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Knowledge, awareness and attitudes of oral hygiene practices and periodontal diseases among students studying in the field of health

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ABSTRACT

Objectives: The aim of this study is to evaluate the knowledge, awareness and attitudes about oral hygiene practices and periodontal diseases among nursing, emergency aid and disaster management (EADM), physiotherapy, first and emergency aid (FEA) students.
Methods: A total of 759 students aged between 18 and 33 were included in the study. Of the students, 166 were enrolled in physiotherapy, 169 in FEA, 120 in EADM and 304 were enrolled in nursing department. Personal data and knowledge, awareness and attitudes towards oral hygiene and periodontal diseases were evaluated using an online questionnaire form consisting of 28 questions. Data obtained were statistically analysed based on $p<0.05$ and $p<0.01$ significance levels.
Results: It was determined that physiotherapy students brushed their teeth more often (74.3%) and changed their toothbrushes more frequently (46.1%) compared to other departments ($p<0.05$). Compared to other students, EADM students were more aware of the effect of dental plaque on gingival diseases (49.6%) and flossed daily at a higher rate (17.6%). It was found that the nursing students had the highest level of knowledge about the symptoms of gingival diseases. FEA students knew more than other departments that smoking was a risk factor for gingival diseases (87.5%). In addition, no significant differences were found between first and last year students in terms of knowledge, awareness, and attitudes towards periodontal diseases.
Conclusion: The findings of the present study show that the knowledge, awareness and attitudes of students studying in the field of health about oral hygiene practices and periodontal diseases should be improved.
Key Words: Periodontal disease, Oral and dental health, Awareness

INTRODUCTION

Health is a universal human need for the promotion and protection of quality of life, which concerns all of society (1). Oral health is critical for the continuity of general health, as it is the entry zone of most microorganisms into the body (2). The association between oral and systemic diseases has been well demonstrated in the last decades. Oral diseases can affect the initiation and progress of various systemic diseases such as cardiovascular disease, diabetes, and rheumatoid arthritis (3, 4). Since the maintenance of oral health is critical for the continuity of general health (5), it is necessary to improve the knowledge level of individuals about oral health and ensure that they gain proper oral hygiene habits (6).

Aetiology of oral diseases include factors such as lack of oral hygiene, smoking, consumption of unhealthy foods, and stress. However, the most important factor is the concept of oral hygiene (7). Oral hygiene can be primarily defined as removing the dental plaque formed by bacteria and sticky foods on the teeth and back of the tongue using toothbrushes, floss and some chemical agents. In individuals with poor oral hygiene, dental plaque can lead to tooth decay and/or periodontal diseases (8).
Periodontal diseases are a group of infectious diseases caused by microbial dental plaque that affect the gingiva and other supporting tissues of the teeth (9). Periodontal diseases are one of the most common health problems worldwide. However,

individuals are often unaware of periodontal disease in its early stages, as it often does not lead to pain. Therefore, individuals often consult the dentist in advanced stages of periodontal diseases such as gingival recession, bad breath and/or tooth mobility (10). In order to keep periodontal disease under control in its early stages, periodontal awareness should be increased in all segments of the society and appropriate behavioural changes should be ensured (11).

In Turkey, studies report that the number of dentists required for the maintenance of periodontal health and oral hygiene training is insufficient (12). Therefore, in addition to dentists, all health personnel should assume some responsibility for raising awareness, providing guidance, and encouraging the community. However, studies show that students studying in various health sciences departments do not have enough knowledge about oral and dental health (13-15).

The aim of this study is to evaluate the knowledge, awareness and attitudes of nursing, physiotherapy, EADM, and FEA department students about oral hygiene practices and periodontal diseases.

MATERIALS AND METHODS

First and final-year students studying in the departments of nursing, EADM, physiotherapy and FEA at Mehmet Akif Ersoy University were included in this cross-sectional survey study. Ethical approval was obtained from the Ethics Committee of Non-Interventional Clinical Research at Mehmet Akif Ersoy University (protocol number GO 2020/32). Necessary permissions were obtained from the deans and directorates of all faculties and health services vocational schools included in the study.

A pilot study was conducted with 15 randomly selected students to ensure that the survey was comprehensible and to correct mistakes. All participants in the pilot study stated that the questions were clear and understandable. The data from the pilot study was not included in the final analysis. The study was carried out with surveys sent to the e-mail addresses of the students. The study was carried out from October to November 2021. The surveys were sent to the students' e-mail addresses after the students were given preliminary information by their instructors who attended the course. Students who were not able to participate in the survey were sent a reminder e-mail one week later. Participation was closed one week after the reminder e-mail.

A total of 759 students (407 first-year and 352 final-year students), were included in the study. 120 students were enrolled in the EADM department, 304 in nursing, 166 in physiotherapy, and 169 were enrolled in the FEA department. Incomplete surveys were excluded from the analysis. Students not in their first or last year were also excluded from the analysis.

The questionnaire used in the study consists of 3 sections and a total of 28 questions. The first part of the questionnaire includes 4 questions on age, gender and educational status of the participants. The second part of the questionnaire includes 14 questions evaluating attitudes and behaviours related to oral dental health. These questions include dentist visit and reason, frequency and duration of tooth brushing, type of toothbrush and frequency of changing toothbrush, amount of toothpaste used, tongue brushing habit, floss, mouthwash and interdental brush use, and smoking. The third part of the questionnaire includes 10 questions to determine the students' knowledge levels related to periodontal health. These questions include factors causing gingival diseases, the effect of smoking on the gingiva, the relationship between gingival health and general health, symptoms of gingival diseases, and the attitudes of students towards gingival treatments.

Study data was evaluated using the SPSS program (SPSS Inc., Chicago, IL). Chi-square test was used to determine statistically significant differences between the values. Percentage, mean and standard deviation, and frequency values were used in the evaluation of the data. All analyses were conducted at $p<0.05$ and $p<0.001$ significance levels.

RESULTS

A total of 759 students were evaluated in the present study. Mean age of the students was 19.82 (range: 18-33). 70.4% (534) were female and 29.6% (225) were male. It was determined that 40.2% of the students who participated in the study were enrolled in nursing, 22.1% were enrolled in FEA, 22% were enrolled in physiotherapy, and 15.7% were enrolled in EADM departments. 53.8% of the students were first-year and 46.2% were final-year students.

The attitudes and behaviours of the students regarding oral dental health are shown in Table 1. Accordingly, it was determined that 16.9% of the participants made regular visits to the dentist every 6 months. However, no significant differences were found between the departments (p>0.05). It was determined that the reason for visits to the dentist was mostly for fillings with a rate of 22.7%. The proportion of students who received instructions from the dentist on how to brush teeth was 42.4%.

Table 1: Comparison of students' attitudes and behaviors related to oral dental health according to their departments

	EADM students		**Physiotherapy students**		**Nursing students**		**FEA students**		**Total**		**Chi-square**
	N	%.	N	%.	N	%.	N	%.	N	%.	
Regular dentist visit once every 6 months	26	**21.8**	22	**13.2**	50	**16.4**	30	**17.9**	128	**16.9**	3.898 (0.273)
Those who brush their teeth twice a day or more	74	**62.2**	124	**74.3**	184	**60.3**	106	**63.1**	488	**64.3**	9.639 (0.022)
Those who brush their teeth for more than 2 minutes	55	**46.2**	63	**37.7**	117	**38.4**	56	**33.3**	291	**38.3**	4.933 (0.177)
Those who change their toothbrush every 3 months	33	**27.7**	77	**46.1**	93	**30.5**	66	**39.3**	269	**35.4**	15.747 (0.001)
Daily use of floss	21	**17.6**	21	**12.6**	23	**7.5**	12	**7.1**	77	**10.1**	22.522 (0.007)
Those who wet the toothbrush before brushing teeth	61	**51.3**	122	**73.1**	189	**62**	115	**68.5**	487	**64.2**	16.340 (0.001)
Those who prefer medium hardness toothbrush	54	**45.4**	103	**61.7**	182	**59.7**	110	**65.5**	449	**59.2**	22.009 (0.009)
Mouthwash use	31	**26.1**	36	**21.6**	66	**21.6**	36	**21.4**	169	**23.3**	1.170 (0.760)
Those who brush their teeth most at night before going to bed	78	**65.5**	77	**46.1**	165	**54.1**	74	**44**	394	**51.9**	18.861 (0.001)

EADM: Emergency Aid and Disaster Management, FEA: First and Emergency Aid

The rate of those who brush their teeth twice a day constitutes 64.3% of all students. This ratio was 74.3% in physiotherapy students, 62.2% in EADM, 60.3% in nursing, and 63.4% in FEA students and the difference between the departments was statistically significant (p< 0.05). The rate of students who brush their teeth for more than 2 minutes is 38.3% and for this variable, no significant difference was found between the departments (p>0.05). It was found that the students who participated in the study brushed their teeth mostly before going to bed at night, and the ratio of EADM students who had this habit was significantly higher compared to other departments (p<0.05). In addition, when the amount of toothpaste used was compared, 61.1% of the students stated that they used pea-sized blob of toothpaste. For this variable, no significant difference was found between the departments (p>0.05). Students who brush their tongues after brushing their teeth constitute 54.3% of the total students.

46.1% of physiotherapy students, 39.3% of FEA students, 30.5% of nursing students, and 27.7% of EADM students changed toothbrushes every 3 months and the difference between the departments was statistically significant (p<0.01). In addition, majority of the students preferred a medium toothbrush (59.2%) and the ratio of FEA students who preferred a medium toothbrush was significantly higher compared to other departments (p<0.01). It was found that 73.1% of physiotherapy students wet their toothbrush before brushing teeth (p< 0.01). Only 4.9% of the students used a rechargeable or battery-powered toothbrush.

The ratio of students who flossed at least once a day was only 10.1%. 17.6% of EADM students, 12.6% of physiotherapy students, 7.5% of nursing students, and 7.1% of FEA students flossed at least once a day and the difference between the departments was statistically significant (p<0.01). A total of 23.3% of the students used mouthwash daily however, no significant difference was found between the departments (p>0.05). Only 12% of the students used an interdental brush and no significant difference was found between the departments (p>0.05).

In Table 2, participants' knowledge levels about gingival health were compared according to their departments. Accordingly, 82.1% of the students responded that gingival health and general health were associated. However, no significant difference was found between the departments (p>0.05).

Table 2: Comparison of students' knowledge level about periodontal health with respect to their departments

	EADM students		**Physio-therapy students**		**Nursing students**		**FEA stu-dents**		**Total**		**Chi-square**
	N	%.	N	%.	N	%.	N	%.	N	%.	
Those who think smoking is a risk factor for gingival disease	87	**73.1**	135	**80.8**	253	**83**	147	**87.5**	622	**81.9**	10.132 (0.017)
Those who think that teeth and gums are not damaged during scaling	37	**31.1**	44	**26.3**	76	**24.9**	30	**17.9**	187	**24.6**	7.106 (0.069)
Those who think gingival health has an impact on overall health	91	**76.5**	136	**81.4**	254	**83.3**	142	**84.5**	623	**82.1**	3.573 (0.311)

EADM: Emergency Aid and Disaster Management, FEA: First and Emergency Aid

When students were asked whether teeth and gums are damaged after scaling, only 24.6% of the participants responded that they were not damaged. For this variable, no statistically significant difference was found between the departments (p>0.05).

27.54% of the students smoked. Of these, 13.3% smoked less than 10 cigarettes per day, 10.14% smoked between 10 and 20 cigarettes per day, and 4.1% smoked more than one pack per day. A significant majority of the students knew that smoking was a risk factor for gingival diseases (81.9%). This ratio was 80.8% in physiotherapy students, 73.1% in EADM students, 83% in nursing students, and 87.5% in FEA students and the difference between the departments was statistically significant (p<0.05). Table 3 shows the participants' knowledge levels about gingival health with respect to their year of education. Accordingly, no significant difference was found between first-year and final-year students in the answers given to the questions about the relationship between general health and gingival health, damage to teeth and gingiva after scaling, and smoking being a risk factor for gingival diseases (p>0.05).

Table 3: Comparison of students' knowledge levels about periodontal health according to their year of education

	First year		Final year		Total		Chi-square
	N	%.	N	%.	N	%.	
Those who think smoking is a risk factor for gingival disease	339	**83.1**	283	80.6	622	**81.9**	0.773 (0.379)
Those who think that teeth and gums are not damaged during scaling	98	**24**	89	25.4	187	**24.6**	0.182 (0.670)
Those who think gingival health has an impact on overall health	341	**83.6**	282	80.3	623	**82.1**	1.344 (0.246)

Table 4 shows the answers of the students regarding factors causing gingival diseases with respect to the departments in which they studied. The rate of students considering dental plaque as a factor in the formation of gingival disease is 28.2%. This ratio was 49.6% in EADM students, 15% in physiotherapy students, 30.8% in nursing students, and 21.4% in FEA students, and the difference between the departments was statistically significant (p< 0.01). The rate of students who believe that the medication used is a factor in the formation of gingival diseases is 18.2%. This ratio was 29.4% in EADM students, 10.2% in physiotherapy students, 22.6% in nursing students, and 10.1% in FEA students, and the difference between the departments was statistically significant (p<0.01). More than half (54%) of the students thought that malnutrition plays a role in the formation of gingival diseases. However, no significant difference was found between the departments (p>0.05). Furthermore, 26.7% of the students thought that some systemic diseases play a role in the formation of gingival diseases. This ratio was 30.3% in EADM students, 25.1% in physiotherapy students, 31.1% in nursing students, and 17.9% in FEA students, and the difference between the departments was statistically significant (p<0.05). The rate of students who think that smoking is a factor in the formation of gingival diseases was 41.6% and no significant difference was found between the departments (p>0.05). 30.8% of the students thought that genetic factors play a role in the formation of gingival diseases. This ratio was significantly higher in EADM students compared to other departments (p<0.01).

Table 4: Comparison of students' knowledge levels about factors causing periodontal diseases according to their departments

Factors Causing Gingival Diseases	EADM students		Physiotherapy students		Nursing students		FEA students		Total		Chi-square
	N	%.	N	%.	N	%.	N	%.	N	%.	
Dental Plaque	59	**49.6**	25	**15**	94	**30.8**	36	**21.4**	214	**28.2**	46.144 (0.001)
Medications	35	**29.4**	17	**10.2**	69	**22.6**	17	**10.1**	138	**18.2**	28.662 (0.001)
Malnutrition	62	**52.1**	84	**50.3**	176	**57.7**	88	**52.4**	410	**54**	2.956 (0.398)
Some Systemic Diseases	36	**30.3**	42	**25.1**	95	**31.1**	30	**17.9**	203	**26.7**	10.755 (0.013)
Smoking	49	**41.2**	65	**38.9**	137	**44.9**	65	**38.7**	316	**41.6**	2.468 (0.481)
Genetic Factors	46	**38.7**	36	**21.6**	111	**36.4**	41	**24.4**	234	**30.8**	17.830 (0.001)

EADM: Emergency Aid and Disaster Management, FEA: First and Emergency Aid

Table 5 shows the answers of the students regarding factors causing gingival diseases with respect to their year of education. Accordingly, 46.2% of final-year and 37.7% of first-year students thought that smoking is a factor in the formation of gingival diseases and the difference was statistically significant (p<005). For the rest of the factors, no statistically significant difference was found between first-year and final-year students (p>0.05).

Table 5: Comparison of students' knowledge levels about the factors causing periodontal diseases according to their year of education

Factors Causing Gingival Diseases	First Year		Final Year		Total		Chi-Square
	N	%.	N	%.	N	%.	
Dental Plaque	108	**26.5**	106	**30.2**	214	**28.2**	1.296 (0.255)
Medications	64	**15.7**	74	**21.1**	138	**18.2**	3.693 (0.055)
Malnutrition	228	**55.9**	182	**51.9**	410	**54**	1.234 (0.267)
Some Systemic Diseases	112	**27.5**	91	**25.9**	203	**26.7**	0.224 (0.636)
Smoking	154	**37.7**	162	**46.2**	316	**41.6**	5.490 (0.019)
Genetic Factors	120	**29.4**	114	**32.5**	234	**30.8**	0.832 (0.362)

Table 6 shows the answers of the students regarding the symptoms of gingival diseases with respect to the departments in which they studied. A total of, 67.6% of the students thought that gingival bleeding was a symptom of gingival disease. However, no significant difference was found between the departments (p>0.05). More than half of the students (52.3%) thought that swelling in the gums was a sign of gingival disease, but no significant difference was found between departments (p>0.05). Furthermore, 51.3% of the students thought that bad breath was among the symptoms of gingival diseases. This ratio was significantly higher in EADM students compared to other departments (p<0.05). In addition, 45.2% of the students thought that redness in the gums was among the symptoms of gingival diseases, and this ratio was significantly higher in nursing students compared to other departments (p<0.05). Additionally, 39% of the students thought that mobility in the teeth was a symptom of periodontal diseases, and this ratio was significantly higher in nursing students compared to other departments (p<0.05). A low proportion of the students thought

that bone resorption was among the symptoms of gingival diseases (18.7%). This ratio was highest in EADM students (25.2%) (p<0.05).

Table 6: Comparison of students' knowledge levels about the symptoms of periodontal diseases according to their departments

Symptoms Of Gingival Diseases	EADM students		Physiotherapy students		Nursing students		FEA students		Total		Chi-square
	N	%.	N	%.	N	%.	N	%.	N	%.	
Mobility in Teeth	38	**31.9**	62	**37.1**	138	**45.2**	58	**34.5**	296	**39**	9.161 (0.027)
Alveolar Bone Resorption	30	**25.2**	18	**10.8**	70	**23**	24	**14.3**	142	**18.7**	15.983 (0.001)
Bad Breath	70	**58.8**	84	**50.3**	163	**53.4**	72	**42.9**	389	**51.3**	8.116 (0.044)
Gingival Bleeding	77	**64.7**	116	**69.5**	215	**70.5**	105	**62.5**	513	**67.6**	3.878 (0.275)
Swelling In The Gums	54	**45.4**	90	**53.9**	171	**56.1**	82	**48.8**	394	**52.3**	5.009 (0.171)
Redness In The Gums	57	**47.9**	67	**40.1**	158	**51.8**	61	**36.3**	343	**45.2**	12.821 (0.005)

EADM: Emergency Aid and Disaster Management, FEA: First and Emergency Aid

Table 7 shows the answers of the students regarding factors causing gingival diseases with respect to their year of education. No statistically significant difference was found between first-year and final-year students (p>0.05).

Table 7: Comparison of students' knowledge levels about the symptoms of periodontal diseases by their year of education

Symptoms Of Gingival Diseases	First Year		Final Year		Total		Chi-Square
	N	%	N	%	N	%	
Mobility in Teeth	159	**39**	137	**39**	296	**39**	0.001 (0.986)
Alveolar Bone Resorption	74	**18.1**	68	**19.4**	142	**18.7**	0.190 (0.663)
Bad Breath	207	**50.7**	182	**51.9**	389	**51.3**	0.094 (0.759)
Gingival Bleeding	273	**66.9**	240	**68.4**	513	**67.6**	0.185 (0.667)
Swelling In The Gums	212	**52**	185	**52.7**	397	**52.3**	0.042 (0.837)
Redness In The Gums	176	**43.1**	167	**47.6**	343	**45.2**	1.502 (0.220)

DISCUSSION

Oral hygiene practices are the most fundamental determinant of oral health. Therefore, conditions such as caries or periodontal diseases that may develop in the absence of oral hygiene and methods of maintaining oral hygiene should be better explained to the society (16). Dentists have the greatest responsibility to enlighten the society on this issue. However, the assistance of other health workers are needed both due to low number of dentists and the difficulty of accessing dentists. Therefore, it is necessary to improve knowledge, awareness and attitudes about oral hygiene and periodontal diseases during health education (17).

The results of this study show the proficiency levels of physiotherapy, first and emergency aid, nursing and emergency aid and disaster management students on these topics. According to the results of our study, it was seen that 16.9% of the students studying in the field of health visit the

dentist regularly every 6 months and the most common reason for visiting was to have fillings (22.7%). Similarly, in the study conducted by Jaber et al. (2017), , it was reported that 9.3% of the students studying in the field of health visited the dentist every 6 months and the most common reason for going to the dentist was to have fillings (18). In another study Kılınç et al. (2020), reported that 19.8% of health services vocational school students visited the dentist regularly, and the most common reason for going to the dentist was toothache (19). According to these results, it has been observed that the attitudes of future healthcare professionals towards regular oral and dental health checks are inadequate.

It has been shown that those who brush their teeth regularly twice a day and acquire this habit at an early age have less dental and gingival problems (20). In the present study, it was found that only 64.3% of the students regularly brushed their teeth twice a day, and the ratio of physiotherapy students with this habit (74.3%) was significantly higher compared to other students. Only 38.3% of the students brushed their teeth for more than 2 minutes. These results are consistent with the reports of similar studies in Turkey (17, 21). However, these rates remain very low compared to health care students in developed countries such as Denmark where 89% of students brush teeth twice a day and 79% brush teeth for more than 2 minutes (22). This situation can be attributed to the fact that there are no oral and dental health related courses in the curricula of health departments except for dentistry in Turkey.

In our study, it was determined that 46.1% of physiotherapy students, 39.3% of FEA, 30.5% of nursing, and 27.7% of EADM students changed their toothbrushes every 3 months. In addition, majority of the students preferred a medium toothbrush (59.2%). When similar studies are examined, it is seen that the ratio of students who change their toothbrushes every 3 months varies between 43% and 66% and more than half of the students prefer soft toothbrushes (2, 6, 12). In the present study, only physiotherapy students preferred soft toothbrushes similar to other studies.

It has been reported that regular tooth brushing and interdental cleaning are protective against periodontal diseases (23). In the present study, the ratio of students who flossed at least once a day was only 10.1%. The ratio of students who used interdental brushes was only 12%. According to the study of Arıkan et al. (2019), 4.1% of students flossed and 5.2% used an interdental brush (17). In their study, Bhattarai et al. (2016) reported that 10% of the students flossed and 9% used an interdental brush (24). Although the findings of the present study indicate a lack of interdental care, other studies have also shown that students neglect interdental care. Considering the studies on this subject, it is seen that the inadequacy of the students in the use of oral hygiene tools may be due to the lack of education (25, 26); (14). In light of this information, more education should be given to students studying in the field of health about the importance of interface cleaning in daily oral care. In the present study, although the rate of students who knew that smoking was a risk factor for gingival disease was 81.9%, 27.54% of the students were smokers. In the study Kılınç et al. (2020), even though 92% of health sciences students stated that they knew smoking had a negative effect on gingival health, 28.9% of the students were smokers (19). These findings are very similar to the findings of the present study.

In our study, a significant majority of students thought that gingival health was associated with general health (82.1%). Similarly, in the study of Jaber et al. (2017), this rate was 82.3% (18). Al-Zarea et al. (2013) reported that this rate was 84% and the level of knowledge about the relationship between gingival health and general health was higher in final year students compared to first-year

students (27). In the present study, no significant difference was found between the knowledge levels of first-year and final-year students.

Only 24.6% of the students answered that teeth and gums were not damaged during scaling. Similarly, Jaber et al. (2017) reported that only 14.6% of students thought that scaling did not harm teeth and gums (18). Scaling is one of the most commonly used periodontal treatment procedures and contrary to what the students think, scaling removes the bacterial dental plaque from the tooth surface, preventing damage to the supporting tissue around the tooth (28). Therefore, by making the students in our study aware of periodontal treatments, they can be prevented from avoiding treatment and periodontal diseases situations that may be encountered in the future can be avoided.

Dental plaque is the most important etiological agent of periodontal diseases. However, some environmental and systemic factors, such as smoking and diabetes, have been reported to increase periodontal destruction (29). In the present study, students' knowledge level about the factors causing gingival diseases was inadequate. Only 28.2% of the students thought that dental plaque may be a factor causing gingival diseases. In the studies of Kılınç et al. (2020) and Gronkjaer et al. (2017), 45.7% and 65% of the students knew that dental plaque was the main factor in the formation of gingival diseases (19,22). In the present study, this rate was consistent with the literature in only EADM students (49.6%). Al-Zarea et al. (2013) reported that the knowledge level of second-year students in this subject was higher compared to that of first-year students (27). However, no significant difference was found between first and last-year students in this study. This is probably due to the lack of courses on factors, prevention and treatment methods of periodontal diseases in the curricula in Turkey. Knowledge levels of the students regarding the symptoms of gingival diseases are similar with the results of other studies in the literature. A total of, 67.6% of the students thought that gingival bleeding was a sign of gingival disease. In the literature, the ratio of participants who thought that gingival bleeding was a symptom of gingival disease varies between 60 and 80% (22, 27, 30, 31). In the present study, 45.2% of the students thought that redness of the gums indicated the presence of gingival disease. In their study, Gholami et al. (2014) reported that 39.9% of the participants thought that redness of the gums was a symptom of gingival disease (32). When the results of the present study and other studies in the literature are evaluated, it is seen that the knowledge level on the symptoms that occur during the onset and progression of periodontal diseases are quite low (2, 16, 33).

CONCLUSION

In conclusion, knowledge, awareness and attitudes towards oral hygiene practices and periodontal diseases of students studying at healthcare departments at Mehmet Akif Ersoy University who participated in the present study should be improved. The education that students will receive about oral and dental health before they graduate is very important in this respect. As future health workers, these students are expected to become role models and increase social awareness for the people around them and their patients. Therefore, health sciences students should be better equipped on these subjects before they graduate.

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