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Dental Anxiety Among Students of the University of Rijeka, Croatia

Dentalna anksioznost kod studenata Sveučilišta u Rijeci

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Abstract

Objectives: Dental anxiety is a common problem and a great challenge for many patients, but also for dentists - the treatment of anxious patients is considered to be one of the most stressful situations for dentists. The aim of this study was to evaluate the prevalence of dental anxiety among the students of the University of Rijeka and to detect possible differences in the level of anxiety among students of different study programs. **Participants and methods:** This cross-sectional study included 290 students from different faculties of the University of Rijeka (Faculty of Law, Faculty of Humanities and Social Sciences, Faculty of Engineering, Faculty of Medicine, Faculty of Dental Medicine), 73 (25.17%) male and 217 (74.83%) female students. The study was conducted online via The Modified Dental Anxiety Scale (MDAS) in 2020 and sampling was based on voluntary responses. The Student's t-test and ANOVA were used to compare differences in MDAS scores among students. **Results:** There is a significant difference in dental anxiety levels between students from the Faculty of Humanities and Social Sciences and Faculty of Dental Medicine (MDAS=11.32±4.11, MDAS=8.84±3.03, p=0.01), and also between students from the Faculty of Law and Faculty of Dental Medicine (MDAS=11.47±4.64, MDAS=8.84±3.03, p <0.01). **Conclusions:** This research showed that non-dental students have a higher level of dental anxiety than dental students. Sufficient knowledge of dental and oral health could potentially overcome dental fear and anxiety. Therefore, there is a need to provide additional dental education throughout the university curriculum.

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Introduction

Dental anxiety (DA) is described as a state of excessive and abnormal fear, worry, and apprehension that something horrible will happen during a dental visit. It is associated with the feeling of losing control and is a reaction to an unknown, possible threat (1-4). DA can manifest as disruptive behavior (5).

DA is a complex phenomenon influenced by many factors, such as previous negative dental experience, parental DA, socioeconomic status, education, and psychological conditions (depression, OCD, abuse, fear of microbes and other phobias, etc.) (6-10).

Patients who suffer from dental anxiety are not cooperative during dental visits and they usually avoid them. This means that they are not getting adequate dental care, which leads to deterioration of oral health (11, 12). Consequently, patients with high dental anxiety levels have a greater number of carious and lost teeth, a higher prevalence of periodontal disease, and a lower number of filled teeth (6). All this

Uvod

Dentalna anksioznost (DA) opisuje se kao stanje pretjeranoga i abnormalnoga straha te zabrinutosti da će se nešto strašno dogoditi tijekom posjeta dentalnoj ordinaciji. Povezana je s osjećajem gubitka kontrole i reakcija je na nepoznatu, moguću prijetnju (1 – 4). Može se manifestirati kao nekooperativno ponašanje (5).

DA je složeni fenomen na koji utječe mnogo čimbenika poput negativnih iskustava s dentalno-medicinskim zahvatima, roditeljske DA, socioekonomskog statusa, obrazovanja i psiholoških stanja (depresija, OKP, različite fobije, itd.) (6 – 10). Pacijenti koji pate od anksioznosti često nisu suradljivi tijekom dentalne terapije i obično izbjegavaju posjete doktoru dentalne medicine. Iz navedenih razloga često ne dobivaju odgovarajuću dentalno-medicinsku skrb, što pogoršava njihovo oralno zdravlje (11, 12). Posljedično, pacijenti s visokim razinama DA imaju veći broj karijesnih lezija i ekstrahiranih zuba, veću prevalenciju parodontne bolesti i manji broj saniranih zuba (6). Sve to potiče pojavu boli i pove-

promotes the development of pain associated with inflammation and infection. Because of the pain, the levels of DA and fear grow higher, which can result in avoiding dental visits further on (13, 14).

DA represents a great challenge for the patient and the dentist. It prolongs dental treatment, requires more time, increases the dentist's stress level, and in general is a barrier to good diagnostics and therapy (6, 15-17).

The level of DA is higher in students who have not yet attended most of the courses in the dental medicine field. Dental education can facilitate a reduction in DA (18).

This study aimed to: evaluate dental anxiety levels in different faculties and compare them, compare dental anxiety levels between preclinical (1st, 2nd, 3rd year) and clinical (4th, 5th, 6th year) dental students, compare dental anxiety levels between male and female students, assess the difference in dental anxiety triggers (dental appointment, waiting room, tooth drilling, scaling and polishing, local anesthetic injection).

Participants and methods

The study is designed as cross-sectional. It was conducted in the Department of Pediatric Dentistry of the Faculty of Dental Medicine University of Rijeka from January to June of 2020.

Sampling criteria

This cross-sectional study was conducted on 290 students, 73 male (25.17%) and 217 female (74.83%) students. Participation in the study was voluntary – voluntary response sampling. Students from the Faculty of Law, Faculty of Humanities and Social Sciences, Faculty of Engineering, Faculty of Medicine, and Faculty of Dental Medicine from the University of Rijeka were included in the study. Table 1 shows the distribution of participants by gender and faculties. Participants were first-year students (N=41), second-year students (N=45), third-year students (N=49), fourth-year students (N=43), fifth-year students (N=64) and sixth-year students (N=48).

Ethical approval and informed consent

The Ethics Committee for biomedical research of the Medical Faculty of the University of Rijeka approved the research and approvals from Deans of all faculties included in the study were gathered. Also, informed consent was obtained from each participant.

zano je s upalom i infekcijom. Zbog boli razine DA i straha rastu, što dodatno potiče pacijente da izbjegavaju odlaske doktoru dentalne medicine (13, 14).

DA je velik izazov i za pacijenta i za doktora dentalne medicine. Produljuje dentalnu terapiju, povećava razinu stresa kod doktora dentalne medicine i općenito je prepreka za dobru dijagnostiku i terapiju (6, 15 – 17).

Razina DA viša je kod studenata koji još nisu slušali većinu kolegija iz područja dentalne medicine. Edukacija u polju dentalne medicine može olakšati smanjenje DA (18).

Ovo istraživanje imalo je kao cilj: procijeniti razinu DA studenata s različitih fakulteta i usporediti ih, usporediti razinu DA između studenata dentalne medicine pretkliničkih (1., 2., 3.) i kliničkih (4., 5., 6.) godina studija, usporediti razinu DA između studenata muškoga i ženskoga spola, procijeniti razlike u okidačima DA (stomatološki pregled, čekaonica, bušenje zuba, uklanjanje kamenca i poliranje, injekcija lokalnog anestetika).

Ispitanici i metode

Ovo presječno istraživanje provedeno je na Katedri za dječju stomatologiju Fakulteta dentalne medicine u Rijeci od siječnja do lipnja 2020. godine.

Ispitanici

U istraživanju je sudjelovalo 290 studenata – 73 (25,17 %) bilo je muškoga spola i 217 (74,83 %) ženskoga. Sudjelovanje je bilo dobrovoljno – uzorkovanje se temeljilo na dobrovoljnom odazivu. Bili su uključeni studenti Pravnog fakulteta, Filozofskog fakulteta, Tehničkog fakulteta, Medicinskog fakulteta i Fakulteta dentalne medicine Sveučilišta u Rijeci. U tablici 1. prikazana je distribucija ispitanika prema spolu i fakultetima. Ispitanici su bili studenti prve (N = 41), druge (N = 45), treće (N =49), četvrte (N = 43), pete (N = 64) i šeste (N = 48) godine.

Etički aspekt

Etičko povjerenstvo za biomedicinska istraživanja Medicinskog fakulteta Sveučilišta u Rijeci odobrilo je istraživanje te su dobivena odobrenja dekana svih fakulteta uključenih u istraživanje. Također je dobiven informirani pristanak od ispitanika.

Table 1 Distribution by gender and faculties Tablica 1. Distribucija ispitanika prema spolu i fakultetu	Number of male participants • Ispitanici muškog spola (N)	Number of female participants • Ispitanici ženskog spola (N)	Number of participants • Ispitanici (N)
Faculty of Engineering • Tehnički fakultet	30	3	33
Faculty of Medicine • Medicinski fakultet	7	29	36
Faculty of Humanities and Social Sciences • Filozofski fakultet	5	26	31
Faculty of Law • Pravni fakultet	14	60	74
Faculty of Dental Medicine • Fakultet dentalne medicine	17	99	116

Methodology

Each participant filled in the Modified Dental Anxiety Scale (MDAS). Also, general information and information on education were collected from each respondent.

The MDAS questionnaire consists of 5 items: If you go to your dentist for treatment tomorrow, how would you feel? If you sit in the waiting room, how would you feel? If you are about to have a tooth drilled, how would you feel? If you are about to have your teeth scaled and polished, how would you feel? If you are about to have a local anesthetic injection in your gum, how would you feel?

Each of the 5 items has 5 possible answers, on a 5-point Likert-type scale ranging from 'not anxious' to 'extremely anxious'. The total score ranges from 5 (no dental anxiety) to 25 (extreme dental anxiety). A total score of 12 is considered a cut-off for mild to moderate DA, and 19 for extreme DA (17, 19).

Statistical analysis

Data analysis was performed in the IBM SPSS® Statistics version 20.0 software (Armonk, NY, SAD). The difference in MDAS scores between genders was tested using the student's t-test. MDAS score between faculties and different years of study was compared using the analysis of variance (post-hoc: student's t-test). Value $p < 0.05$ was considered statistically significant.

Results

Figure 1 shows the prevalence of DA among students of the University of Rijeka. The percentage of students with mild to extreme DA is shown in Figure 2, and the percentage by study year is shown in Figure 3. The score for each of the 5 items and the total MDAS score are shown in Table 2.

A comparison of dental anxiety prevalence in preclinical and clinical dental students is shown in Figure 4. Even though preclinical dental students have a higher level of DA, there was no statistically significant difference ($p = 0.94$) in

Metodologija

Svaki ispitanik ispunio je modificiranu ljestvicu dentalne anksioznosti (MDAS). Također su od svakog ispitanika prikupljeni opći podatci i podatci o obrazovanju.

Upitnik MDAS sastoji se od sljedećih pet pitanja: Da sutra trebaš otići stomatologu, kako bi se osjećao? Kako se osjećaš u čekaonici dok čekaš da te stomatolog pozove u ordinaciju? Kako se osjećaš dok čekaš u stomatološkom stolcu dok liječnik uzima bušilicu da počne raditi na tvojem zubu? Sjediš u stomatološkom stolcu i čekaš čišćenje zuba. Dok čekaš, a stomatolog priprema instrumente s kojima će čistiti zube oko zubnog mesa, kako se osjećaš? Kako se osjećaš dok stomatolog uzima injekcijsku iglu da bi aplicirao lokalnu anesteziju?

Svako od pet pitanja ima pet mogućih odgovora na ljestvici poput Likertove od pet bodova, koja se kreće od „opušteno" do „tako uplašen da se katkad preznojim ili osjećam bolesno". Ukupan rezultat kreće se od 5 (nema DA) do 25 (izraziti DA). Ukupan rezultat od 12 smatra se pragom za umjerenu DA, a 19 za izrazitu.

Statistička analiza

Analiza podataka obavljena je u softveru IBM SPSS® Statistics verzija 20.0 (Armonk, NY, SAD). Razlika u rezultatima MDAS-a između spolova testirana je s pomoću Studentova t-testa. Rezultati MDAS-a između fakulteta i različitih godina studija uspoređeni su analizom varijance (post-hoc: Studentov t-test). Vrijednost $p < 0,05$ smatrana je statistički značajnom.

Rezultati

Slika 1. prikazuje prevalenciju DA među studentima Sveučilišta u Rijeci. Postotak onih s umjerenom do izrazitom DA prikazan je na slici 2., a postotak prema godini studija je na slici 3. Rezultati za svako od pet pitanja i ukupni rezultat MDAS-a nalaze se u tablici 2.
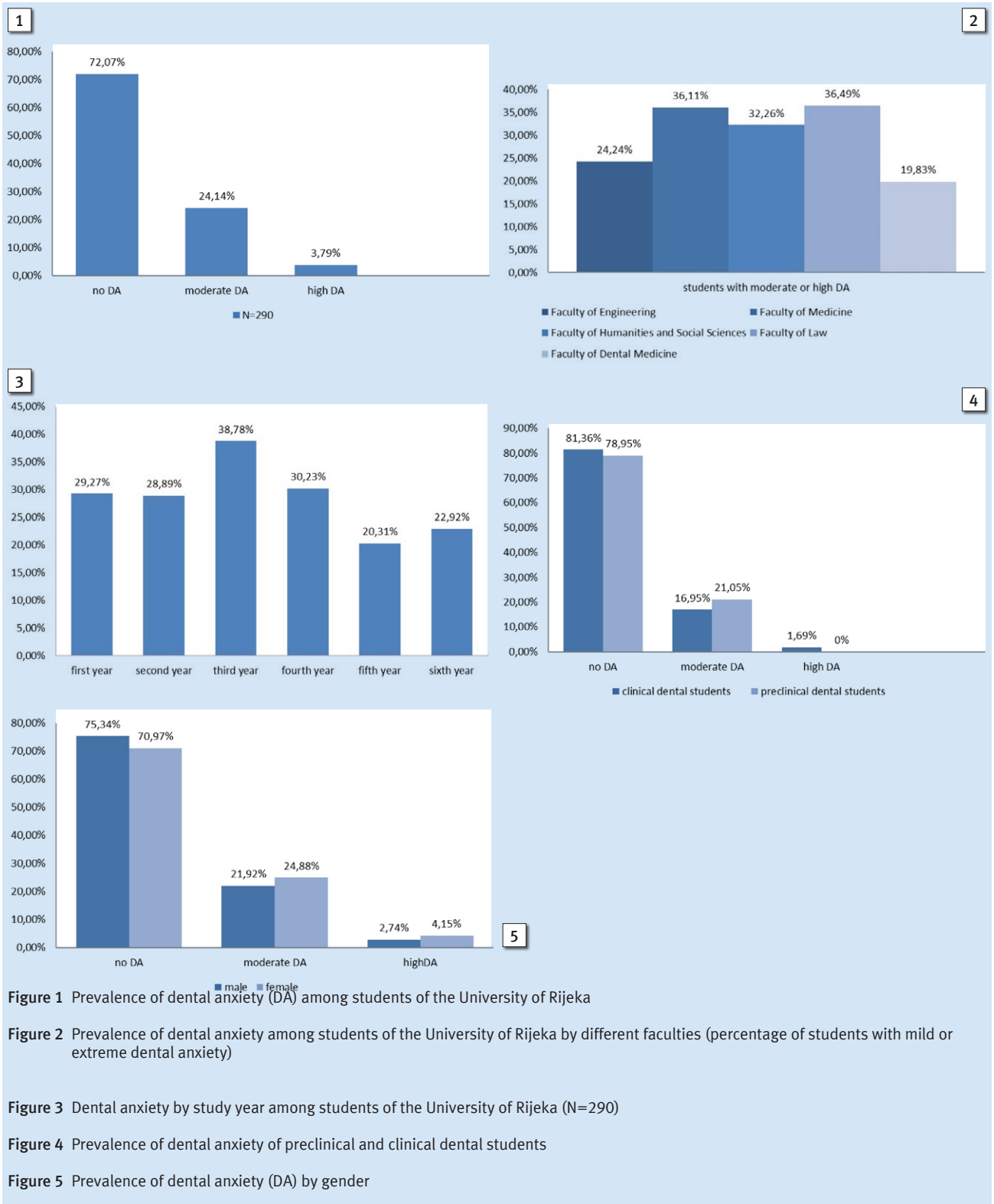
Usporedba prevalencije DA između studenata pretkliničkih i kliničkih godina studija dentalne medicine prikazana je na slici 4. Iako pretklinički studenti dentalne medicine imaju višu razinu DA, nije bilo statistički značajne razlike ($p = 0,94$) u rezultatima MDAS-a između pretkliničkih (1., 2.,

Table 2   MDAS score (mean ± SD) – each item (1 to 5) and total score (5 to 25)
Tablica 2. MDAS rezultat (aritmetička sredina ± SD) – svako pitanje (1 do 5) i ukupni rezultat (5 do 25)

	Dental appointment • Pitanje 1	Waiting room • Pitanje 2	Tooth drilling • Pitanje 3	Scaling and polishing • Pitanje 4	Local anesthetic injection • Pitanje 5	Total MDAS • MDAS ukupno
Faculty of Engineering • Tehnički fakultet	2.33 ± 0.99	1.61 ± 0.83	1.91 ± 0.88 ***	1.64 ± 0.86	1.97 ± 1.07 *	9.42 ± 3.80
Faculty of Medicine • Medicinski fakultet	2.39 ± 1.02	1.67 ± 0.79	2.28 ± 0.94	1.83 ± 0.94 *	2.31 ± 0.89	10.47 ± 3.84
Faculty of Humanities and Social Sciences • Filozofski fakultet	2.39 ± 0.88	1.68 ± 0.94	2.39 ± 0.95 **	2.10 ± 1.14 **	2.77 ± 1.18 *, **	11.32 ± 4.11 *
Faculty of Law • Pravni fakultet	2.57 ± 1.01*	1.91 ± 1.04*	2.49 ± 1.00 *,***	2.07 ± 1.13 ***	2.45 ± 1.22 ***	11.47 ± 4.64 **
Faculty of Dental Medicine • Fakultet dentalne medicine	2.14 ± 0.82*	1.55 ± 0.68*	1.85 ± 0.82 *,**	1.33 ± 0.59 *,**,***	1.97 ± 0.95 *,***	8.84 ± 3.03 ***
University of Rijeka • Sveučilište u Rijeci	2.33 ± 0.93	1.68 ± 0.85	2.13 ± 0.97	1.70 ± 0.94	2.22 ± 1.09	10.04 ± 3.95
*,**,*** $p < 0.05$						

Figure 1 Prevalence of dental anxiety (DA) among students of the University of Rijeka

Figure 2 Prevalence of dental anxiety among students of the University of Rijeka by different faculties (percentage of students with mild or extreme dental anxiety)

Figure 3 Dental anxiety by study year among students of the University of Rijeka (N=290)

Figure 4 Prevalence of dental anxiety of preclinical and clinical dental students

Figure 5 Prevalence of dental anxiety (DA) by gender

MDAS scores between preclinical (1st, 2nd, 3rd year) and clinical (4th, 5th, 6th year) dental students (*Table 3*).

More female participants reported dental anxiety; prevalence by gender is shown in Figure 5. There was a significant difference in item 4 (teeth scaling and polishing) and item 5 (local anesthetic injection) between male and female participants (Table 4).

3.) i kliničkih (4., 5., 6.) godina studija dentalne medicine (tablica 3.).

DA je učestalija kod studentica; prevalencija prema spolu prikazana je na slici 5. Dokazana je statistički značajna razlika u pitanjima 4 (uklanjanje kamenca i poliranje zuba) i 5 (lokalna injekcija anestetika) između ispitanika muškoga i ženskoga spola (tablica 4.).

Table 3   MDAS score (mean ± SD) of preclinical (1st, 2nd, 3rd year) and clinical (4th, 5th, 6th year) dental students
Tablica 3. MDAS – ukupni rezultat (aritmetička sredina ± SD) pretkliničkih (1., 2., 3.) i kliničkih (4., 5., 6.) godina studija dentalne medicine

	total MDAS score mean ± SD • MDAS ukupno aritm. sred. ± SD	
First-year students • Prva godina	8.50 ± 2.48	Preclinical dental students • Pretklinika – studenti dentalne medicine 8.86 ± 2.25
Second-year students • Druga godina	8.55 ± 3.41	
Third-year students • Treća godina	9.53 ± 2.89	
Fourth-year students • Četvrta godina	8.12 ± 3.39	Clinical dental students • Klinika – studenti dentalne medicine 8.81 ± 3.12
Fifth-year students • Peta godina	8.75 ± 2.62	
Sixth-year students • Šesta godina	9.31 ± 3.25	

Table 4   MDAS score (mean ± SD) by gender
Tablica 4. MDAS – ukupni rezultat (aritmetička sredina ± SD) prema spolu

	Male • Muški spol	**Female • Ženski spol**	**p**
Item 1 • Pitanje 1 Dental appointment	2.32 ± 0.93	2.33 ± 0.94	0.90
Item 2 • Pitanje 2 Waiting room	1.59 ± 0.81	1.71 ± 0.86	0.31
Item 3 • Pitanje 3 Tooth drilling	1.64 ± 0.87	1.71 ± 0.97	0.58
Item 4 • Pitanje 4 Scaling and polishing	1.64 ± 0.,87	2.19 ± 0.99	**0.00**
Item 5 • Pitanje 5 Local anesthetic injection	1.97 ± 1.30	2.30 ± 1.10	**0.03**
Total MDAS score • MDAS – ukupni rezultat	9.48 ± 3.79	10.24 ± 4.00	0.16

Discussion

With the big advancement of dental medicine in the last decades it was expected that the levels of DA would become lower, but the prevalence of DA is still high (20, 21). It varies from 3% to 43% depending on various factors (22). The prevalence of DA among students of the University of Rijeka, 27.93%, is following the results of other studies (16, 17, 23). Also, it is still pretty high among dental students, 19.83%.

As expected, the study showed a lower prevalence of DA among dental students compared to students from other faculties. This is also following results from other studies (6, 15-17, 23). Students from non-dental faculties have higher MDAS scores than dental students which can be explained by the level of acquired dental knowledge. Students from the Faculty of Law have the highest MDAS score (11.47) and the highest prevalence of DA (36.49%). Along with law students, students from the Faculty of Humanities and Social Sciences also have statistically significantly higher levels of DA in comparison with dental students. Regarding the knowledge on oral and dental health, medical students should have the highest knowledge after the dental students and thus the lowest anxiety after the dental students, but the study showed lower DA among engineering students in comparison with medical students. Also, medical students have significantly higher scores on item 3 (tooth scaling and polishing) than dental students.

Attitudes toward health and patient behavior strongly depend on available information and knowledge. Lack of adequate education can result in fear and anxiety (17). Non-

Rasprava

S obzirom na znatan napredak dentalne medicine posljednjih desetljeća očekivalo se da će razina DA postati niža, no prevalencija je i dalje visoka. Varira od 3 % do 43 %, ovisno o različitim čimbenicima. Prevalencija DA među studentima Sveučilišta u Rijeci od 27,93 % slijedi rezultate drugih studija. Također je još dosta visoka i među studentima dentalne medicine – 19,83 %.

Kako se i očekivalo, studija je pokazala nižu prevalenciju DA među studentima dentalne medicine u usporedbi s onima drugih fakulteta, što je također u skladu s rezultatima drugih studija. Studenti drugih fakulteta imaju višu razinu DA prema MDAS upitniku od studenata dentalne medicine, što se može objasniti razinom stečenoga znanja iz dentalne medicine. Studenti Pravnog fakulteta imaju najviši rezultat na MDAS-u (11,47) i najvišu prevalenciju DA (36,49 %). Uz njih i studenti Filozofskog fakulteta imaju statistički znatno višu razinu DA u usporedbi sa studentima dentalne medicine. Kad je riječ o oralnome zdravlju, studenti medicine trebali bi imati najviše znanja nakon studenata dentalne medicine i zato najmanju razinu DA nakon studenata dentalne medicine, ali istraživanje je pokazalo manju razinu DA među studentima Tehničkog fakulteta u usporedbi sa studentima Medicinskog fakulteta. Studenti medicine također su postigli znatno bolje rezultate na pitanju 3 (uklanjanje kamenca i poliranje zuba) od studenata dentalne medicine.

Stajališta prema zdravlju i ponašanje pacijenata uvelike ovise o dostupnim informacijama i znanju. Nedostatak odgovarajućeg obrazovanja može rezultirati strahom i anksioznošću. Studenti drugih fakulteta imaju vrlo malo sa-

dental students have very little if any education on oral and dental health in their university program. Considering also the lack of education on oral and dental health in elementary schools and high schools, it seems that only dental students receive knowledge on the importance of dental health through formal education. This also relates to medical students who have one subject on dental medicine and maxillofacial surgery. During their university education dental students are very often subjected to dental examinations, unlike other students. That could also be the reason why dental students feel less anxious, and more relaxed and comfortable during dental visits. Irregular dental check-ups could lead to the development of dental anxiety (17). Accordingly, frequent check-ups could then be correlated with lower DA.

Eventually, it is also possible that students who have higher dental fear and anxiety choose other faculties rather than dental medicine and because of that have higher MDAS scores.

Clinical courses in the university program (dental medicine) could be the key to reducing DA. The dental medicine curriculum through the years can be seen as a behavioral exposure technique – students gradually experience anxiety-provoking situations. Firstly, they start with artificial and extracted teeth and phantoms, and then they examine and treat each other, which could be the crucial point since students have both the patient's and doctor's perspectives. Subsequently, they examine and treat their patients. Considering all this, we expected lower levels of DA among experienced, clinical dental students than preclinical, novice dental students but the MDAS score was insignificantly higher in clinical students. Also, this is not in line with the results of other studies (15, 23).

There is substantial agreement among studies on gender-related differences in anxiety levels (17, 23). Higher levels of dental anxiety in women can be explained by gender differences in emotions, sensitivity, general anxiety, sadness, depression, and neuroticism (17, 24).

This study showed a higher prevalence of DA and higher MDAS scores in female compared to male participants, but only the differences in items 3 and 5 were statistically significant.

These gender differences could explain the lowest MDAS score (9.42) and lowest prevalence (24.24%) of engineering students among non-dental students since 90.1% of engineering students who participated in this study were male.

Comparing scores for each item, local anesthetic injection (item 5) appeared to be the biggest trigger for DA, followed by tooth drilling (item 3). These results correspond to the results of other studies, and the biggest proven triggers are linked with previous pain (17, 21, 23).

Limitations of the study are the non-probability sampling method and the undetermined sufficient sample size. In the future, the study should have a random sample with a determined sample size and with participants paired in age (study year) and sex between different faculties.

ti nastave o temi oralnoga zdravlja u svojemu sveučilišnom programu, ako uopće imaju. S obzirom na nedostatak izobrazbe o oralnome zdravlju i u osnovnim i srednjim školama, čini se da samo studenti dentalne medicine dobivaju znanje o važnosti oralnoga zdravlja tijekom formalnog obrazovanja, te studenti medicine koji imaju jedan predmet o dentalnoj medicini i maksilofacijalnoj kirurgiji. Tijekom sveučilišnog obrazovanja studenti dentalne medicine često su izloženi dentalno-medicinskim pregledima, za razliku od drugih studenata. To bi također mogao biti razlog zašto su manje anksiozni te opušteniji i ugodniji tijekom dentalno-medicinskih posjeta. Neredoviti posjeti doktoru dentalne medicine mogu potaknuti pojavu DA. Stoga bi česti pregledi tijekom studija mogli biti povezani s nižom DA.

Konačno, također je moguće da studenti koji imaju veću razinu straha i anksioznost prema dentalnim zahvatima biraju druge fakultete osim dentalne medicine, te zbog toga imaju više rezultate na MDAS upitniku.

Klinički predmeti u sveučilišnom programu dentalne medicine mogli bi biti ključ za smanjenje DA. Kurikul studija dentalne medicine postupno izlaže studente različitim situacijama u ordinaciji dentalne medicine Nakon pretkliničke praktične nastave počinju s kliničkom i to upravo u ulozi i pacijenta i dentalnog asistenta te doktora dentalne medicine. To bi mogao biti ključni trenutak jer studenti imaju perspektivu i pacijenta i liječnika. S obzirom na navedeno, očekivana je niža razina DA među studentima viših godina (klinička nastava) od studenata nižih (pretkliničkih) godina, ali rezultati MDAS upitnika bili su neznatno viši kod kliničkih studenata. To također nije u skladu s rezultatima drugih studija (15, 23).

U drugim istraživanjima autori su istaknuli značajnu povezanost spola i razine anksioznosti (17, 23). Viša razina DA kod ispitanica može se objasniti spolnim razlikama u emocijama, osjetljivosti, općoj anksioznosti, tuzi, depresiji i neuroticizmu. Ovo istraživanje pokazalo je veću prevalenciju DA i više rezultate na MDAS upitniku kod ispitanica u usporedbi s ispitanicima, ali samo su razlike u pitanjima 3 i 5 bile statistički značajne.

Te razlike u spolovima mogu objasniti najniži rezultat na MDAS-u (9, 42) i najnižu prevalenciju (24,24 %) među studentima Tehničkoga fakulteta (među studentima nestomatoloških fakulteta), zato što je 90,1 % studenata toga fakulteta koji su sudjelovali u ovom istraživanju bilo muškog spola.

Uspoređujući rezultate dobivene za svako pitanje, lokalna anestezija, odnosno injekcijska igla (pitanje 5) pokazala se najvećim okidačem za DA, a slijedi bušenje zuba (pitanje 3). Ti rezultati odgovaraju rezultatima iz drugih studija, a najveći dokazani okidači povezani su s prethodnom boli (17, 21, 23).

Ograničenja studije su metoda uzorkovanja i neodređivanje potrebne veličine uzorka. U budućnosti studija bi trebala obuhvatiti slučajni uzorak s izračunatom potrebnom veličinom uzorka i sudionicima uparenima prema dobi (godini studija) i spolu između različitih fakulteta.

Conclusion

In conclusion, this study showed the following: higher level of DA in non-dental than in dental students, no statistically significant difference in levels of DA between clinical and preclinical dental students, higher level of DA in female than in male participants, application of local anesthesia as the most frequent cause of DA in all students.

Sufficient knowledge on dental and oral health could potentially overcome dental fear and anxiety. Thus, there is a need to provide additional dental education throughout the university curriculum.

Further research on the subject is needed, ideally, longitudinal studies to follow students through different university curricula in association with dental anxiety levels.

Zaključci

Zaključno, istraživanje je pokazalo: višu razinu DA kod studenata drugih fakulteta u usporedbi sa studentima dentalne medicine, nema statistički značajne razlike u razinama DA između kliničkih i pretkliničkih godina studija dentalne medicine, zabilježena je viša razina DA kod ispitanica nego kod ispitanika, primjena lokalne anestezije pokazala se kao najčešći uzrok DA kod svih studenata. Znanjem o oralnome zdravlju mogu se prevladati strah i anksioznost vezani za stomatološke posjete. Zato je u sveučilišne kurikule potrebno uvrstiti u dentalnu edukaciju. Potrebna su daljnja istraživanja o toj temi, a idealne bi bile longitudinalne studije koje bi pratile studente kroz različite sveučilišne programe u vezi s razinama dentalne anksioznosti.

Sažetak

Cilj istraživanja: Dentalna anksioznost problem je i veliki izazov za mnoge pacijente, ali i za doktore dentalne medicine. Naime, liječenje anksioznih pacijenata smatra se jednom od najstresnijih situacija kad je riječ o doktorima dentalne medicine. Cilj ovog istraživanja bio je procijeniti učestalost dentalne anksioznosti među studentima Sveučilišta u Rijeci i otkriti moguće razlike u razini anksioznosti među studentima različitih studijskih programa. **Ispitanici i metode:** Ovo presječno istraživanje obuhvatilo je 290 studenata s različitih fakulteta Sveučilišta u Rijeci (Pravni fakultet, Filozofski fakultet, Tehnički fakultet, Medicinski fakultet, Fakultet dentalne medicine). Njih 73 (25,17 %) bilo je muškog spola, a 217 (74,83 %) ženskoga. Istraživanje je provedeno online 2020. godine na temelju modificirane ljestvice dentalne anksioznosti (MDAS). Za usporedbu razlika u MDAS rezultatima između studenata korišteni su Studentov t-test i ANOVA. **Rezultati:** Pronađena je statistički značajna razlika u razinama dentalne anksioznosti između studenata s Filozofskog fakulteta i Fakulteta dentalne medicine (MDAS = 11,32 ± 4,11, MDAS = 8,84 ± 3,03, p= 0,01), te onih s Pravnog fakulteta i Fakulteta dentalne medicine (MDAS = 11,47 ± 4,64, MDAS = 8,84 ± 3,03, p < 0,01). **Zaključci:** Ovo istraživanje pokazalo je da studenti koji ne studiraju dentalnu medicinu imaju višu razinu dentalne anksioznosti u usporedbi sa studentima dentalne medicine. Dovoljno znanje o dentalnome i oralnome zdravlju moglo bi prevladati strah i anksioznost povezane sa stomatološkim zahvatima. Zato je u sveučilišni kurikul potrebno uvrstiti dodatnu dentalnu edukaciju.

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