



COMPARISON OF ORAL HYGIENE ATTITUDES, AWARENESS AND PERIODONTAL PARAMETERS OF UNDERGRADUATE DENTAL STUDENTS

ABSTRACT


Objectives: The aim of this study was to compare the differences in self-reported oral health attitudes and clinical measurements between undergraduate dental students who enrolled in or not enrolled in periodontology course in Turkey.

Materials and Methods: A total of 701 students were included in the study. Students asked 26 questions including age, gender, smoking, oral hygiene habits and self-assessment measures for periodontal status. Probing depth (PD) clinical attachment level (CAL), presence of bleeding on probing (BOP), plaque index (PI) and gingival index (GI) measurements performed. The Chi-square test was used for categorical data and one way Anova post hoc Tukey test for ordinal level data.

Results: There were no differences between grades in term of PD and CAL ($p>0.05$). Statistically significant difference was in BOP value between 1st and 5th grade ($p<0.05$). PI values of 1st grade were statistically higher than 3rd, 4th and 5th grades ($p<0.05$). GI of 1st grade was statistically higher than 4th and 5th grades ($p<0.05$). GI of 2nd grade was statistically higher than 3rd, 4th and 5th grades ($p<0.05$). Tooth brushing was not different between grades ($p>0.05$). Interdental care ratios in grades significantly differ from each other ($p<0.05$). According to students, they did not have any kind of periodontal disease with high percentages above 88%. 4th and 5th grades had periodontal treatment comparing the other grades ($p<0.05$).

Conclusions: Starting to take periodontology course in dental faculties from the first year and constituting a periodontal disease prevention program will be beneficial to students in Turkey.

Keywords: Dental education, dental health surveys, periodontal disease, self-report.

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INTRODUCTION

Periodontal diseases are affecting 50-90% of the adult population in the world.¹ Although they are not life threatening, they can affect the quality of life of the patient.² The first symptom of periodontal disease is gingival bleeding³ and the development process of the disease is usually painless unless the root surface is exposed. Clinical-based measurements are standard and also preferred approaches to diagnose periodontal diseases. However, measures derived from responses to self-reported questions included in interview-based surveys of other chronic diseases and conditions such as dietary intake, diabetes, and pain have been successful in producing viable public health data.⁴ In 2003, the Center for Disease Control and Prevention launched a Periodontal Disease Surveillance Initiative, in collaboration with the American Academy of Periodontology (AAP), which evaluated many other targets and potential use of personal reporting measures for surveillance of periodontitis.⁵

In some studies comparing periodontal parameters with self-reporting, there was a good agreement between the clinical examination and the opinions of the participants^{6,7}, but some of them did not show such compatibility.⁸ Many studies have assessed self-reported measurements of oral health and periodontal disease, but only a few specific questions were evaluated and the results differ between measurements and populations. There may be differences in the effectiveness of clinic measures, cultural differences, changes in access to dentist/specialist, or differences in periodontal care standards.⁴

Oral health education starts in the family, this predict the actual oral health status, but it can be insufficient in some cases. To control oral diseases, a number of developing countries have recently launched school-based oral health education (OHE) and preventive programs aimed at improving oral health behaviors and the state of the child population. In addition, written and visual media, also dentists, can affect oral health status of people.

Dental students who are dentists of the future take their periodontology course in the 3rd grade. 1st and 2nd grade continues as preclinical. The oral hygiene behaviors of the students up to 3rd grade are independent from the Faculty of Dentistry. The attitudes of dental students towards their oral health affect the oral health habits and have a possible effect on the improvement of the oral health of their patients.⁹ The aim of this study was to compare the differences in self-reported oral health attitudes with large number of questions, and clinical measurements between preclinical and clinical dental students in Turkey.

Study population and methodology

Seven hundred one students from all five academic years of Cumhuriyet University and Pamukkale University were included in the study. All dental students who agreed to complete the questionnaire were included in the study. The study was carried out in accordance with the Declaration of Helsinki and approved by Pamukkale University Ethics Committee of Noninvasive Clinical Research (Date: 05/03/2019; No: 05). All participants were signed informed consent. The self-report questionnaire created following the screening of relevant literature and existing self-report measures. Students asked 26 questions including age, gender, also demographic questions about smoking and systemic status, oral hygiene habits and self-assessment measures for periodontal status. The questionnaire form completed by the researcher by asking and explaining the student face to face.

After filling the questionnaire, plaque index (PI)¹⁰ and gingival index (GI)¹¹ were obtained from all the students. The whole mouth clinical periodontal examination included measurement of probing depth (PD) that measured, clinical attachment level (CAL), presence of bleeding on probing (BOP) performed using a Williams periodontal probe (Hu-Friedy, Chicago, IL) at 6 sites per tooth for whole mouth. Based on clinical diagnostic criteria proposed by 1999 International Workshop for a Classification of Periodontal Diseases and Conditions¹², the students were categorized into periodontal diseases.

Statistical analysis

The SPSS version 21.0 used for performing statistical analyses. The Chi-square test used for categorical data. The normality of data was analyzed using Shapiro-Wilk test and one way Anova post hoc Tukey test for periodontal parameters. The data presented as mean \pm standard deviation or percentage. The significance level was taken as $p < 0.05$.

Table 1. Demographic variables of students

		1 st Grade n (%)	2 nd Grade n (%)	3 rd Grade n (%)	4 th Grade n (%)	5 th Grade n (%)	P value
Age	17-24 years	206(98.6)	188(98.9)	165(100)	64(91.4)	56(83.6)	0.001
	25-30 years	3(1.4)	2(1.1)	0(0)	6(8.6)	11(16.4)	
Gender	Female	128(61.2)	120(63.2)	100(60.6)	44(62.9)	45(67.2)	NS
	Male	81(38.8)	70(36.8)	65(39.4)	26(37.1)	22(32.8)	
Smoking Status	Yes	45(21.5)	32(16.8)	37(22.4)	18(25.7)	16(23.9)	NS
	No	158(75.6)	152(80)	118(71.5)	49(70)	49(73.1)	
	Quit	6(2.9)	6(3.2)	10(6.1)	3(4.3)	2(3)	

Periodontal parameters

According to periodontal parameters of students there were no differences between grades in term of PD ($p > 0.05$). When comparing CAL values, all grades diagnosed as slight periodontitis but there was no difference between the grades ($p > 0.05$). Although BOP values were similar in all classes, there was a statistically significant difference in BOP value between 1st and 5th grade ($p < 0.05$). PI

RESULTS

Descriptive data of students represented in Table 1. A total 701 students were included in the study. Age ranges of 1st, 2nd and 3rd grade students were found to be significantly lower than 4th and 5th grade students respectively ($p < 0.05$). There was no difference between grades in terms of gender ($p > 0.05$). There was no difference in smoking ratio between grades ($p > 0.05$).

index values of 1st grade were statistically higher than those of 3rd, 4th and 5th grades ($p < 0.05$) but not 2nd grades ($p > 0.05$) also values of 3rd were statistically higher than 4th and 5th grades ($p < 0.05$). GI of 1st grade was statistically higher than 4th and 5th grades ($p < 0.05$) but not 2nd grades ($p > 0.05$). GI that belongs to 2nd grade was statistically higher than those of 3rd, 4th and 5th grades ($p < 0.05$). There was not a difference between 3rd, 4th and 5th grades in term of GI values ($p > 0.05$). (Table 2)

Table 2. Periodontal parameters of grades

	1 st Grade Mean \pm SD	2 nd Grade Mean \pm SD	3 rd Grade Mean \pm SD	4 th Grade Mean \pm SD	5 th Grade Mean \pm SD	P value
PD	2.045 \pm 0.64	2.715 \pm 8.65	2.029 \pm 0.67	2.080 \pm 0.70	2.007 \pm 0.63	0.546
GI	1.065 \pm 0.55 [†]	1.106 \pm 0.52 [‡]	0.942 \pm 0.45	0.754 \pm 0.42	0.801 \pm 0.43	0.001
PI	2.052 \pm 0.50*	2.071 \pm 0.51**	1.208 \pm 0.59***	0.843 \pm 0.50	0.816 \pm 0.41	0.001
BOP	56.08 \pm 24.6 [†]	52.23 \pm 27.1	51.70 \pm 27.7	50.12 \pm 27.7	45.08 \pm 25.0	0.039
CAL	2.051 \pm 0.64	2.728 \pm 0.64	2.064 \pm 0.68	2.180 \pm 0.78	2.080 \pm 0.72	0.546

[†] $p < 0.05$, 1st vs 4th and 5th grades; [‡] $p < 0.05$, 2nd vs 3rd, 4th and 5th grades; * $p < 0.05$, 1st vs 3rd, 4th and 5th grades; ** $p < 0.05$, 2nd vs 3rd, 4th and 5th grades; *** $p < 0.05$, 3rd vs 4th and 5th grades; [†] $p < 0.05$ 1st vs 5th grade

Results of the questions in Table 3

When the answers to the questions asked for the evaluation of the oral hygiene habits of the students, the question answers about tooth brushing were not different between grades ($p > 0.05$). Students in all grades preferred manual toothbrush more to other methods ($p < 0.05$). There was a statistically significant difference between the frequency of tooth brushing in grades ($p < 0.05$). “2-

3min brushing” percentages of 4th and 5th grades were higher than the other grades. Interdental care ratios in grades significantly differ from each other ($p < 0.05$). 3rd, 4th and 5th grade students showed high percentages comparing 1st and 2nd grades. 1st, 2nd, 3rd and 5th grades, preferred dental floss in order 48.6%, 73.6%, 64.4%, 80% but 4th grades preferred interdental brush with a 61.4% ratio. Interdental cleaning frequencies were higher in 4th and 5th

grades ($p < 0.05$) comparing the other grades. Tongue cleaning was higher in 4th and 5th grades ($p < 0.05$) comparing the other grades but

mouthwash usage was not different between grades ($p > 0.05$). (Table 3)

Table 3. Questions on the determination of oral hygiene habits

	1 st Grade n (%)	2 nd Grade n (%)	3 rd Grade n (%)	4 th Grade n (%)	5 th Grade n (%)	P value
1-Do you brush your teeth?						
Yes	206(98.6)	188(99.5)	163(98.8)	70(100)	67(100)	NS
No	3(1.4)	2(0.5)	2(1.2)	0(0)	0(0)	
2-How many times do you brush your teeth?						
1 time a day	47(22.5)	36(18.9)	27(16.4)	9(12.9)	8(11.9)	NS
Twice a day	135(64.6)	112(58.9)	109(66.1)	51(72.9)	47(70.1)	
3 times a day	22(10.5)	33(17.4)	24(14.5)	9(12.9)	9(13.4)	
Seldom	5(2.4)	8(4.2)	5(3)	1(1.4)	3(4.5)	
3-Which product do you prefer for brushing?						
Toothbrush	193(92.3)	175(92.1)	147(89.1)	67(95.7)	63(94)	NS
Electric toothbrush	14(6.7)	10(5.3)	13(7.9)	3(4.3)	2(3)	
Misvak	1(0.5)	5(2.6)	3(1.8)		2(3)	
Other	1(0.5)		2(1.2)			
4-Time of tooth brushing						
<1 min	111(53.1)	54(28.6)	75(46.3)	27(38.6)	20(29.9)	0.001
=1 min	90(44)	92(48.7)	60(37.2)	19(27.1)	17(25.4)	
2-3 min	4(2.4)	22(12.7)	19(11.6)	17(24.3)	22(32.8)	
>4 min	1(0.5)	19(10.1)	8(4.9)	7(10)	8(11.9)	
5-Do you perform interdental care?						
Yes	70(33.5)	59(31.1)	111(67.3)	51(72.9)	53(79.1)	0.001
No	139(66.5)	131(68.9)	54(32.7)	19(27.1)	14(20.9)	
6-Which product do you prefer for interdental cleaning?						
Interdental brush	9(12.5)	11(16.4)	24(20.3)	43(61.4)	6(10.9)	0.001
Dental floss	35(48.6)	49(73.1)	76(64.4)	5(7.1)	44(80)	
Wooden toothpick	28(38.9)	7(10.4)	17(14.4)	5(7.1)	4(7.3)	
Water jet			1(0.8)	1(1.4)	1(1.8)	
7-Interdental cleaning frequency						
Everday	10(13.7)	14(20.9)	35(29.7)	21(38.9)	27(49.1)	0.020
Less than a week	13(17.8)	4(6)	16(13.6)	8(14.8)	10(18.2)	
Sometimes		48(71.6)	67(56.8)	25(46.3)	18(32.7)	
Seldom	50(68.5)	1(1.5)				
8-Do you clean your tongue?						
Yes	124(59.3)	130(68.4)	101(61.2)	52(74.3)	50(74.6)	0.001
No	85(40.7)	59(31.6)	64(38.8)	18(25.7)	17(25.4)	
9-Do you use mouth wash?						
Yes	49(23.4)	63(32.8)	55(32.2)	19(27.1)	17(25.4)	NS
No	160(76.6)	127(67.2)	110(67.8)	51(72.9)	50(74.6)	

Results of the questions in Table 4

The answers to questions about oral health and periodontal awareness of students presented in Table 4. Nearly half of the students in all classes defined their gingival health as “good”. 3rd, 4th, and 5th grade students with similar percentages (24.8%, 24.3%, 28, and 4%) defined gingival health as “very good”. 1st and 2nd grade students defined gingival health as bad with 37.4% and 33.2% respectively. According to students, they did not have any kind of periodontal disease with high percentages above 88% percentages. 4th and 5th

grades had periodontal treatment comparing the other grades ($p < 0.05$). In terms of both the periodontal pocket question and the oral malodor question, students gave “no” answers with high percentages ($p > 0.05$). 1st grade students had pain and swelling on their gums with the highest percentage 31.6%, 5th grade student answered the question the least percentage 6% ($p < 0.05$). Less gingival bleeding was reported from 4th and 5th grades comparing the others ($p < 0.05$). In addition, less abscess was reported by 3rd, 4th and 5th grades comparing the others ($p < 0.05$).

Table 4. Questions about oral health and periodontal awareness of students

	1 st Grade n (%)	2 nd Grade n (%)	3 rd Grade n (%)	4 th Grade n (%)	5 th Grade n (%)	P value
1-How do you evaluate your gum health?						
<i>Excellent</i>	3(1.4)	12(6.3)	6(3.6)	7(10)	6(9)	
<i>Very Good</i>	28(13.4)	26(13.7)	41(24.8)	17(24.3)	19(28.4)	
<i>Good</i>	95(45.5)	87(45.8)	65(39.4)	35(50)	34(50.7)	
<i>Bad</i>	79(37.4)	63(33.2)	47(28.5)	11(15.7)	8(11.9)	0.001
<i>Very Bad</i>	4(1.9)	2(1.1)	6(3.6)	0(0)	0(0)	
2-Do you or did you have periodontitis or any kind of periodontal disease?						
<i>Yes</i>	20(10)	22(11.5)	18(10.7)	7(10.5)	6(11)	
<i>No</i>	189(90)	166(88.5)	147(89.3)	57(89.5)	50(99)	NS
3-Has your dentist ever told you that you had periodontitis or periodontal disease?						
<i>Yes</i>	36(17.2)	39(20.5)	36(21.8)	15(21.4)	13(19.4)	
<i>No</i>	173(82.8)	151(79.5)	129(78.2)	55(78.6)	54(80.6)	NS
4-Have you ever had periodontal treatment?						
<i>Yes</i>	18(8.6)	21(11.1)	31(18.8)	26(37.1)	24(35.8)	
<i>No</i>	191(91.4)	169(88.9)	134(81.2)	44(62.9)	43(64.2)	0.001
5-Has your dentist ever told you that you had pockets or lost bone around your teeth?						
<i>Yes</i>	3(1.5)	5(2.7)	2(1.2)	1(1.4)	2(2.3)	
<i>No</i>	206(98.5)	185(97.3)	163(98.8)	69(98.6)	65(97.7)	NS
6-Malodor or bad taste can be caused by certain foods like onions or garlic. Independent of the consumption of such foods, do you have malodor or bad taste?						
<i>Yes</i>	28(13.4)	26(13.7)	21(12.7)	5(7.1)	7(10.4)	
<i>No</i>	181(86.6)	164(86.3)	144(87.3)	65(92.9)	60(89.6)	NS
7-Have you had any pain and swelling on your gums?						
<i>Yes</i>	66(31.6)	56(29.5)	34(20.6)	7(10)	4(6)	
<i>No</i>	143(68.4)	134(70.5)	131(79.4)	63(90)	63(94)	0.001
8-Have you ever had bleeding in your gums?						
<i>Yes</i>	111(53.1)	101(53.2)	69(41.8)	26(37.1)	24(35.8)	
<i>No</i>	98(46.9)	89(46.8)	96(58.2)	44(62.9)	43(64.2)	0.008
9-Have you ever had an abscess in your gums?						
<i>Yes</i>	53(25.4)	50(26.3)	17(10.3)	1(1.4)	3(4.5)	
<i>No</i>	156(74.6)	140(73.7)	148(89.7)	69(98.6)	64(95.5)	0.001

Results of the questions in Table 5

The answers of the questions related to periodontology awareness and oral hygiene requirements of the students shown in Table 5. 1st grade students have heard periodontology term in 77% percentage. Most of the students have learned oral hygiene necessity from their parents. 1st and 2nd grade students did not have an information

about microbial dental plaque comparing the 3rd, 4th and 5th grade students ($p < 0.05$). Also 1st (23.6%) and 2nd (32.1%) grade students thought that “the initial periodontal treatment can harm the teeth” ($p < 0.05$). In addition to that, 1st (52.2%) and 2nd (43.7%) grade students thought that dental calculus can be eliminated by natural products with high percentages.

Table 5. Questions related to periodontology awareness and oral hygiene requirements

	1 st Grade n (%)	2 nd Grade n (%)	3 rd Grade n (%)	4 th Grade n (%)	5 th Grade n (%)	P value
1-Have you heard the “Periodontology” term before?						
Yes	161(77)	171(90)	155(93.3)	70(100)	67(100)	0.001
No	48(23)	19(10)	10(6.1)	0(0)	0(0)	
2-Where do you learn the necessity of performing oral hygiene?						
Family	145(69.4)	118(62.1)	105(63.6)	38(54.3)	34(50.7)	0.001
School(Primary, secondary, high)	43(20.6)	35(18.4)	24(14.5)	14(20)	17(25.4)	
Advertisements	7(3.3)	4(2.1)	3(1.8)	0(0)	0(0)	
Friends	5(2.4)	9(4.7)	0(0)	2(2.9)	2(3)	
School of Dentistry	9(4.3)	24(12.6)	33(20)	16(22.9)	14(20.9)	
3-Do you have an information about the microbial dental plaque?						
Yes	45(21.5)	87(45.8)	129(78.2)	70(100)	67(100)	0.001
No	164(78.5)	103(54.2)	36(21.8)	0(0)	0(0)	
4-Do you think the periodontal treatment will harm the teeth?						
Yes	55(26.3)	61(32.1)	31(18.8)	8(10.2)	2(3.2)	0.001
No	154(73.7)	129(67.9)	134(81.2)	62(89.8)	65(96.8)	
5-Do you think the calculus deposits can be eliminated by naturally or natural products?						
Yes	109(52.2)	83(43.7)	38(23)	8(10.2)	3(5)	0.001
No	100(47.8)	107(56.3)	127(77)	62(89.8)	64(95)	

DISCUSSION

The use of questionnaires has become a more common method for understanding oral health attitudes of people. There are many types of questionnaires used in the literature for this purpose. In this study, we developed questions about both oral hygiene status and periodontal attitude. The aim of this study is to compare the oral hygiene attitudes and knowledge about periodontology field of dental students who take or do not take periodontology course and compare them with their clinical measurements. Theoretical periodontology courses start in the first semester of the third year of five year-education and students meet patients in the second semester of the third year in Turkey. The 4th and 5th grade students actively treat the patients in the periodontology clinic. As the level of education increased, the dental health attitudes of the individuals observed to be more developed^{13,14} but some studies reported the absence of an improvement in oral hygiene practices of dental students regardless of having obtained information and education.¹⁵

Halitosis (fedor oris, bad breath, breath malodour, oral malodour) is the general term that used to describe any unpleasant odour in expired air.¹⁶ Oral halitosis development in younger ages could be due to tongue coating deposition.¹⁷ 1st (13.4%), 2nd (13.7%) and 3rd (12.7%) grade students' percentages belong the oral malodor question higher than 4th (7.1%) and 5th (10.4%) grade students in accordance with their tongue

cleaning percentages. These results are very below the results belong the students in Jordan (78%)¹³, students in Japan and Finland¹⁸ but higher than Sweden (2.4%).¹⁹ Oral malodor that can occur due to many causes is also an important area of social life but it may originate from oral or non-oral sources. Although a device in this present study did not measure the level or severity of halitosis, the subjective self-reported information evaluated therefore, differences can be observed between survey studies.

Microbial dental plaque is the primary etiologic factor of periodontal disease. Therefore, brushing teeth twice a day recommended as a good procedure for dental care.²⁰ An adequate plaque control will result in a reduction in PI. In this study the percentage of students brushing twice a day varied between 58.9% and 72.9% and remained below the students in Lithuania (% 92)²¹, India (84.6%)²² and United Arab Emirates (86%)¹⁴ but similar in Turkey (74%).²³ Although interdental cleaning frequency that performed everyday changed between grades, 33.5% -79.1% of students had knowledge regarding interdental aids. The percentage of interdental care in the 3rd (67.3%), 4th (72.9%) and 5th (79.1%) grades almost doubled comparing the 1st (33.5%) and 2nd (31.1%) grades. These findings were similar to India (74%), remained above United Arab Emirates (56%).¹⁴ But these data include all interdental cleaning tools, including toothpicks and all timelines. Rates of regular interdental cleaning results remained low.

Min 13.7% of 1st grade and max 49.1% of 5th grade stated to perform interdental cleaning regularly. In a study 44.6% of clinical and 41.0% of preclinical students stated to use dental floss regularly.²¹ In another research conducted in Turkey, 19% of preclinical students indicate the using dental floss regularly, while 31% of clinical students.²³ In the same study, information about microbial dental plaque of preclinical students found to be better than the clinical students.²³ In our study, it increased in direct proportion to the education that student's received and reached 100% in 4th and 5th grade. In line with the results of the questionnaire, the PI values of the 1st, 2nd and 3rd grade students were statistically higher than the 4th and 5th grade students. However, most of these studies did not compare the clinical data that had been collected only declaration of person with clinical measurement. Although, different results may be due to the differences in oral health behavior between countries. Religious and cultural beliefs, also economic factors have effect on oral hygiene behavior. For example, misvak use and toothpicks may not be found in a study in Greece or Italy. But in our study 0.5% of 1st grade, 2.6% of 2nd grade, 1.8% of 3rd grade and 3% of 5th grade students performed their plaque control using misvak.

According to GI values measured in relation to gingival inflammation, 1st and 2nd grade students revealed statistically higher values comparing than those of 4th and 5th grade students. We asked the students if they ever had bleeding, pain or swelling in their gums. 1st grade and 2nd grades had almost the same percent (53.1-53.2%), but this decreased in 3rd (41.8%), 4th (37.1%) and 5th grade (35.8%). Mongolian students had experienced gingival bleeding with 34%²⁴ similar to our study but Greek students stated the gingival bleeding as %17.9 percent.²⁵ 3.6% Lithuanian clinical students and 19% preclinical students experienced gingival bleeding.²¹ Gingivitis even slight periodontitis diagnosed according to GI and CAL data and questionnaire responses of the students.

Smoking increases the periodontal destruction and reduces the chance of success of periodontal treatments.²⁶ Also halitosis may be present in the strong smokers' breath, and a history of smoking

has been implicated in decreasing olfactory sensitivity. In Saudi Arabia, it has reported that among 13% of male and 2% of female dental students were current smokers.²⁷ Another study that performed in Saudi Arabia, cigarette smoking has been reported among 27.6% and 2.4 % of male and female dental students, respectively.²⁸ An international review that evaluated the rate of smoking among dental students and the highest rate was 47% for Greece (1-5 grades) and the lowest rate was 3% for the Canada (all years).²⁹ In our study, there was no difference between the groups in terms of smoking. The rate of smoking was 16.8% (2nd grade), 21.5% (1st grade), 22.4% (3rd grade), 23.9% (5th grade) and 25.7% (4th grade). Also 43.9% of female students vs 56.1% male students were current smokers as opposed in Japan (33% men versus 7% women)³⁰, Jordan (31% men vs 4% women)³¹, India (15% men vs 2% women)²⁹ and Saudi Arabia (13% men vs 2% women)³² but similar to Greece and Serbia.²⁹ These differences may be caused by the change in the socio-economic situation in which students live, the lack of training on the hazards of smoking and the differences in the stress levels that was experienced. However, smoking rates seem to affect the periodontal status of students. When CAL values considered, periodontitis developed in students of all grades. In addition, the students in our study stated that they did not receive periodontal treatment before with high percentages. This result may be due to inability to reach periodontal treatment or inadequate economic level.

Turkey is a large country linking the Middle East, Asia, and Europe with expansive geography, various ethnic and racial minorities. The cost of dental care with a large and growing adult population and the change in the prevalence of periodontal diseases can lead to significant economic, social and developmental effects.³³ Caries preventive approaches are currently included in the oral health promotion plan. A more comprehensive health plan for periodontal disease prevention has not been established yet. The dental specialization training law was enacted in 2011. Prior to this, a small number of students were given doctoral education in universities and

periodontologists were trained. Therefore, it can be very difficult and costly to have indances reach someone who is educated in the field of periodontology.

CONCLUSIONS

Variations in dental attitudes and behaviors of students depend on clinical training and curriculum. However, dental students can only meet in the 3rd year with the periodontology field that proven relationships with the whole body. Starting to take periodontology course in dental faculties from the first year and addition a periodontal disease prevention program to preventive oral health practice will be beneficial to students on account of their future patients in Turkey.

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CONFLICT OF INTEREST STATEMENT

None

Dişhekimliği Öğrencilerinin Ağız Hijyeni Tutumları, Farkındalıkları ve Periodontal Parametrelerinin Karşılaştırılması

ÖZ

Amaç: Bu çalışmanın amacı, Türkiye'de periodontoloji dersi alan ve almayan dişhekimliği öğrencileri arasında, kendilerinin bildirdiği ağız sağlığı tutumları ve klinik ölçümler arasındaki farklılıkları karşılaştırmaktır. **Gereç ve Yöntemler:** Çalışmaya toplam 701 öğrenci dahil edildi. Öğrencilere yaş, cinsiyet, sigara içme, ağız hijyeni alışkanlıkları ve periodontal durum gibi öz değerlendirme soruları dahil toplam 26 soru soruldu. Sondlama derinliği (PD), klinik ataçman seviyesi (CAL), sonlamada kanama varlığı (BOP), plak indeksi (PI) ve gingival indeksi (GI) ölçümleri. Kategorik verilerde Ki-kare testi, gruplar arası karşılaştırmalarda tek yönlü varyans analizi post-hoc Tukey testi kullanıldı. **Bulgular:** PD ve CAL açısından sınıflar arasında fark bulunmadı ($p>0,05$). 1. ve 5. sınıf BOP değerleri arasında anlamlı farklılık bulundu ($p<0,05$). 1. sınıfın PI değerleri 3., 4. ve 5. sınıflarından istatistiksel olarak yüksekti ($p<0,05$). 1.

sınıfların GI değerleri, 4. ve 5. sınıflarda istatistiksel olarak daha yüksekti ($p<0,05$). 2. sınıfların GI değerleri, 3., 4. ve 5. sınıflarda istatistiksel olarak daha yüksekti ($p<0,05$). Diş fırçalama açısından sınıflar arasında farklılık bulunmadı ($p>0,05$). İnterdental bakım oranları sınıflar arasında birbirinden önemli ölçüde farklı bulundu ($p<0,05$). Öğrencilerin %88'e kendi ağızları periodontal açıdan sağlıklıydı. 4. ve 5. sınıfların periodontal tedavi olma yüzdeleri diğer sınıflarda karşılaştırıldığında daha fazla bulundu. **Sonuçlar:** Dişhekimliği fakültelerinde 1. sınıftan itibaren periodontoloji dersi verilmeye başlanması ve ülke çapında periodontal hastalıklardan korunma programı oluşturmak Türkiye'deki öğrencilere dolayısıyla onların ilerideki hastalarının yararına olacaktır. **Anahtar Kelimeler:** Dişhekimliği eğitimi, diş sağlığı anketleri, periodontal hastalık, kendini raporlama.

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