, ne, ne znam). Peto pitanje odnosilo se na stomatološku edukaciju i potrebu za njezinim poboljšanjem (slika 1.).

Dobiveni podatci uneseni su u program SPSS 17 i analizirani korištenjem deskriptivne statistike. Razlike između zemalja i godina studija testirane su Chi-kvadrat testom.

Rezultati

Brojevi i postotci studenata koji su ispunili upitnik nalaze se u tablici 1. Ukupno je anketirano 739 studenata u Albaniji/u Tirani (n = 319), u Hrvatskoj/u Zagrebu (n = 211) i u Republici Makedoniji/u Skoplju (n = 209). Struktura uzorka nalazi se u tablici 2.

Odgovori studenata stomatologije prve, treće i završne godine na pitanje o njihovu glavnom motivu za odabir karijere, prikazani su u tablici 3. Razlike u rezultatima Chi-kvadrat testa za neovisne skupine za odgovore studenata prve godine svih triju škola bile su statistički značajne ($\chi^2 = 82,65; p < .01$, što sugerira da su se studenti prve godine stomatologije razlikovali kad je riječ o motivaciji za odabir onoga što će studirati kad su se upisali na studij. Postoje značajne razlike između fakulteta u Zagrebu i Skoplju ($\chi^2 = 18,12; p < 0,01$), iako je njihova distribucija mnogo sličnija u usporedbi s distribucijom na fakultetu u Tirani. Najveća razlika bila
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Table 1. Response Rates

| Dental School • Stomatološki fakultet | 1st year • 1 godina | 3rd year • treća godina | Final year • završna godina |
|--------------------------------------|--------------------|------------------------|-----------------------------|
| Albania - Tirana • Albanija - Tirana | 91/170 = 53 %      | 110/119 = 92           | 118/129 = 91 %              |
| Croatia - Zagreb • Hrvatska - Zagreb | 59/113 = 52.2 %    | 85/114 = 75.4 %        | 67/112 = 59.8 %             |
| North Macedonia - Skopje • Severna Makedonija - Skoplj | 91/97 = 93.8 % | 62/85=72.9 % | 56/71=78.9 % |

Table 2. Sample structure: dental school, gender and year of study (n and % of the total)

| School • Fakultet | Gender • Spol | Year of study • Godina studija | Total • Ukupno |
|-------------------|---------------|---------------------------------|----------------|
| Skopje            | Female • Ženski | 1st 31 (14.8) | 52.2 % | 118 (56.5) | 121 (37.9) |
|                   | Male • Muški   | 1st 31 (14.8) | 30 (14.4) | 118 (56.5) | 198 (62.1) |
| Tirana            | Female • Ženski | 1st 35 (11.0) | 92 110 (34.5) | 319 (100) |
|                   | Male • Muški   | 1st 56 (17.6) | 78 (24.5) | 198 (62.1) | 237 (100) |
| Zagreb            | Female • Ženski | 1st 23 (25.3) | 47 (31.8) | 93 (38.4) |
|                   | Male • Muški   | 1st 26 (21.8) | 47 (22.3) | 93 (38.4) |

Table 3. Motives for career choice of dental students from the three schools in different academic years

| Motivation • Motivacija | Year | Tirana | Skopje | Zagreb | Total • Ukupno |
|-------------------------|------|--------|--------|--------|----------------|
| Parents' pressure • Pritisak roditelja | 1. | 13 | 14.3 % | 1 | 1.1 % | 0 | 0.0 % | 0 | 0.0 % | 14 | 5.8 % |
|                         | 3. | 15 | 13.6 % | 0 | 0.0 % | 1 | 1.2 % | 1 | 1.2 % | 16 | 6.2 % |
|                         | 5. | 33 | 27.7 % | 0 | 0.0 % | 2 | 3.0 % | 4 | 3.9 % | 35 | 14.5 % |
| Positive image • Pozitivna slika struke | 1. | 23 | 25.3 % | 52 | 57.1 % | 47 | 79.7 % | 122 | 50.6 % |
|                         | 3. | 32 | 29.0 % | 22 | 35.5 % | 47 | 55.3 % | 101 | 39.3 % |
|                         | 5. | 26 | 21.8 % | 23 | 41.1 % | 44 | 65.7 % | 93 | 38.4 % |
| Relatives' recommendation • Preporuke rodbine | 1. | 7 | 7.7 % | 5 | 5.5 % | 4 | 6.8 % | 16 | 6.6 % |
|                         | 3. | 14 | 12.7 % | 6 | 9.7 % | 7 | 8.2 % | 27 | 10.5 % |
|                         | 5. | 7 | 5.9 % | 5 | 8.9 % | 4 | 6.0 % | 16 | 6.6 % |
| Friends' recommendation • Preporuke prijatelja | 1. | 4 | 4.4 % | 0 | 0.0 % | 1 | 1.2 % | 5 | 2.1 % |
|                         | 3. | 2 | 1.8 % | 1 | 1.6 % | 1 | 1.2 % | 4 | 1.6 % |
|                         | 5. | 4 | 3.4 % | 0 | 0.0 % | 0 | 0.0 % | 4 | 1.7 % |
| Family business • Obiteljski posao | 1. | 7 | 7.7 % | 14 | 15.4 % | 0 | 0.0 % | 21 | 8.7 % |
|                         | 3. | 1 | 0.9 % | 23 | 37.1 % | 10 | 11.8 % | 34 | 13.2 % |
| Financial incentive • Financije | 1. | 20 | 20.0 % | 19 | 20.9 % | 6 | 10.2 % | 45 | 18.3 % |
|                         | 3. | 12 | 10.9 % | 10 | 16.1 % | 14 | 16.5 % | 36 | 14.0 % |
|                         | 5. | 16 | 13.4 % | 10 | 17.9 % | 10 | 14.9 % | 36 | 14.9 % |
| Other • Ostalo | 1. | 17 | 18.7 % | 0 | 0.0 % | 1 | 1.7 % | 18 | 7.5 % |
|                         | 3. | 34 | 30.9 % | 0 | 0.0 % | 5 | 5.9 % | 39 | 15.2 % |
|                         | 5. | 25 | 21.0 % | 0 | 0.0 % | 2 | 3.0 % | 27 | 11.2 % |
| Total • Ukupno | 1. | 91 | 100.0 % | 91 | 100.0 % | 59 | 100.0 % | 241 | 100.0 % |
|                         | 3. | 110 | 100.0 % | 62 | 100.0 % | 85 | 100.0 % | 257 | 100.0 % |
|                         | 5. | 119 | 100.0 % | 56 | 100.0 % | 67 | 100.0 % | 242 | 100.0 % |
the most frequent response by students from Zagreb. The responses from all countries were broadly similar with regards to frequencies with which relative's recommendation was reported as a motive for choosing to study dentistry.

There were significant differences among all 3 schools within the 3rd year of study ($\chi^2=99.74; p<.01$), although the most frequent findings for all groups was the positive image of the profession. The differences were significant across all comparisons (Skopje-Zagreb; $\chi^2=17.59; p<.01$) (Skopje-Tirana; $\chi^2=66.52; p<.01$) (Zagreb-Tirana; $\chi^2=44.37; p<.01$). The same difference was found among all final year students ($\chi^2=94.35; p<.01$). All responses from the three schools differed (Skopje-Zagreb; $\chi^2=17.20; p<.01$) (Skopje-Tirana; $\chi^2=51.77; p<.01$) (Zagreb-Tirana; $\chi^2=47.77; p<.01$).

Additionally, with few exceptions, the pattern of frequencies of answers was similar to that of the 1st year students. The most striking exception to the answers collected from the 1st year students was the percentage of final year students from the dental school in Tirana who reported that a positive image as a motive for studying was higher than in the 1st year of study.

When the responses are compared with regards to the Croatian dental school, there are only two categories in which respondents from the 3rd study year were similar to those in the two dental schools from Skopje and Tirana. They were positive image and friends' recommendation. Financial incentive as motivation to study dentistry was relevant for only 16.1% 3rd year students from Skopje, which was almost the same as that for the students from Zagreb (16.5%)(Table 3). By the final year, the pattern of similarities and dissimilarities between the school in Zagreb, Skopje and Tirana respondents was similar, suggesting that students differ mostly in respecting their parents' wish (more typical for students from Tirana, 27.1%). Except for the students from Skopje, the vast majority students at the other two dental schools reported that they were still well motivated to continue with their studies (Figure 2). A far higher percentage of third year dental students from Skopje (33.9%), than at Tirana (11.8%) and Zagreb (2.4%) reported that they were not motivated to finish their dental studies. As could be expected, the general pattern was that, the higher the study year, the higher was the motivation to graduate (Figure 3) from the school and start working as a dentist. The reasons for dissatisfaction with dental courses were reported by only 58 students from both third and final year of studies. Students in all three dental schools reported that they would like to have more clinical practice with patients (Figure 4). The second most frequently chosen aspect was better organization of the studies in terms of timing, guidance and so on. The highest percentage of students who thought that their instructors should improve the quality of teaching was among the final year students from Zagreb (9%), while none of the students from Skopje reported this. On the other hand, final-year students from Skopje were those who most frequently reported that they felt that nothing should be changed in the way their studies were organized and delivered (Figure 4).
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Discussion

One of the biggest public dental schools from three selected South Eastern European countries were chosen to participate in this study. Students from 1st, 3rd and the final year were chosen to participate in the study; first group, who were just starting their studies, to assess their motivation to study dentistry, the second group, who were half way through the course, to confirm if their professional choice was good or they had been disappointed, and the third group, who were very near to the end of their studies, to assess their satisfaction with education and their future career. Numerous studies in many countries have described the reasons for choosing dentistry as a profession (19, 20, 21). Most of the investigations have been questionnaire based and have used different instruments which means that the findings are not directly comparable (18). In the current study, the same questionnaire was used in all three countries. The results show that the most frequent reason for applying for dental studies at the three dental schools was the positive image of dental profession. Only for the final year students at Tirana the reason was parental pressure as the most important motive for choosing to study dentistry, also showing the influence of family on children decisions. Positive image for dental profession is mostly connected with the better social position in the society, making it a more desirable job. At all three schools, financial incentive was reported as the second most common

Rasprava

U ovom istraživanju sudjelovali su najveći državni fakulteti iz triju odabranih zemalja jugoistočne Europe. Studenti 1., 3. i završne godine izabrani su na sljedeći način – u prvoj skupini bili su oni koji su tek upisali studij kako bi se procijenila njihova motivacija za studij stomatologije; u drugoj skupini uvršteni su oni na polovini studija kako bi se procijenila njihova zadovoljstvo obrazovanjem i budućom karirom. U brojnim studijama u mnogim zemljama opisani su razlozi za odabir stomatologije kao profesije (19, 20, 21). Većina istraživanja temelji se na upitnicima i primjenjuju se različiti instrumenti, što omogućuje usporedbu podataka (18). U ovoj studiji isti su u pitanjima i primjenjuju se različiti instrumenti, što omogućuje usporedbu podataka (18). U ovoj studiji isti su u pitanjima i primjenjuju se različiti instrumenti, što omogućuje usporedbu podataka (18). U ovoj studiji isti su u pitanjima i primjenjuju se različiti instrumenti, što omogućuje usporedbu podataka (18). U ovoj studiji isti su u pitanjima i primjenjuju se različiti instrumenti, što omogućuje usporedbu podataka (18).
reason for choosing dentistry, underlining its importance in everyday decision making.

Just to give a broader overview, we have to compare the results of this study with similar ones all around the globe. In contrast to our findings, a study in Australia reported that the most predominant motives for students to be serve others, to become independent, to enjoy job satisfaction, and to acquire financial security. Similar results were reported in Canada, Thailand, and Japan (helping people, health care-related occupation, and academic interest for studying dentistry). These motives are different, showing a strong social awareness to help others, not only thinking about individual prosperity and social position.

Regarding motivation towards career choice, 41% of Japanese students stated positive motives related to helping others, achieving self-worth and health-care related interests.

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We have found the results similar to the ones of this study in India; the main factors for choosing dentistry as a profession have been reported as: parents’ influence, reputation and better lifestyle and 96.7% of students reported these factors as motivational. They considered that dentistry was a highly prestigious profession and wished to go to dental schools to become ethical, skilled professionals capable of practicing dentistry at such a level that was consistent with the expectations of society.

In another study Chinese dental students indicated that their choice was mainly because of financial reasons or prestige, also supporting the self-orientated profession decision as a main motivation. In a descriptive, cross-sectional study which was conducted on a cohort of first-year dental students from thirteen countries in six continents in 2011-12, it was found that the strongest motives were a flexible work schedule, leaving time for family life, and opportunity to help those less fortunate.

Some authors have investigated the dental profession as a career choice by different ethnic groups. One group presented data on the persons who influenced the selection of dentistry as a career by students belonging to different ethnic groups in Australia and New Zealand. It was reported that parents, in particular the mother, were more influential among Asian students than among Anglo-Australian or New Zealand students.

While a positive image for dental profession was connected with the better social position in the society in some countries, in other countries a positive image for dentistry has been connected with the desire to offer help to people. This could be explained by the low socioeconomic situation in south-eastern European countries where an individual has to think about his/her social and financial position, while in more developed parts of the world financial security gives the

Samo da bismo dali širi pregled, moramo usporediti rezultate ove studije sa sličnim u svijetu. Suprotno našim rezultatima, jedno istraživanje u Australiji pokazalo je da je motivacija studentima pomaganje drugima, da postanu neovisni, da uživaju i da su zadovoljni poslom te da steknu financijsku sigurnost. Slični rezultati zabilježeni su u Kanadi, Tajlandu i Japanu (pomaganje ljudima, zanimanje vezano za zdravstvenu zaštitu i akademsko zanimanje za studij stomatologije). Ti su motivi različiti, pokazuju snažnu društvenu usmjerenost na pomoć drugima, ne smiči samo na osobni prosperitet i socijalni položaj.

U Indiji smo pronašli rezultate slične onima iz našeg istraživanja – glavni razlozi za odabir stomatologije kao profesije navode se utjecaj roditelja, ugled i bolji način života, a istaknuo ih je 96,7% studenata kao glavne motivacijske čimbenike. Smatraju da je stomatologija vrlo угledna profesija i žele se upisati na taj studij kako bi postali etični, kvalificirani profesionalci sposobni da se bave strukom na razini koja je u skladu s očekivanjima društva.

Iako je pozitivna slika stomatološke profesije u nekim zemljama bila povezana s boljim socijalnim položajem u društvu, u drugima je povezana ponajprije sa željom da se pomogne drugim ljudima. To bi se moglo objasniti niskom socijalno-ekonomskom situacijom u zemljama jugoistočne Europe u kojima pojedinac mora razmišljati o svojem socijalnom i financijskom položaju, dok se u razvijenom i financijski sigurnom dijelu svijeta studenti pružaju mogućnost izbora stomatologije kao profesije koja je usmjerena na pacijenta.

Samo da bismo objasnili to stanje, moramo spomenuti socijalno-ekonomsku pozadinu. Takva situacija može biti zbog niskih prihoda stomatologa koji rade u privatnoj praksi u Moderniji i njihov velik broj u odnosu prema stanovništvu. U zemljama koje nisu članice EU-a, moraju se primijeniti strategije za ograničavanje broja studenata, jer mnogi neće na-
student opportunity to choose dentistry as a profession that is patient-oriented.

A positive image of the dental profession was the main reason for students studying dentistry at all three schools. In Croatia, a member of the European Union (EU), this percentage is the highest one; 97% of the students of the final year. In the two non-EU countries (Albania, North Macedonia) it seemed that the dental profession does not have good status and student expectations are not being fulfilled, especially in Skopje (up to 33.9% willing to change their vocation and up to 64.5% lost their motivation to study).

To explain this situation, we have to mention the socio-economic background. This situation might reflect the low income of dentists working in private practices in Macedonia and a large number of the dentists, relative to the overall population. In non-EU countries strategies to limit the number of students have to be implemented, since a large number of them cannot find a job at the end of their studies and, therefore, are not motivated to study while they are dental students.

One of the strategies to improve the situation could be to organize the study in a better way, by giving more attention to students’ suggestions. The main thing to improve is to include more clinical practice and to better organize the study. Better textbooks, more recent literature and better lectures were stated as important parts of improvement, however, not on the main list.

The results of this study could be used in a much broader study in Europe, in order to compare with the students from the European countries which have different political, social and healthcare cultures and systems. The results could be observed through socioeconomic and cultural differences underlining European diversities.

Conclusions

This study has highlighted that a positive image of dental profession was the main factor for students’ pursuing dentistry in the three south-eastern European dental schools that took part in the current study. The positive image for the profession was still present in the final year of study for dental students from Tirana and Zagreb but not for dental students from Skopje, whose motivation to study decreased as dental courses progressed. These data are a valuable addition to similar data collected worldwide, to compare reasons to study dentistry between different countries, with different social, economic and cultural backgrounds.

Ethics approval and consent to participate

Ethics approval for this study was obtained from the Ethics Committee at the Faculty of Dental Medicine, University Ss. Cyril and Methodius in Skopje, North Macedonia.

The informed consent obtained from study participants was verbal. At the beginning of the questionnaire the students were informed about the aim of the study, that participation was voluntary and confidentiality was assured.

Competing Interests

The authors report that they have no conflict of interests.
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