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Procjena oralno-zdravstvenog ponašanja turskih studenata

An Assessment of Self-Reported Oral Health Behaviour of Non-Dental School Students in Turkey

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Sažetak

Svrha istraživanja bila je odrediti navike u održavanju oralne higijene kod studenata u Turskoj koji se nisu upisali na stomatologiju. **Ispitanici i postupci:** Iz ukupne studentske populacije na izmirskome sveučilištu Ege, nasumce je odabran uzorak od 300 upisanih (prosječna dob 19,0±1,36) – 233 studentice (prosječna dob 18,7±0,99) i 67 studenata (prosječna dob 19,9±1,88). Podaci o oralno-higijenskim navikama dobiveni su iz ankete koju su studenti osobno ispunjavali. **Rezultati:** Pokazalo se da svi studenti obavljaju oralnu higijenu – 92,3 posto koristi se četkicom i pastom za zube, a kod 43,3 posto ispitanika čestoća čišćenja je dva ili više puta na dan. Udjel onih koji nikada nisu posjetili stomatologa iznosio je 11,3 posto, a 50 posto ispitanika izjavilo je da su posljednji put posjetili stomatologa prije više od godinu dana. Kao glavni razlog posjeta njih 29 posto navelo je zubobolju. Studentice su češće četkale zube od muških kolega ($p<0,05$). U usporedbi sa studentima, one su naginjale krvarenju desni ($p<0,01$), češće su osjećale bolove u predjelu umnjaka ($p<0,05$) te zapažale zvukove kod otvaranja i zatvaranja usta ($p<0,05$). **Zaključak:** Kako bi se poboljšale higijenske navike, za polaznike svih razina školovanja bez obzira na dob, posebice one koji će se zaposliti u zanimanjima vezanima za zdravstvo, treba primijeniti sistavne programe oralnoga zdravlja.

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Adresa za dopisivanje

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Ključne riječi

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Uvod

U mnogim državama studenti aktivno sudjeluju u javnom životu i budući su oblikovatelji javnoga mnijenja. Upravo iz tih razloga mogli bi biti važni modeli njihova zdravstvenog ponašanja (1). Budući da pomoćno osoblje u zdravstvu stječe znanje i vještine usko vezane za preventivne informacije i promicanje zdravlja, važno je da i o oralnome zdravlju znaju dovoljno, kako bi njihovo ponašanje slijedilo profesionalne preporuke. Imaju li kvalitetno znanje

Introduction

In many countries, university students occupy a significant position in public life, and comprise the opinion leaders of the future. Patterns of health behaviour and beliefs in students may therefore be particularly significant (1). Since auxiliary health personnel specialise in preventive information and health promotion, it is important that their own oral health knowledge should be good and their oral health behaviour conform to professional recommendations.

i ponašanje kad je riječ o oralnom zdravlju, oni mogu snažno utjecati na zdravstvenu izobrazbu pojedinaca i skupina te bi mogli u širem smislu poslužiti kao primjer u društvu (2).

Kako vlastite oralne higijenske navike ne dosežu preporučene razine, potrebni su daljnji naponi u izobrazbi želi li se poboljšati oralno zdravlje opće populacije (3). Većina autora ističe da je napredak u oralno-higijenskim navikama postignut zahvaljujući širokoj uporabi pasta za zube s fluorom (4).

Većina studija o temi oralnoga zdravlja može se provesti među djecom, adolescentima i odraslima te među studentima stomatološkog ili nestomatoloških fakulteta (5-7). Iako su među mlađim odraslim Turcima (8) obavljena određena ispitivanja o oralno-zdravstvenom ponašanju, vrlo je malo podataka o ponašanju studenata nestomatoloških studija prema vlastitu oralnom zdravlju (9). Isto tako se ništa ne zna o navikama učenika stručnih škola u kojima se školuje sve više pomoćnog osoblja. Dakle, svrha ankete bila je odrediti razinu znanja o oralnom zdravlju koje imaju studenti sveučilišta Ege, a nisu budući stomatolozi, nego će postati pomoćno osoblje.

Ispitanici i postupci

Uzorci

Podaci su skupljeni u Školi za profesionalnu medicinsku izobrazbu Ataturk koju pohađaju polaznici prve i druge godine ukupno devet različitih programa nastave - tehničara hitnog prijevoza i hitne medicinske skrbi (Am), anesteziologije (An), audiometrije (Au), stomatološke protetike (Dp), dijalize (Di), voditelja medicinske dokumentacije i tajnika (Md), medicinskih laboranata, radiodijagnostike (Ra), porodništva (Op).

U istraživanju je sudjelovalo ukupno 300 studenata (prosječna dob $19,0 \pm 1,36$) – 233 žene (prosječna dob $18,7 \pm 0,99$) i 67 muškaraca (prosječna dob $19,9 \pm 1,88$). Studiju je odobrilo Etičko povjerenstvo Medicinskog fakulteta sveučilišta Ege (broj 06-3,1/5).

Anketa

Svaki je ispitanik anonimno ispunio upitnik s pitanjima o navikama, znanju i stajalištu o osobnim stomatološkim higijenskim navikama (kako održavaju higijenu usta, koliko često četkaju zube i mijenjaju četkice, koriste li se drugim oralno-higijenskim pomagalima, rabe li paste za zube s fluorom, jesu li dobili upute o oralnoj higijeni i koliko često

With proper knowledge and oral health behaviour, they can play an important role in the health education of individuals and groups, and act as role models for lay people and the community at large (2).

Oral self-care behaviours fall short of the recommended levels and further educational efforts are still needed to improve population oral health status (3). The majority of authors attribute the improvement in oral health habits particularly to the widespread use of fluoridated toothpaste (4).

Most studies about oral health behaviours have been conducted among children, adolescents, adults and dental or non-dental university students (5-7). Although some studies have been carried out on oral health behaviour and status of Turkish young adults (8), little data has been available about oral health behaviour of Turkish non-dental students (9). No data has been encountered as regards oral health care habits of the students of vocational schools educating gradually increasing numbers of auxiliary personnel each day. Hence, the aim of this study was to determine oral health knowledge and behaviour among students of non-dental school students, Ege University, Izmir, training auxiliary health personnel.

Methods

Sample

The data were collected at Ataturk Medical Technology Vocational Training School which has the 1st and the 2nd grade students for 9 different programmes [Programme of Ambulance and Emergency Care Technician (Am), Programme of Anaesthesiology (An), Programme of Audiometry (Au), Programme of Dental Prosthetics (Dp), Programme of Dialysis (Di), Programme of Medical Documentation and Secretariat (Md), Programme of Medical Laboratory (Ml), Programme of Radiodiagnostics (Ra), Programme of Opticianery (Op)].

A total of 300 students (mean age 19.0 ± 1.36), 233 females (mean age 18.7 ± 0.99), and 67 males (mean age 19.9 ± 1.88) were included in the study. The Research Ethics Committee of Medical Faculty, Ege University, approved the study (#06-3.1/5).

Questionnaire

Each student replied anonymously to a self-administered questionnaire composed of questions on habits, knowledge, and attitude regarding dental care (dental care methods, frequency of tooth brushing, frequency of toothbrush replacement, any other oral hygienic aid, use of fluoride paste, receiving oral hygiene instructions and frequency of oral

treba posjećivati stomatologa). Upitnik je bio prilagođena inačica ankete kojom su se koristili Cavaillon i suradnici (10) te je sadržavao pitanja vezana za ovu studiju. Osim toga, anketa je uključivala i podatke o već obavljenim stomatološkim zahvatima i trenutnoj razini svijesti sudionika o stomatološkom zdravlju te njihovim percepcijama u vezi s oralnim zdravljem. Te su podatke ispitanici zabilježili na prilagođenom formularu koji je izvorno sastavio Kawamura pod nazivom The Hiroshima University-Dental Behavioural Inventory (HU-DBI) (11).

Analiza podataka

Za procjenu podataka koristili smo se deskriptivnom statističkom obradom. U usporedbi dviju neovisnih skupina rabljen je Mann-Whitney U test, a za skupinu nešto veće populacije test hi-kvadrat i Kruskal-Wallisov H test (SPSS 11,5 for Windows; SPSS, Chicago, Ill). Odabrana razina statističke znatnosti iznosila je 0,05.

Rezultati

Distribucija studenata prema programima nalazi se u Tablici 1. Distribucija oralne zdravstvene skrbi svih studenata koji su izjavili da održavaju oralnu higijenu nalazi se u Tablici 2.

Dok je 36 studenata (12%) izjavilo da redovito odlazi na stomatološke preglede, 264 (88%) navelo je kako to ne čine. Na pitanja o posljednjem posjetu stomatologu, njih 34 (11,3%) odgovorilo je da nisu „nikada“ bili kod stomatologa, 30 (10%) je bilo u posljednjih mjesec dana, 52 (17,3%) tijekom posljednjih 2 do 6 mjeseci, 34 (11,3%) u posljednjih 7 do 12 mjeseci, a 150 (50%) bili su u stomatološkoj ordinaciji prije godinu dana. Od onih koji su otišli stomatologu, razlog posjeta bio je sljedeći: kontrolni pregled - 45 studenata (15%), zubobolja - 87 (29%), ekstrakcija zuba - 48 (16%), izrada ispuna - 37 (12,3%), impaktirani zub - 13 (4,3%), ortodontska terapija - 12 (4%), potreba za stomatološkim protetskim radom - 8 (2,7%) te uklanjanje tvrdih zubnih naslaga - 5 (1,7%).

Kod oralno-zdravstvenih navika postoji velika korelacija između dobi i čestoće četkanja zuba te vremenu koje mu je posvećeno, što je predstavljeno u Tablici 3. U Tablici 4. prikazano je koliko se dugo netko koristi četkicom prije nego što je zamijeni. Najveća stopa učestalosti četkanja zuba kod muških i ženskih ispitanika jest u rubrici „jedanput na dan“, a u rubrici „dva puta ili tri puta na dan“ potvrdno je odgovorilo više ženskih negoli muških ispitanika (Tablica 3.). Kod procjene trajanja pojedinačnog

check-ups). The questionnaire was a modification of the questionnaires of Cavaillon et al. (10) and contained questions pertinent to this study. Besides this, in order to determine previous dental treatments of the students and present awareness of their dental health, their perceptions of oral health was recorded by means of a form developed by modifying the one developed by Kawamura, The Hiroshima University-Dental Behavioural Inventory (HU-DBI) (11).

Data Analysis

For the assessment of the data, descriptive statistics was used. For the comparison of the two independent groups, Mann-Whitney U, and for the more populated group, Chi Square and Kruskal-Wallis H (SPSS 11.5 for Windows; SPSS, Chicago, Ill) tests were utilized. Level of significance was chosen as 0.05.

Results

Distribution of the students according to programmes has been detailed in Table 1. Distribution of the oral health care of the students all of whom reported to perform oral care can be seen in Table 2.

While 36 students (12%) reported to have regular dental check-ups, 264 (88%) of them stated that they did not have any. Upon questioning the students about last seeing the dentist, 34 of them (11.3%) responded as ‘never’, 30 (10%) in the last month, 52 (17.3%) 2-6 months ago, 34 (11.3%) 7-12 months ago, and 150 (50%) more than one year ago. Among the ones having visited the dentist, the purpose for the visit was listed as: control for 45 students (15%), toothache for 87 (29%), tooth extraction for 48 (16%), filling for 37 (12.3%), impacted tooth for 13 (4.3%), orthodontic treatment for 12 (4%), need for dental prosthesis for 8 (2.7%), and calculus removal for 5 (1.7%).

Of oral health behaviours, the significant correlation between gender and tooth brushing frequency and time has been given in Table 3, whereas the one between toothbrush replacement time and use of fluoride toothpaste has been shown in Table 4. The highest rate in the frequency of tooth brushing for males and females has been observed in the ‘once a day’ response, and the frequency of twice or 3 times a day has been higher for females than males (Table 3). Evaluating the time of brushing according to gender, except for the ‘4 minutes and more’, the

Tablica 1. Distribucija studenata prema nastavnim programima**Table 1** Distribution of students according to programmes

Kratice • Abbreviations	Programi • Programmes	N	%
Am	Tehničari hitne medicinske skrbi i prijevoza • Ambulance and emergency care technician	30	10.0
An	Anesteziolozi • Anaesthesiology	24	8.0
Au	Audiometrija • Audiometry	17	5.7
Dp	Zubni protetičari • Dental prosthetics	72	24.0
Md	Medicinska dokumentacija i birotehnika • Medical documentation and secretariat	47	15.7
Di	Dijaliza • Dialysis	22	7.3
Ml	Medicinski laboratorij • Medical laboratory	31	10.3
Ra	Radiodijagnostičari • Radiodiagnostics	18	6.0
Op	Porodništvo • Opticianery	39	13.0

Tablica 2. Frekvencije ponašanja studenata prema oralnom zdravlju**Table 2** Frequencies of students' oral health behaviours

Ponašanje u oralnom zdravlju • Oral Health Behaviour	N	%
Frekvencija četkanja zuba • Tooth brushing frequency		
Jedanput na dan • Once a day	151	50.3
Dva puta na dan • Twice a day	57	19.0
Tri puta na dan • 3 times a day	73	24.3
Rijetko • Seldom	19	6.3
Metoda provedbe oralne skrbi • Method of oral care		
Četkanje zuba+zubna pasta • Toothbrushing+Toothpaste	277	92.3
Četkanje zuba+zubna pasta +zubna svila • Toothbrushing+Toothpaste+Dental Floss	8	2.7
Četkanje zuba+zubna pasta +električna četkica • Toothbrushing+Toothpaste+Electric Toothbrush	1	0.3
Četkanje zuba+zubna pasta +misvak • Toothbrushing+Toothpaste+Misvak	2	0.7
Četkanje zuba+zubna pasta +ispiranje usta • Toothbrushing+Toothpaste+Mouthwashing	11	3.7
Četkanje zuba+zubna pasta + zubna svila+ ispiranje usta • Toothbrushing+Toothpaste+ Dental Floss+ Mouthwashing	1	0.3
Nepoznata oralno-zdravstvena sredstva • Oral care products never heard of		
Obaviješteni o svemu • Heard of all	88	29.3
Interdentarna četkica • Interdental brush	72	24
Interdentarna četkica+zubna svila • Interdental brush+Dental Floss	2	0.7
Interdentarna četkica+misvak • Interdental brush+Misvak	2	0.7
Električna četkica za zube • Electric Toothbrush	5	1.7
Štapić za žvakanje • Chewing Stick	10	3.3
Superfloss	121	40.3
Trajanje četkanja zubi • Time of toothbrushing		
< 1 min	21	7.0
= 1 min	73	24.3
2-3 min	185	61.7
> 4 min	21	7.0
Trajanje četkice za zube - zamjena • Time of toothbrush replacement		
Nema specifičnog trajanja • No specific time	64	21.3
Kada se dlačice istroše • When bristles wear out	101	33.7
Jedanput na mjesec • Once a month	27	9.0
Od 2 do 6 mjeseci • 2-6 months	108	36.0
Uporaba fluoridirane paste za zube • Use of fluoride toothpaste		
Da • Yes	158	52.7
Ne • No	7	2.3
Ne znam • Don't know	135	45.0
Upute o oralnoj higijeni • Receiving oral hygiene instruction		
Da • Yes	128	42.7
Ne • No	172	57.3

četkanja zuba ponavlja se već uočena prevalencija žena, osim u rubrici „4 minute i dulje“ – nju su češće birali muškarci (Tablica 3.). U procjeni odnosa između spola i zamjene četkice, došli smo do podatka da je najveća učestalost zabilježena kod žena - iznosila je 2 do 6 mjeseci, dok je odgovor koji su najčešće izabrali muškarci glasio „kada se dlačice istroše“ (Tablica 4.). U Tablici 4. također je prikazano kako se žene koriste fluoridiranim pastama za zube, dok muškarci i ne znaju sadržava li njihova pasta fluor ili ne. U skladu s programima, uporaba zubnih pasta s fluorom nije bila znatna ($p > 0,05$), ali je vrijeme korištenja pojedinačne četkice do njezine zamjene bilo veliko ($\chi^2(8)=19,88, p=0,011$).

Odnos između informiranosti o oralno-zdravstvenoj skrbi i spolu te programa nije se pokazao statistički važnim ($p > 0,05$).

Do statistički znatnog odnosa došlo se analizom povezanosti trajanja četkanja i vijeka zubne četkice ($\chi^2(9)=30,94, p=0,000$).

U Tablici 5. predstavljena je raspodjela stavaka o percepciji studenata u vezi s oralnim zdravljem. Dok se osviještenost o povezanosti oralnog i općeg zdravlja nije baš razlikovala s obzirom na spol ispitanika ($p > 0,05$), bila je velika s obzirom na nastavni program koji pohađaju ($\chi^2(1)=3,74, p=0,09$). Statistički je dobivena velika povezanost Dp-a i Op-a ($U=1183,5; Z=-2,04; p=0,041$) i Md ($U=1327,5;$

number of females was higher than that of males in all the times listed. For the option of ‘4 minutes and more’ the number of males was observed to be higher than that of females (Table 3). In the assessment of the relationship between toothbrush replacement and gender, it was determined that the highest rate for females was 2-6 months, while the response from males was ‘when the bristles wear out’ (Table 4). Again in Table 4, it has been indicated that females used fluoride toothpaste, whereas males did not know whether the toothpaste contained fluoride or not. According to programmes, while use of fluoride toothpaste was observed not to be significant ($p > 0,05$), time of toothbrush replacement was found to be significant ($\chi^2(8)=19,88, p=0,011$).

The relationship between being previously informed about oral health care and gender and programmes was observed not to be significant ($p > 0,05$).

A significant relationship was found between time of brushing and time of toothbrush replacement ($\chi^2(9)=30,94, p=0,000$).

The distribution of students’ oral health perception items have been indicated in Table 5. While awareness of the relationship between oral health and general health was not significant in terms of gender ($p > 0,05$), it was significant in terms of programmes ($\chi^2(1)=3,74, p=0,09$). The relationship be-

Tablica 3. Odnos između spola, frekvencije ($\chi^2(4)=23,26, p=0,000$) i vremena ($\chi^2(3)=8,99, p=0,029$) četkanja.

Table 3 Relationship among gender, frequency ($\chi^2(4)=23.26, p=0.000$) and time ($\chi^2(3)=8.99, p=0.029$) of tooth brushing.

Spol • Gender	Frekvencija četkanja zuba • Tooth brushing Frequency				Vrijeme četkanja zuba • Tooth brushing Time				Ukupno • Total
	1x day	2 x day	3 x day	Seldom	<1 min	=1min	2-3 min	>4min	
Muški • Male (%)	6 (53.7)	7 (10.4)	12 (17.9)	12 (17.9)	3 (4.5)	14 (20.9)	40 (59.7)	10 (14.9)	67
Ženski • Female (%)	155 (49.4)	50 (21.5)	61 (26.2)	7 (3)	8 (7.7)	59 (25.3)	145 (62.2)	11 (4.7)	233

Tablica 4. Odnos između spola, zamjene zube četkice ($\chi^2(3)=16,64, p=0,001$) i uporabe fluoridirane zubne paste ($\chi^2(2)=14,33, p=0,001$).

Table 4 Relationship among gender, replacement of toothbrush ($\chi^2(3)=16.64, p=0.001$) and use of fluoride toothpaste ($\chi^2(2)=14.33, p=0.001$).

Spol • Gender	Trajanje zubne četkice • Time of Toothbrush Replacement				Uporaba fluoridirane zubne paste • Use of Fluoride Toothpaste			Ukupno • Total
	Nije specifično • No specific time	Kada se dlačice istroše • When bristles wear out	Jednom mjesečno • Once a month	2-6 mjeseci • 2-6 months	Da • Yes	Ne • No	Ne znam • Don't know	
Muški • Male (%)	24 (35.8)	26 (38.8)	4 (6)	13 (19.4)	26 (38.8)	5 (7.5)	36 (53.7)	67
Ženski • Female (%)	40 (17.2)	75 (32.2)	23 (9.9)	95 (40.8)	132 (56.7)	2 (0.9)	99 (42.5)	233

Tablica 5. Stope percepcije oralnog zdravlja kod studenata**Table 5** Students' rates of oral health perception

Br. • No.	Opis stavaka • Item descriptions	Da • Yes	Ne • No
1	Krvare li Vam desni tijekom četkanja/jela/buđenja? • Do you have gingival bleeding while toothbrushing/eating/waking up?	110 (36.7)	190 (63.3)
2	Imate li na zubima tvrdih naslaga? • Do you have calculus on your teeth?	137 (45.7)	163 (54.3)
3	Jeste li ikada liječili karijes? • Have you ever had dental treatment for caries?	167 (55.7)	133 (44.3)
4	Jeste li ikada izgubili zub zbog karijesa? • Have you ever lost your tooth because of caries?	131 (43.7)	169 (56.3)
5	Osjećate li bol u predjelu umnjaka? • Do you perceive pain in the wisdom tooth area?	119 (39.7)	181 (60.3)
6	Jeste li primili ortodontsku terapiju? • Have you ever had orthodontic treatment?	22 (7.3)	278 (92.7)
7	Jeste li ikada izbjeljivali zube? • Have you ever had bleaching treatment?	11 (3.7)	289 (96.3)
8	Čujete li zvukove tijekom otvaranja i zatvaranja usta? • Do you hear sounds in opening-closing your mouth?	87 (29)	213 (71)
9	Imate li kakvih parafunkcijskih navika? (škripanje zubima, stiskanje čeljusti, grizete li nokte, itd.?) • Do you have any parafunctional habits? (grinding, clenching, biting your nails, etc.)	105 (35)	195 (65)
10	Znate li da Vaše oralno zdravlje utječe na Vaše sustavno zdravlje? • Do you know that your oral health influences your general systemic health?	246 (82)	54 (18)

Tablica 6. Stope učestalosti potvrdnih odgovora prema spolu i nastavnom programu (* p<0,5, ** p<0,01, ***p<0001; NZ, nije statistički znatno)**Table 6** Rates of `yes` responses by gender and programme (* p<0.05, ** p<0.01, ***p<0.001; NS, not-significant)

Br. • No.	Spol • Gender		Uk. • Total	χ^2	p	Programi • Programmes										Uk. • Total	χ^2	p
	M (n=67)	Ž • F (n=233)				Am (n=30)	An (n=24)	Au (n=17)	Dp (n=72)	Md (n=47)	Di (n=22)	Ml (n=31)	Ra (n=18)	Op (n=39)				
1	52	138	190	7.57	**	22	18	11	47	26	12	18	14	22	190	7.65	NZ•NS	
2	41	122	163	1.63	NZ•NS	19	5	7	37	30	13	16	13	23	163	17.93	*	
3	27	106	133	0.56	NZ•NS	16	12	7	14	28	8	15	6	27	133	35.31	***	
4	39	130	169	0.12	NZ•NS	14	13	8	43	23	12	15	14	27	169	9.98	NZ•NS	
5	48	133	181	4.61	*	23	12	12	47	29	17	10	12	19	181	21.28	***	
6	62	216	278	0.00	NZ•NS	27	23	16	62	43	20	31	17	39	278	11.09	NZ•NS	
7	64	225	289	0.16	NZ•NS	30	23	17	66	46	21	30	18	38	289	7.44	NZ•NS	
8	55	158	213	5.15	*	22	18	11	46	37	14	21	13	31	213	5.83	NZ•NS	
9	43	152	195	0.02	NZ•NS	19	19	11	41	32	12	22	12	27	195	6.27	NZ•NS	

Z=-2,80; p=0,005). U Tablici 6. predstavljena je raspodjela u postotcima - potvrdni odgovori na 9 pitanja iz ankete prema spolu i programu koji pohađaju, a izražena je i vrijednost rezultata testa hi-kvadrat i statističke razine uočenih razlika. U usporedbi s kolegama, studentice su češće navele gingivno krvarenje tijekom četkanja/jela/buđenja (prva stavka) (p<0,01), češće su percipirale bol u regiji trećih kutnjaka (stavka petna) (p<0,05), te su auditivno percipirale zvučne fenomene dok otvaraju i zatvaraju usta (stavka deveta) (p<0,05). U procjeni ponašanja prema nastavnom programu, odgovori na stavke 2, 3 i 5 pokazali su statističku znatnost. Kako bismo došli do nastavnog programa iz kojega je potjecao statistički važan podatak, od svih spomenutih stavaka izostavljena je ona s najvećom vrijednosti hi-kvadrat testa te je analiza ponovljena. Prema rezultatima ponovljenog hi-kvadrat testa, nije bilo statistički

tween Dp and Op (U=1183.5; Z=-2.04; p=0.041) and Md (U=1327.5; Z=-2.80; p=0.005) was found to be significant. Table 6 presents the percentage distribution of students `yes` responses to the 9 questionnaire items, by gender and programmes, as well as the chi-square value and statistical levels of the differences observed. Compared with male students, females tended to report gingival bleeding while toothbrushing/eating/waking up (item 1) (p<0.01), perceiving more pain in the wisdom tooth area (item 5) (p<0.05), and hearing more sounds while opening-closing the mouth (item 9) (p<0.05). Evaluating all the programmes, the responses for items 2, 3 and 5 were observed to be significant. In order to find the programme from which the statistical significance resulted, among all the items mentioned, the item with the highest chi-square was left out and the chi-square analysis was repeated. According to the results of

velike razlike te je statistički znatna razlika pripisana nastavnom programu s najvećom vrijednosti hi-kvadrat testa. Prema tim vrijednostima, u usporedbi s drugim programima, zaključeno je da su polaznici nastavnog programa Am-a češće od ostalih isticali da imaju tvrde zubne naslage (stavka druga); polaznici Dp-a primili su više terapija zbog karijesa (stavka treća); polaznici Ml-a češće su percipirali bol u predjelu trećih kutnjaka (stavka peta).

Rasprava

Rezultati ispitivanja pokazali su da svi ispitani studenti provode mjere oralne higijene. Stopa svakodnevnog četkanja zuba (93,6%) ipak je nešto niža od one (96%) kod Chindije i suradnika (12). Stopa četkanja zuba dva ili više puta na dan (43,3%) niža je od one do koje su došli Rimondini i njegovi kolege (7) (92,1%) i od one Kirtiloglu i Yavuz (9) (68%), čije je ispitivanje također provedeno među studentima nestomatoloških fakulteta u Turskoj.

U studiji Silva-Nette i Silve (13) za studente prve godine Fakulteta farmacije i stomatologije, ustanovljeno je vrijeme četkanja od 1 do 5 minuta, a u našem je ispitivanju iznosilo 2 do 3 minute sa stopom od 61,7%.

Kirtiloglu i Yavuz (9) ističu da se vrlo malo studenata (3%) svaki dan koristi zubnom svilom, a velika većina (91,1%) nikada je nije rabila ili tek ponekad. U studiji Silva-Nette i Silve (13) stope uporabe zubne svile i ispiranja usta posebnim tekućinama iznosile su 87% i 37%. Kod Rimondinija i suradnika (7) nailazimo tek nekoliko subjekata (14,9) koji su naveli da se redovito svaki dan koriste zubnom svilom ili drugim sredstvima. U ovom ispitivanju je stopa svakodnevnog korištenja zubne paste bila niža od onih objavljenih u studijima iz Kanade (14) (22,3% godine 1992.) i iz SAD-a (15) (31,6% godine 1989.), no ipak je nešto veća od postotka iz studija Kirtiloglu i Yavuz (9). Ipak, osim četkanja zuba rabili su se i drugi oblici skrbi, iako je stopa njihove uporabe bila dosta niska. Za razliku od nekih drugih studija, kod pitanja o načinima održavanja oralne higijene za koje ispitanici još nisu znali, dobiveni su sljedeći podaci: superfloss (40,3%), zatim interdentalna četkica (24%) i misvak-tradicionalna drvena četkica za održavanje oralne higijene u područjima gdje prevladava muslimansko stanovništvo (op.p.) (33%). Iako se postotak neznanja o superflossu može prihvatiti budući da nisu bili spomenuti fiksni protetski radovi, podatak da sudionici nisu znali što je to interdentalna četkica upućuje na nedostatan znanje o oralno-zdravstvenoj skrbi.

the repeated chi-square analysis, no significant difference was obtained, and the significant difference was attributed to the programme with the highest chi-square. In accordance with these, comparing with the other programmes, it was determined that the students in Am reported to have more calculus on their teeth (item 2); the students in Dp received more treatment for caries (item 3); and the students in Ml perceived more pain in the wisdom tooth area (item 5).

Discussion

The results of this study show that all students perform oral care practices. The rate of daily tooth brushing (93.6%) has been found to be close to, however, lower than that (96%) of Chindia et al (12). The rate of tooth brushing twice and more a day (43.3%) has been observed to be lower than those of Rimondini et al. (7) (92.1%) and Kirtiloglu and Yavuz (9) (68%), obtained in a study carried out on non-dental university students in Turkey.

While brushing time of 1st year students enrolled in the Pharmacy and Dentistry School was found to be 1 to 5 minutes in Silva-Netto et Silva's (13) study, it was observed to be 2-3 minutes with a rate of 61.7% in this study.

Kirtiloglu and Yavuz (9) reported that very few of the students (3%) used dental floss daily, and the great majority of students (91.1%) had never or sometimes used it. In Silva-Netto et Silva's (13) study, the rates of using dental floss and rinsing the mouth were reported to be (87%) and (37%), respectively. In Rimondini et al.'s (7) study, few subjects (14.9) were reported to use dental floss daily or utilise other devices. In this study, the rate of daily flossing was lower than those reported in other studies from Canada (14) (22.3% in 1992) and the USA (15) (31.6% in 1989), whereas it was a little higher than that of Kirtiloglu and Yavuz (9). However, in addition to tooth brushing, other methods of care were also utilised, though the rates were quite low. Different from the other studies, when inquired about methods of care they had not heard of, the students' responses ranked as superfloss (40.3%), followed by interdental brush (24%) and misvak (33%). Although the percentage of not knowing superfloss would be acceptable, for they did not have any fixed prosthetic restorations, not having any idea about interdental brush indicates that students lack knowledge about oral health care.

Toothbrushes do not need to be replaced every 3 months. However, in Kirtiloglu and Yavuz's (9) study, 49% of the subjects and in Rimondini et

Zubne četkice ne treba mijenjati svaka tri mjeseca. Ipak, u studiji Kirtiloglu i Yavuz (9), 49% ispitanika mijenjalo ih je svaka tri mjeseca, a kod Rimondinija i suradnika (7) isto je činilo 81,6%. U ovoj je studiji 36% ispitanika izjavilo da mijenja četkicu u razmaku od 2 do 6 mjeseci, a njih 33,7% istaknulo je da je mijenjaju tek kada joj se istroše dlačice.

Al-Ansari i suradnici (2) opisuju da polaznici Fakulteta medicinskih znanosti vrlo dobro znaju za fluoridirane zubne paste i ulogu fluorida (94%), iako se nisu svi njima koristili. Slično se pokazalo i u ovom ispitivanju - fluoridiranim pastama za zube služi se 52,7% studenata. S obzirom na povezanost spola i uporabe takve paste, većina studentica potvrdno je odgovorila na to pitanje, dakle, znala je za njih i njima se koristila, a većina njihovih kolega izjavili su kako ne znaju. Ti rezultati upozoravaju da je prijeko potrebno bolje informirati studente o sadržaju zubnih pasti.

Tseveenjav i suradnici (16) nisu uočili spolne razlike u provedbi mjera oralne higijene, no druga istraživanja upućuju na većinsku spolnu određenost u ponašanju subjekata prema vlastitu oralnom zdravlju (17). Žene su pokazale veću stopu dobrog oralno-zdravstvenog ponašanja (18). Kirtiloglu i Yavuz (9) ističu da žene postizu znatno veću stopu četkanja zuba. U ovom smo ispitivanju, u skladu s navedenim istraživanjima, zaključili da je učestalost četkanja između dva i tri puta na dan statistički češća kod žena negoli kod muškaraca. Hikiji i suradnici (19) nisu uočili statistički veliku razliku među spolovima s obzirom na trajanje četkanja, no mi smo u ovom ispitivanju sudionike rangirali više od sudionica samo u rubrici „iznad 4 minute“. Pozitivnija stomatološka stajališta žena mogu se objasniti na temelju veće pozornosti koju posvećuju tijelu i izgledu (5).

Izvori od kojih su studenti dobili podatke o prevenciji oralnih bolesti nisu bili stomatološko osoblje, nego rodbina, prijatelji i učitelji te akcije u medijima ili promidžbene kampanje, što je povezano s rizikom da se prihvate netočne informacije, pogrešno protumače podaci ili nedosljedno što učini u određivanju dugoročnih promjena u ponašanju s obzirom na samoprevenciju (20). Kirtiloglu i Yavuz (9) navode udjel od 71% studenata koji su dobili upute i motivaciju o održavanju oralne higijene prema kojima je zube potrebno četkati dva puta i više puta na dan. 57,3% studenata obuhvaćenih ovim ispitivanjem izjavilo je kako nikad nisu dobili takve naputke ni profesionalnu potporu skrbi o oralnom

al. (7), 81.6% replaced their toothbrushes every 3 months. In this study, it was observed that 36% of the students replaced their toothbrushes in 2-6 months, while 33.7% replaced them when the bristles wore out.

Al-Ansari et al (2) reported that knowledge on oral health among the students of Health Sciences College was most strongly associated with the use of fluoride toothpaste, and that, although 94% of the respondents knew the role of fluorides, not all of them actually used fluoride toothpaste. Similarly, in this study, 52.7% of the students reported using fluoride toothpaste. As for the relationship between gender and use of fluoride toothpaste, majority of females responded `yes`, while `don't know` was the response from most of the males. These results indicate the necessity of informing the students more about the contents of toothpastes.

Although Tseveenjav et al (16). has reported that students' oral self-care did not differ by gender; other studies indicate that dental behaviour is mostly determined by gender (17). Females exhibited significantly higher rates of good oral health behaviour (18). Kirtiloglu and Yavuz (9) reported that the rate of tooth brushing was significantly higher in females. In this study, in accordance with the above mentioned studies, it was concluded that the frequency of tooth brushing twice or 3 times a day was found to be statistically more significant in females than in males. While Hikiji et al. (19) did not observe a significant difference between genders in terms of brushing time, in this study, males ranked higher than females only in brushing for more than 4 minutes. Females' having more positive dental attitudes could be explained on the basis that females usually care more about their body and appearance (5).

Students have drawn information about oral disease prevention, not from dental staff, but from non-professional sources such as relatives, friends, school, mass-media campaigns or advertising with the associate risk of misinformation and misinterpretation or inconsistent effect to determine long-term self-prevention behavioural changes (20). Kirtiloglu and Yavuz (9) reported that 71% of the students who had previously received oral hygiene instructions and motivation brushed their teeth twice or more per day. 57.3% of the students included in this study reported that they had previously not received any professional support about oral health care. These results are rather higher than those of the above mentioned researchers. Besides this, no

zdravlju. Ti su postoci nešto veći od onih kod drugih istraživača. Osim opisanoga, nismo uočili statistički veliku povezanost između nastavnog programa i spola, s obzirom na to jesu li subjekti dobili profesionalnu potporu u održavanju oralne higijene. Iako polaznici programa za zubne protetičare nemaju takvu izobrazbu u sklopu svojega sveučilišnog školovanja, za razliku od polaznika drugih nastavnih programa, oni su radili sa stomatolozima u srednjoj školi i tijekom stručne prakse. Kako u ovom razdoblju ne dobivaju stručne obavijesti o tom predmetu, nameće se pomisao da se ne brinu previše o oralnom zdravlju i to se mora smatrati velikim nedostatkom u njihovu obrazovanju.

Kod Rimondinija i suradnika (7) pokazalo se da je među polaznicima sveučilišnih studija većina (59,9%) bila na stomatološkom pregledu posljednjih godinu dana uoči razgovora. Dok je 11,3% studenata izjavilo kako nikada u životu nisu posjetili stomatologa, stopa onih s obavljenim pregledima tijekom posljednje godine dana niža je od one kod drugih istraživača. Štoviše, polovica je navela duži interval. Ta se stopa, koju su istraživači smatrali visokom, pripisuje činjenici da se u ranijoj dobi podiže svijest o oralnom zdravlju, a i ljudi ne pridaju dovoljnu važnost redovitim posjetima stomatologu. Obično odlaze stomatologu kad se pojave tegobe (zubobolja, ekstrakcija, ispun, itd.), a ne radi redovitih kontrola.

U ovom ispitivanju koristili smo se obrascem s upitnikom za procjenu percepcije oralnoga zdravlja te se iz tih podataka vidjelo da gotovo nitko od ispitanika nije primio ortodontsku terapiju (92,7%) i nije izbjeljivao zube (96,3%). Budući da kod nas nisu potpuno razvijene preventivne medicinske usluge, a ortodontska je terapija vrlo skupa, određeni studenti koji nisu primili ortodontsku terapiju kompromitiraju one koji je ne mogu primiti, a doista im je potrebna. Smatrali smo da će svijest o odnosu oralnog i općeg zdravlja biti veća u nastavnom programu Dp-a negoli u drugima, jer je ta povezanost istaknuta tijekom izobrazbe. Ipak, veća je svijest o tome uočena kod polaznika programa za optičare i voditelje medicinske dokumentacije. U toj se studiji ističe podatak o većoj stopi uočenoga gingivnog krvarenja kod ispitanica, iako je njihova stopa četkanja dva puta i više puta na dan te trajanje četkanja od 2 do 3 minute, veća negoli kod ispitanika. To pokazuje da je u daljnjem istraživanju potrebno procijeniti parodontni status. Ispitanice su češće percipirale i bol u predjelu umnjaka te zvukove tijekom otvaranja i zatvaranja usta, što pokazuje da je osobito

significant relationship was observed between programme and gender on receiving professional support. Although dental prosthetics technicians do not receive this training during their university education, different from the students in the other programmes, these students had worked with dentists during their high-school education and probation. Not acquiring professional knowledge within this period brings to mind that they do not care much about their oral health, and it is considered to be a great shortcoming of the education.

Rimondini et al. (7) reported that among university students, a majority of subjects (59.9%) had a dental examination within the year previous to the interview. While 11.3% of students reported not to have visited a dentist before, the rate of students having visited a dentist within the last year was observed to be lower than that of other researchers. Moreover, half of the students expressed that it had been more than one year since they had last seen a dentist. This rate, which has been considered to be high according to the researchers of this study, has been attributed to the facts that people's consciousness about oral health is not raised at younger ages, and that people do not attach enough importance to regular dental check-ups. People prefer to visit dentists not for check-ups, but when a problem arises (toothache, extraction, filling, etc.).

In the study, in the form where their perception of oral health care was evaluated, almost all the students were observed not to have previously received orthodontic treatment (92.7%) or bleaching treatment (96.3%). In our country, since preventive medical services have not completely developed and orthodontic treatment is expensive, some of the students who did not receive orthodontic treatment comprise the ones who cannot receive orthodontic treatment although they need it. It was considered that awareness of the relation between oral health and general health would be more significant than the other programmes in Dp where its importance was emphasised during education. However, the higher rates were observed in the optics and medical documentation programmes. In this study, it is thought-provoking that although females reported more gingival bleeding than males, their frequency of brushing twice or 3 times a day, and time of brushing for 2-3 minutes have been observed to be higher than those of males. This indicates the necessity of evaluating the periodontal status in a further study. Again, females' reporting more perception of pain in the wisdom tooth area and hearing more

potrebno ispitivanje te skupine u svrhu dijagnostike temporomandibularnih poremećaja. Iako se stavke o tvrdim zubnim naslagama i boli u predjelu umnjaka ne mogu objasniti samo na temelju procjene nastavnog programa, jasno je da su studenti zubne protetike liječili karijes kod stomatologa. Oni su tijekom obrazovanja i stručne prakse više vremena proveli sa stomatolozima te su bolje obaviješteni o oralnom zdravlju od polaznika drugih nastavnih programa. Zato im se može pružiti pomoć češće nego drugima.

Zaključci

Sve veća svijest o oralnoj higijeni i skrb o vlastitoj oralnoj higijeni kod mlađih odraslih ljudi može u budućnosti smanjiti pojavnost zubnog karijesa i reducirati parodontopatiju te oralne bolesti u starijoj populaciji. U Turskoj vlada ne financira programe za promidžbu stomatološke skrbi među studentima. Treba prihvatiti programe o sustavnoj izobrazbi o oralnom zdravlju na svim razinama obrazovanja i među učenicima svih dobi, a posebice kod budućega pomoćnog osoblja u zdravstvu. Samo će se tako poboljšati redovita skrb o vlastitu oralnom zdravlju.

sounds in opening-closing their mouths shows that it would be appropriate to investigate particularly this group in terms of TMJ problems. Although items of calculus and pain in the wisdom tooth area cannot be explained on the basis of programme evaluation, it is quite natural that students of dental prosthesis had previously received more treatment because of caries. These students share more time with dentists during their education and probation, are more informed about oral health than the others in the other programmes and can get help for their problems.

Conclusions

Increased awareness of oral hygiene and improved self-care of oral health in young adults may decrease the future incidence of dental caries, and periodontal and oral diseases in the elderly. There are no government-sponsored programmes to promote dental care among university students in Turkey. Systematic oral health education programmes should be implemented in respect to all educational levels and ages, especially for potential health care staff, to support the improvement of regular oral self-care practices.

Abstract

Objective: The aim of this study was to determine the self-reported oral health behaviours of Turkish non-dental school students. **Methods:** A sample of 300 students (mean age 19.0±1.36) – 233 females (mean age 18.7±0.99), and 67 males (mean age 19.9±1.88) – attending Ege University, Izmir, were randomly selected from the whole student population. Data on self-reported oral health behaviour of students were collected by a self-administered questionnaire. **Results:** It was observed that all the students performed oral care, 92.3% used toothbrush and toothpaste for care, and the frequency of brushing the teeth twice or more a day was 43.3%. It was determined that 34 students (11.3%) had never been to the dentist, it had been more than 1 year for 50% that they had seen a dentist, and the main reason for seeing the dentist was toothache for 29%. Female students brushed their teeth more frequently than male students ($p<0.05$). Compared with male students, females tended to have gingival bleeding ($p<0.01$), felt more pain in the wisdom tooth area ($p<0.05$), and they perceived more sounds in opening-closing of the mouth ($p<0.05$). **Conclusion:** Systematic oral health education programmes should be implemented in respect to all educational levels and ages, especially for the people who will work in the field of health, to support the improvement of regular oral self-care practices.

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Key words

Oral Health; Dental Health Survey;
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