





Perspectives of Dentistry Students on Orthodontics Specialty in Career Choices

Diş Hekimliği Öğrencilerinin Kariyer Tercihlerinde Ortodonti Uzmanlığına Bakış Açıları

Emre KAYALAR^{1,2} 
Sanaz SADRY¹ 
Aybike Hazan GUR¹ 
Mozhdeh GOLSHANI² 

¹Department of Orthodontics,
İstanbul Aydın University, Faculty of
Dentistry, Istanbul, Turkey

²Department of Orthodontics and
Pediatric Dentistry, University of
Sydney, Faculty of Dentistry,
Surry Hills, NSW, Australia

ABSTRACT

Objective: The aim of this study is to determine the perspectives of the third-, fourth-, and fifth-grade students in the faculty of dentistry on orthodontics specialty in career choices.

Methods: This epidemiological descriptive study was conducted by administering a 12-question questionnaire to 150 students (101 females and 49 males) enrolled in the third, fourth, and fifth grades of the faculty of dentistry. Out of the total of 150 students, 45 belonged to the third grade, 52 belonged to the fourth grade, and 53 belonged to the fifth grade. The collected data were subjected to the chi-square analysis.

Results: The mean age of 150 participants whose ages were between 20 and 27 years was 21.08 ± 1.98 . It was observed that the opinions about orthodontic specialization did not differ according to the age, gender, and education period of the students. Of them, 41.9% thought that there would be a great need in the field of orthodontics in their career choice. The most preferred specialization areas in future were orthodontics (42.6%); prosthetic dentistry (17.6%); and oral, dental, and maxillofacial surgery (15.5%). The students stated that the most important reason for wanting to specialize in orthodontics was financial gain with a rate of 23.6%.

Conclusion: It was concluded that the opinions about the orthodontic specialization were generally positive, and the preference was mainly favorable. Factors such as clinical experience, financial gain, and interest in the specialty were found to be important in the selection of the specialty branch.

Keywords: Dentistry, orthodontics, career choices, specialty

ÖZ

Amaç: Bu çalışmanın amacı, diş hekimliği fakültesinin üçüncü, dördüncü ve beşinci sınıf öğrencilerinin meslek seçimlerinde ortodonti uzmanlığına yönelik bakış açılarını belirlemektir.

Yöntemler: Bu epidemiyolojik tanımlayıcı çalışma, diş hekimliği fakültesinin üçüncü, dördüncü ve beşinci sınıflarına kayıtlı 150 öğrenciye (101 kadın ve 49 erkek) 12 soruluk bir anket uygulanarak yapıldı. Toplam 150 öğrenciden 45'i üçüncü sınıfta, 52'si dördüncü sınıfta ve 53'ü beşinci sınıftaydı. Verilerin analizi Ki-kare testi ile yapıldı.

Bulgular: Yaşları 20 ila 27 arasında değişen 150 katılımcının yaş ortalaması 21.08 ± 1.98 idi. Ortodonti uzmanlığı ile ilgili görüşlerin öğrencilerin yaş, cinsiyet, eğitim dönemine göre farklılık göstermediği görüldü ($p > 0.05$). %41.9'ü gelecekte Ortodonti alanında ihtiyacın fazla olacağını düşünmektedir. Gelecekte en çok tercih edilen uzmanlık alanları sırasıyla Ortodonti (%42.6), Protetik Diş Tedavisi (%17.6) ve Ağız, Diş ve Çene Cerrahisi (%15.5) idi. Öğrencilerin ortodonti alanında uzmanlaşma isteklerinin en önemli nedeni, %23.6 oranında maddi kazanç oldu.

Sonuç: Ortodonti uzmanlığına yönelik görüşlerin genellikle olumlu olduğu ve bu alanın kariyer tercihlerde nispeten yüksek oranda yer aldığı sonucuna varıldı. Uzmanlık dalının seçiminde klinik deneyim, maddi kazanç ve uzmanlık alanına olan ilginin önemli faktörler olduğu belirlendi.

Anahtar Kelimeler: Diş hekimliği, ortodonti, kariyer seçimi, uzmanlık

This study was presented as an oral presentation at The National Dentistry Congress of Istanbul Aydın University (22 May 2022).

Received/Geliş Tarihi: 04.01.2023

Accepted/Kabul Tarihi: 01.06.2023

Publication Date/Yayın Tarihi: 10.10.2023

Corresponding Author/Sorumlu Yazar:
Sanaz SADRY
E-mail: sanazsady@aydin.edu.tr

Cite this article as: Kayalar E, Sadry S, Hazan Gur A, Golshani M. Perspectives of dentistry students on orthodontics specialty in career choices. *Curr Res Dent Sci.* 2023;33(4):199-205.



Content of this journal is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

INTRODUCTION

Career, in general terms, means advancing in a chosen line of work and as a result, taking responsibility, gaining status, and gaining prestige. It is the development of a person's activities, responsibilities, attitudes, and behaviors in business life.¹ The concept of specialization is defined as increasing productivity by concentrating on a limited area. Developing research skills and increasing clinical skills will benefit dentistry one step further by improving patient satisfaction and service level and reducing complication rates.² In order to achieve these, post-graduate education becomes important. In cases where general dentistry is insufficient, continuing specialty training after the faculty of dentistry plays an important role.³ Students who graduate after undergraduate education can continue their graduate education if they are successful in the exams held throughout the country. The financial income to be obtained, the desire to work in a specific field, the interest of the dentist in specialty education, and the academic career option are effective in the selection of graduate education.⁴ However, it is a well-known fact that academicians, who are seen as role models, have a positive effect on students' choice of specialization. In addition, although it is not very effective at the moment, it is thought that malpractice cases will be effective in the selection of graduate education in the future.⁵ Oral, dental, and maxillofacial radiology; oral, dental, and maxillofacial surgery; prosthetic dentistry; endodontics; restorative dentistry; pediatric dentistry; periodontology; and the department of orthodontics have been determined as areas that can be specialized in the 'Bag Law' No. 6225 published in the Official newspaper dated 26.04.2011 and numbered 27916, in our country.^{6,7} Orthodontics constitutes a small part of the dentistry curriculum and this has been going on for years. Aesthetic dentistry, the development of jaw and facial systems, developments in materials, and innovations in science and technology have had a positive impact on orthodontic expertise. Over the years, the number of graduates, the number of specialist applications, and the number of specialist physicians have increased. Variables such as financial gain, ease of work, and malpractice are effective in the selection of the field of specialization.⁸ Various studies have been conducted on the choice of specialization of dentistry students.^{9,10} There are various studies evaluating the motivation of dentistry students in different specialties, the criteria they pay attention to in selection, and their perspectives on specialties. Kaptı and Ozdogan¹¹ conducted a study in which the students of the faculty of dentistry evaluated their motivation to specialize in the department of prosthetic dentistry, and it was determined that the thoughts about the department first started to form in the preclinical period and that factors such as the clinical experiences they had and the effect of the faculty members they took were effective in their career choices. In our country, no study has been found that examines the place of the department of orthodontics in the future plans and career goals of dentistry students.

In this study, it is aimed to determine the perspectives of the third-, fourth-, and fifth-grade students of the faculty of dentistry on orthodontics specialty in career choices.

The aim of this study is to make the view of dentistry students in different education periods toward orthodontic specialization in career choices. The hypothesis of the study is orthodontics will be preferred among the first 3 departments when all factors are taken into consideration.

MATERIAL AND METHODS

This study was carried out with the participation of 150 students in total, third-, fourth-, and fifth-grade students studying at Istanbul Aydın University Faculty of Dentistry, Turkey in the 2020-2021 academic term. The study is an epidemiological descriptive study applied to mid-term and intern students actively continuing their education. Students who took a break from their education (inactive) were excluded from this study. Ethics committee approval was obtained from Istanbul Aydın University Non-Interventional Ethics Committee (Number: 2022/103). One hundred fifty individuals (101 females and 49 males) aged between 20 and 27 years were included in our study. Forty-five individuals were third-grade students, 52 individuals were fourth-grade students, and 53 individuals were fifth-grade students. The study was carried out by the method of data collection with a questionnaire. Data were collected using the Google Forms program. The survey questions in the research were prepared by analogy with the questions that Aksoy and Yanikoglu¹² used in their studies and were delivered to the participants online via a link. Consent was obtained from the participants before starting the survey. The questionnaire consisted of 15 questions in total. The first 3 questions consisted of questions about age, gender, and education period. The rest of the questionnaire comprised 10 questions that were designed using the Likert scale. These questions specifically pertained to clinical and specialized areas of orthodontics.

The last 3 questions are about the comparison and ranking of the orthodontics department with other departments.

The analysis of the obtained data was performed using the computer statistical package program Statistical Package for the Social Sciences (SPSS) version 20.0 (IBM Corp.; Armonk, NY, USA). Descriptive statistical methods and the chi-square test were used to evaluate the data. $P < .05$ was considered statistically significant. As a result of the power analysis using the 'G Power 3.1.9.2' package program, the effect size was 0.420, the alpha error was 0.05, while the power of the study was found to be 0.99 with the current sample size.

RESULTS

The mean age of the population participating in the study was 21.08 ± 1.98 years, and the participants were at least 20 and at most 27 years old. In this study, in which a total of 150 individuals participated, the female population was 101 (68.7%) and the male population was 49 (31.3%) (Table 1). According to the education period of the students; third graders comprised 30% (45), fourth graders 34.7% (52), and fifth graders 35.3% (53) (Table 2). According to the results of the chi-square test in the cross-assessment and independent samples, it was seen that the views on orthodontic specialization did not differ according to the age, gender, and education period of the students (Table 1). A high percentage of 56% of the students who participated in the study stated that they were aware of the orthodontics department during the pre-school period (Table 3). There was no significant difference in the answer given to this question between men and women ($P = .138$). There was no significant difference in the response given between the classes ($P = .213$) (Table 3).

The students reported that the least reason for why they meet with the orthodontics department is textbook (6%). Clinical experience was found to be the second most influential experience for

Table 1. Significance of gender distribution by age and grade.

| | | Gender | | | | P |
|--------|--------------|--------|------|--------|------|------|
| | | Male | | Female | | |
| | | n | % | n | % | |
| Age | 18-24 | 38 | 32.8 | 78 | 67.2 | .487 |
| | 25-29 | 9 | 26.5 | 25 | 73.5 | |
| Grades | Third grade | 12 | 26.7 | 33 | 73.3 | .565 |
| | Fourth grade | 19 | 36.5 | 33 | 63.5 | |
| | Fifth grade | 16 | 30.2 | 37 | 69.8 | |

Table 2. Age, gender, and grades of the individuals participated in this study.

| | | n | % |
|--------|--------------|-----|-------|
| Age | 18-24 | 116 | 77.3 |
| | 25-29 | 34 | 22.7 |
| Gender | Male | 47 | 31.3% |
| | Female | 103 | 68.7% |
| Grades | Third grade | 45 | 30.0% |
| | Fourth grade | 52 | 34.7% |
| | Fifth grade | 53 | 35.3% |

students (26.7%). A significant difference was found between the classes in the answer given to this question ($P=.049$) (Table 3). Thirty percent of respondents are undecided about whether their first experience with orthodontic treatment is positive or negative; however, it was observed that individuals had a more positive approach in general. There was no difference in the response between men and women ($P=.158$) (Table 3).

Students stated that there will be a great need for orthodontics in the future (Table 3). There was no significant difference between the genders in the answer given to the question ($P=.381$) (Tables 3). The students listed the first 3 departments that they dream of specializing in as orthodontics (43.3%); prosthodontics (17.3%); and oral, dental, and maxillofacial surgery (15.3%) (Table 3). The least preferred department was the department of endodontics (2.7%). Men and women gave significantly different answers to this question ($P=.034$). The answers they gave in the third, fourth, and fifth grades showed a significant difference ($P=.01$) (Table 3). Which specialty of dentistry do you think is the most important? Forty percent of the students answered the question as the orthodontics department. The department that was thought to be least effective was the department of oral and maxillofacial radiology with 3.2%. It was observed that there was no significant difference in the answer given to this question between men and women ($P=.439$) (Table 3). The students who participated in the study stated that the most important reason for wanting to specialize in orthodontics was financial gain with a rate of 23.3% (Table 3). It was seen that the need of the patients was the least preferred option with 12%. There was no significant difference in the answer given to this question between the genders ($P=.899$). There was no significant difference in the answers given between the classes ($P=.61$) (Table 3).

DISCUSSION

The process of specialization in dentistry is an important decision that will shape the lives of students. In making this decision, it is important to complete the knowledge of the students about the specialty they want to choose, to determine their abilities in this specialty, and to guide the students with the right guidance.

Postgraduate education has an important place in the field of dentistry, as in all professional branches. Although private clinical practices are popular due to the nature and historical development of the profession, with the changing specialty system

in recent years, private fields of study have also begun to turn to and prefer specialist physicians. In addition, when considering academic careers, the number of dentists working as specialists, doctors, and academicians is increasing every day due to the increase in the number of universities in recent years. Factors such as the popularity of departments, needs of faculty members, financial gain, and comfortable working conditions play an important role in choosing a specialty. A situation similar to this significant increase in specialized education in our country is also found in other states. In a study conducted in Saudi Arabia, it was reported that orthodontic expertise in dentistry is gaining importance day by day.¹³ Specialty training has become a condition that should be in dentistry. New research focuses on what students pay attention to when choosing a department for specialized education.¹⁴

Methodologically, it was a survey study to gather the opinions of undergraduate students enrolled in a dentistry faculty. Moreover, it is aimed to evaluate the perceptions of knowledge and competence in the orthodontics department and their ranking according to other departments. The first-grade dentistry students usually were not included in the evaluation of students' career choices in previous studies,¹⁵ Similarly, the third-, fourth-, and fifth-grade students were included in our study also considering the start of clinical orthodontic training.

In this study, it was questioned why the students of our faculty would prefer orthodontic specialization and it was predicted that it is for economical reasons, despite the fact that they look coldly at the expertise in this field due to the long-lasting treatments. While departments are preferred in the specialty exam applied in our country, orthodontics is generally the first or second preferred area. The fact that the average of the answers received to the question for preference ranking was found to be 5.05 in this study, statistically supporting this situation. Most of the students stated that they were most impressed by the clinical experience related to the orthodontics department, and it was seen that the fifth graders were more affected. This result may have been encountered because there was a difference of 2 years between third graders and fifth graders and 1 year between fourth and fifth graders in terms of clinical experience. In addition, students are uncertain about whether their first experience with orthodontics was positive or negative; but it was found that they mostly thought positively. It is known that students increase their stress levels toward clinical classes in studies,¹⁶ but in our study, it was seen that this stress did not form a negative opinion about orthodontics in individuals. In a study that evaluated the place of orthodontics in the future career planning of dentistry students, 10% of second-grade students and 14% of all fourth-grade students and fifth-grade students stated that the reason they wanted to specialize in the orthodontics department was a positive university experience.¹⁵ The answer given to the question in our study may have resulted from a positive university experience that supports this information.

Students stated that the most important criterion they paid attention to when choosing a specialty was their interest in the specialty. Although it is known that the cost of dental education is quite high, the cost of education was found to be the most insignificant criterion. This result is also consistent with similar studies.^{17,18} In all 3 grades, students consider that their interest in the specialty is the most important criterion for choosing a

Table 3. Evaluation of survey findings according to gender, grade, and age.

| Questions | All Individuals | | | Gender | | Grade | | | Age | | P ^a |
|---|-----------------|--------------|------------|----------------|-------------------|--------------------|-------------------|----------------|-------------|-------------|----------------|
| | n (%) | Female n (%) | Male n (%) | P ^a | Third grade n (%) | Fourth grade n (%) | Fifth grade n (%) | P ^a | 18-24 n (%) | 25-29 n (%) | |
| 1. When did you learn orthodontics at first? | | | | .213 | | | | <.001** | | | .016* |
| A. Pre-school period | 84 (56.00%) | 59 (57.3%) | 25 (53.2%) | | 37 (82.2%) | 25 (48.1%) | 22 (41.5%) | | 72 (62.1%) | 12 (35.3%) | |
| B. University preference period | 14 (9.30%) | 7 (6.8%) | 7 (14.9%) | | 1 (2.2%) | 8 (15.4%) | 5 (9.4%) | | 11 (9.5%) | 3 (8.8%) | |
| C. University preference period- preclinic | 9 (6.00%) | 7 (6.8%) | 2 (4.3%) | | 3 (6.7%) | 4 (7.7%) | 2 (3.8%) | | 8 (6.9%) | 1 (2.9%) | |
| D. Preclinic period | 8 (5.30%) | 5 (4.9%) | 3 (6.4%) | | 1 (2.2%) | 5 (9.6%) | 2 (3.8%) | | 4 (3.4%) | 4 (11.8%) | |
| E. Clinic period | 15 (10.00%) | 8 (7.8%) | 7 (14.9%) | | 2 (4.4%) | 6 (11.5%) | 7 (13.2%) | | 9 (7.8%) | 6 (17.6%) | |
| F. Others | 20 (13.30%) | 17 (16.5%) | 3 (6.4%) | | 1 (2.2%) | 4 (7.7%) | 15 (28.3%) | | 12 (10.3%) | 8 (23.5%) | |
| 2. Which introductory experience about the orthodontics department has impressed you the most? | | | | .322 | | | | .049* | | | .006** |
| A. Preclinic experience | 28 (18.70%) | 20 (19.4%) | 8 (17.0%) | | 7 (15.6%) | 12 (23.1%) | 9 (17.0%) | | 22 (19.9%) | 6 (17.6%) | |
| B. Clinic experience | 40 (26.70%) | 23 (22.3%) | 17 (36.2%) | | 14 (31.1%) | 15 (28.8%) | 11 (20.8%) | | 37 (31.9%) | 3 (8.8%) | |
| C. The academician who teaches the orthodontics | 18 (12.00%) | 11 (10.7%) | 7 (14.9%) | | 2 (4.4%) | 10 (19.2%) | 6 (11.3%) | | 12 (10.3%) | 6 (17.6%) | |
| D. Textbook | 11 (7.30%) | 7 (6.8%) | 4 (8.5%) | | 1 (2.2%) | 2 (3.8%) | 8 (15.1%) | | 8 (6.9%) | 3 (8.8%) | |
| E. Journal or website of dentistry | 9 (6.00%) | 7 (6.8%) | 2 (4.3%) | | 2 (4.4%) | 4 (7.7%) | 3 (5.7%) | | 3 (2.6%) | 6 (17.6%) | |
| F. Others | 44 (29.30%) | 35 (34.0%) | 9 (19.1%) | | 19 (42.2%) | 9 (17.3%) | 16 (30.2%) | | 34 (29.3%) | 10 (29.4%) | |
| 3. How should the orthodontics specialty exam be? | | | | .576 | | | | .024* | | | |
| A) Dus | 54 (36.00%) | 33 (32.0%) | 21 (44.7%) | | 25 (55.6%) | 17 (32.7%) | 12 (22.6%) | | 47 (40.5%) | 7 (2.6%) | |
| B) Audition | 50 (33.30%) | 36 (35.0%) | 14 (29.8%) | | 11 (24.4%) | 21 (40.4%) | 18 (34.0%) | | 38 (32.8%) | 12 (35.3%) | |
| C) A foreign language exam is sufficient | 20 (13.30%) | 14 (13.6%) | 6 (12.8%) | | 5 (11.1%) | 4 (7.7%) | 11 (20.8%) | | 13 (11.2%) | 7 (2.6%) | |
| D) The average of scores in central exam like ALES and graduation grades | 16 (10.70%) | 13 (12.6%) | 3 (6.4%) | | 2 (4.4%) | 5 (9.6%) | 9 (17.0%) | | 12 (10.3%) | 4 (11.8%) | |
| E) Degree in dental education or who entered the top 3 | 10 (6.70%) | 7 (6.8%) | 3 (6.4%) | | 2 (4.4%) | 5 (9.6%) | 3 (5.7%) | | 6 (5.2%) | 4 (11.8%) | |
| 4. How would you rate your experience with orthodontic treatment? | | | | .262 | | | | .014* | | | .138 |
| A. Mostly positive | 21 (14.00%) | 16 (15.5%) | 5 (10.6%) | | 4 (8.9%) | 9 (17.3%) | 8 (15.1%) | | 17 (14.7%) | 4 (11.8%) | |
| B. Positive | 39 (26.00%) | 30 (29.1%) | 9 (19.1%) | | 20 (44.4%) | 9 (17.3%) | 10 (18.9%) | | 34 (29.3%) | 5 (14.7%) | |
| C. Little positive | 27 (18.00%) | 16 (15.5%) | 11 (23.4%) | | 2 (4.4%) | 12 (23.1%) | 13 (24.5%) | | 18 (15.5%) | 9 (26.5%) | |
| D. Undecided | 45 (30.00%) | 30 (29.1%) | 15 (31.9%) | | 16 (35.6%) | 15 (28.8%) | 14 (26.4%) | | 36 (31.0%) | 9 (26.5%) | |
| E. Little negative | 12 (8.00%) | 9 (8.7%) | 3 (6.4%) | | 2 (4.4%) | 6 (11.5%) | 4 (7.5%) | | 8 (6.9%) | 4 (11.8%) | |
| F. Mostly negative | 6 (4.00%) | 2 (1.9%) | 4 (8.5%) | | 1 (2.2%) | 1 (1.9%) | 4 (7.5%) | | 3 (2.6%) | 3 (8.8%) | |
| 5. How do you value the department of orthodontics in terms of education and social environment? | | | | .897 | | | | .640 | | | .169 |
| A) Very well | 54 (36.00%) | 38 (36.9%) | 16 (34.0%) | | 21 (46.7%) | 18 (34.6%) | 15 (28.3%) | | 43 (37.1%) | 11 (32.4%) | |
| B) Well | 46 (30.70%) | 29 (28.2%) | 17 (36.2%) | | 12 (26.7%) | 14 (26.9%) | 20 (37.7%) | | 37 (31.9%) | 9 (26.5%) | |
| C) Medium | 40 (26.70%) | 28 (27.2%) | 12 (25.5%) | | 11 (24.4%) | 15 (28.8%) | 14 (26.4%) | | 31 (26.7%) | 9 (26.5%) | |
| D) Bad | 6 (4.00%) | 5 (4.9%) | 1 (2.1%) | | 1 (2.2%) | 3 (5.8%) | 2 (3.8%) | | 4 (3.4%) | 2 (5.9%) | |
| E) Very bad | 4 (2.70%) | 3 (2.9%) | 1 (2.1%) | | 0 (0.0%) | 2 (3.8%) | 2 (3.8%) | | 1 (0.9%) | 3 (8.8%) | |
| 6. What is your general perception about the future needs of the orthodontics department? | | | | .381 | | | | .001** | | | .158 |
| A. Mostly positive | 41 (27.30%) | 30 (29.1%) | 11 (23.4%) | | 6 (13.3%) | 17 (32.7%) | 18 (34.0%) | | 29 (25.0%) | 12 (35.3%) | |
| B. Positive | 62 (41.30%) | 40 (38.8%) | 22 (46.8%) | | 30 (66.7%) | 17 (32.7%) | 15 (28.3%) | | 55 (47.4%) | 7 (20.6%) | |
| C. Little positive | 25 (16.70%) | 15 (14.6%) | 10 (21.3%) | | 3 (6.7%) | 14 (26.9%) | 8 (15.1%) | | 14 (12.1%) | 11 (32.4%) | |
| D. Undecided | 16 (10.70%) | 14 (13.6%) | 2 (4.3%) | | 4 (8.9%) | 4 (7.7%) | 8 (15.1%) | | 13 (11.2%) | 3 (8.8%) | |
| 7. What do you think is the most important area in dentistry? | | | | .968 | | | | .693 | | | .201 |
| A. Oral, dental, and maxillofacial radiology | 7 (4.7%) | 5 (4.9%) | 2 (4.3%) | | 2 (4.4%) | 0 (0.0%) | 5 (9.4%) | | 5 (4.3%) | 2 (5.9%) | |
| B. Prosthodontics | 26 (17.30%) | 16 (15.5%) | 10 (21.3%) | | 7 (15.6%) | 10 (19.2%) | 9 (17.0%) | | 24 (20.7%) | 2 (5.9%) | |
| C. Oral, dental, and maxillofacial surgery | 38 (25.30%) | 27 (26.2%) | 11 (23.4%) | | 14 (31.1%) | 14 (26.9%) | 10 (18.9%) | | 27 (23.3%) | 11 (32.4%) | |
| D. Pedodontics | 10 (6.70%) | 8 (7.8%) | 2 (4.3%) | | 2 (4.4%) | 4 (7.7%) | 4 (7.5%) | | 6 (5.2%) | 4 (11.8%) | |
| E. Endodontics | 5 (3.30%) | 3 (2.9%) | 2 (4.3%) | | 2 (4.4%) | 2 (3.8%) | 1 (1.9%) | | 3 (2.6%) | 2 (5.9%) | |
| F. Periodontology | 6 (4.00%) | 4 (3.9%) | 2 (4.3%) | | 2 (4.4%) | 3 (5.8%) | 1 (1.9%) | | 4 (3.4%) | 2 (5.9%) | |
| G. Orthodontics | 57 (38.00%) | 39 (37.9%) | 18 (38.3%) | | 16 (35.6%) | 19 (36.5%) | 22 (41.5%) | | 46 (39.7%) | 11 (32.4%) | |
| H. Restorative dentistry | 1 (0.70%) | 1 (1.0%) | 0 (0.0%) | | 0 (0.0%) | 0 (0.0%) | 1 (1.9%) | | 1 (0.9%) | 0 (0.0%) | |
| 8. What is the first department you dream of specializing in? | | | | .577 | | | | .247 | | | .434 |
| A. Oral, dental, and maxillofacial radiology | 3 (2.00%) | 2 (1.9%) | 1 (2.1%) | | 0 (0.0%) | 2 (3.8%) | 1 (1.9%) | | 3 (2.6%) | 0 (0.0%) | |
| B. Prosthodontics | 26 (17.30%) | 18 (17.5%) | 8 (17.0%) | | 12 (26.7%) | 9 (17.3%) | 5 (9.4%) | | 22 (19.0%) | 4 (11.8%) | |
| C. Oral, dental, and maxillofacial surgery | 23 (15.30%) | 17 (16.5%) | 6 (12.8%) | | 8 (17.8%) | 6 (11.5%) | 9 (17.0%) | | 20 (17.2%) | 3 (8.8%) | |
| D. Pedodontics | 14 (9.30%) | 8 (7.8%) | 6 (12.8%) | | 3 (6.7%) | 9 (17.3%) | 2 (3.8%) | | 9 (7.8%) | 5 (14.7%) | |
| E. Endodontics | 4 (2.70%) | 4 (3.9%) | 0 (0.0%) | | 1 (2.2%) | 1 (1.9%) | 2 (3.8%) | | 2 (1.7%) | 2 (5.9%) | |
| F. Periodontology | 13 (8.70%) | 11 (10.7%) | 2 (4.3%) | | 5 (11.1%) | 3 (5.8%) | 5 (9.4%) | | 5 (4.3%) | 4 (11.8%) | |
| G. Orthodontics | 65 (43.30%) | 41 (39.8%) | 24 (51.1%) | | 16 (35.6%) | 21 (40.4%) | 28 (52.8%) | | 49 (42.2%) | 16 (47.1%) | |
| H. Restorative dentistry | 2 (1.30%) | 2 (1.9%) | 0 (0.0%) | | 0 (0.0%) | 1 (1.9%) | 1 (1.9%) | | 2 (1.7%) | 0 (0.0%) | |

(Continued)

Table 3. Evaluation of survey findings according to gender, grade, and age. (Continued)

| Questions | All Individuals | | | Gender | | | Grade | | | Age | | |
|---|-----------------|--------------|------------|----------------|-------------------|--------------------|-------------------|----------------|-------------|-------------|----------------|--|
| | n (%) | Female n (%) | Male n (%) | P ^a | Third grade n (%) | Fourth grade n (%) | Fifth grade n (%) | P ^a | 18-24 n (%) | 25-29 n (%) | P ^a | |
| 9. In which specialization do you think you can earn more financially? | | | | .672 | | | | .201 | | | .034* | |
| A. Oral, dental, and maxillofacial radiology | 1 (0.70%) | 1 (1.0%) | 0 (0.0%) | | 0 (0.0%) | 0 (0.0%) | 1 (1.9%) | | 1 (0.9%) | 0 (0.0%) | | |
| B. Prosthodontics | 22 (14.70%) | 17 (16.5%) | 5 (10.6%) | | 10 (22.2%) | 7 (13.5%) | 5 (9.4%) | | 20 (17.2%) | 2 (5.9%) | | |
| C. Oral, dental, and maxillofacial surgery | 31 (20.70%) | 24 (23.3%) | 7 (14.9%) | | 12 (26.7%) | 6 (11.5%) | 13 (24.5%) | | 23 (19.8%) | 8 (23.5%) | | |
| D. Pedodontics | 6 (4.00%) | 3 (2.9%) | 3 (6.4%) | | 1 (2.2%) | 2 (3.8%) | 3 (5.7%) | | 3 (2.3%) | 3 (8.8%) | | |
| E. Endodontics | 7 (4.70%) | 5 (4.9%) | 2 (4.3%) | | 1 (2.2%) | 5 (9.6%) | 1 (1.9%) | | 3 (2.3%) | 4 (11.8%) | | |
| F. Periodontology | 7 (4.70%) | 4 (3.9%) | 3 (6.4%) | | 1 (2.2%) | 2 (3.8%) | 4 (7.5%) | | 5 (4.3%) | 2 (5.9%) | | |
| G. Orthodontics | 75 (50.00%) | 48 (46.6%) | 27 (57.4%) | | 19 (42.2%) | 30 (57.7%) | 16 (49.1%) | | 61 (52.6%) | 14 (41.2%) | | |
| H. Restorative dentistry | 1 (0.70%) | 1 (1.0%) | 0 (0.0%) | | 1 (2.2%) | 0 (0.0%) | 0 (0.0%) | | 0 (0.0%) | 1 (2.9%) | | |
| 10. Which specialization do you think is most important for patient care? | | | | .734 | | | | .023* | | | .660 | |
| A. Oral, dental, and maxillofacial radiology | 9 (6.00%) | 6 (5.8%) | 3 (6.4%) | | 1 (2.2%) | 4 (7.7%) | 4 (7.5%) | | 8 (6.9%) | 1 (2.9%) | | |
| B. Prosthodontics | 14 (9.30%) | 11 (10.7%) | 3 (6.4%) | | 7 (15.6%) | 4 (7.7%) | 3 (5.7%) | | 11 (9.5%) | 3 (8.8%) | | |
| C. Oral, dental, and maxillofacial surgery | 32 (21.30%) | 21 (20.4%) | 11 (23.4%) | | 12 (26.7%) | 9 (17.3%) | 11 (20.8%) | | 28 (24.1%) | 4 (11.8%) | | |
| D. Pedodontics | 13 (8.70%) | 8 (7.8%) | 5 (10.6%) | | 4 (8.9%) | 5 (9.6%) | 4 (7.5%) | | 10 (8.6%) | 3 (8.8%) | | |
| E. Endodontics | 6 (4.00%) | 4 (3.9%) | 2 (4.3%) | | 5 (11.1%) | 1 (1.9%) | 0 (0.0%) | | 5 (4.3%) | 1 (2.9%) | | |
| F. Periodontology | 16 (10.70%) | 10 (9.7%) | 6 (12.8%) | | 7 (15.6%) | 6 (11.5%) | 3 (5.7%) | | 12 (10.3%) | 4 (11.8%) | | |
| G. Orthodontics | 55 (36.70%) | 41 (39.8%) | 14 (29.8%) | | 7 (15.6%) | 21 (40.4%) | 27 (50.9%) | | 39 (33.6%) | 16 (47.1%) | | |
| H. Restorative dentistry | 5 (3.30%) | 2 (1.9%) | 3 (6.4%) | | 2 (4.4%) | 2 (3.8%) | 1 (1.9%) | | 3 (2.6%) | 2 (5.9%) | | |
| 11. Which specialization do you think is the most effective department in dentistry? | | | | .439 | | | | .032* | | | .581 | |
| A. Oral, dental, and maxillofacial radiology | 10 (6.70%) | 8 (7.8%) | 2 (4.3%) | | 3 (6.7%) | 3 (5.8%) | 4 (7.5%) | | 8 (6.9%) | 2 (5.9%) | | |
| B. Prosthodontics | 15 (10.00%) | 12 (11.7%) | 3 (6.4%) | | 5 (11.1%) | 5 (9.6%) | 5 (9.4%) | | 14 (12.1%) | 1 (2.9%) | | |
| C. Oral, dental, and maxillofacial surgery | 31 (20.70%) | 21 (20.4%) | 10 (21.3%) | | 13 (28.9%) | 5 (9.6%) | 13 (24.5%) | | 25 (21.6%) | 6 (17.6%) | | |
| D. Pedodontics | 13 (8.70%) | 7 (6.8%) | 6 (12.8%) | | 6 (13.3%) | 7 (13.5%) | 0 (0.0%) | | 8 (6.9%) | 5 (14.7%) | | |
| F. Periodontology | 11 (7.30%) | 6 (5.8%) | 5 (10.6%) | | 3 (6.7%) | 6 (11.5%) | 2 (3.8%) | | 9 (7.8%) | 2 (5.9%) | | |
| G. Orthodontics | 60 (40.00%) | 40 (38.8%) | 20 (42.6%) | | 11 (24.4%) | 23 (44.2%) | 26 (49.1%) | | 44 (37.9%) | 16 (47.1%) | | |
| H. Restorative dentistry | 10 (6.70%) | 9 (8.7%) | 1 (2.1%) | | 4 (8.9%) | 3 (5.8%) | 3 (5.7%) | | 8 (6.9%) | 2 (5.9%) | | |
| 12. If you want to specialize in orthodontics, what is the most important reason for this? | | | | .899 | | | | .061 | | | .462 | |
| A. Contribution to professional life | 18 (12.00%) | 13 (12.6%) | 5 (10.6%) | | 8 (17.8%) | 6 (11.5%) | 4 (7.5%) | | 15 (12.9%) | 3 (8.8%) | | |
| B. Patients' need | 18 (12.00%) | 12 (11.7%) | 6 (12.8%) | | 8 (17.8%) | 6 (11.5%) | 4 (7.5%) | | 14 (12.1%) | 4 (11.8%) | | |
| C. Financial gain | 35 (23.30%) | 24 (23.3%) | 11 (23.4%) | | 14 (31.1%) | 6 (11.5%) | 15 (28.3%) | | 30 (25.9%) | 5 (14.7%) | | |
| D. Personal abilities | 20 (13.30%) | 12 (11.7%) | 8 (17.0%) | | 5 (11.1%) | 9 (17.3%) | 6 (11.3%) | | 13 (11.2%) | 7 (20.6%) | | |
| E. Other | 59 (39.30%) | 42 (40.8%) | 17 (36.2%) | | 10 (22.2%) | 25 (48.1%) | 24 (45.3%) | | 44 (37.9%) | 15 (44.1%) | | |

^aChi-square test.

*P < .05; **P < .01. Bold values denote statistically significant changes.

specialty; but the fourth grades made this choice with a higher percentage. Fourth graders are more enthusiastic because they have just started clinical education and may have chosen this option more.

The present study has identified that the top three departments that students consider specializing in are orthodontics; oral, dental, and maxillofacial surgery; and prosthetic dental treatment, respectively. It has been reported in the literature that orthodontics took the first place in the studies, followed by oral, dental, and maxillofacial surgery.^{19, 20} In our study, it was found that women students dream of specializing in the departments of oral, dental, and maxillofacial surgery; orthodontics; and pedodontics with a much higher rate than men. Dhima et al²¹ showed that, unlike our study, men preferred the department of oral and maxillofacial surgery more than women. In a similar study conducted in our country, it was found that women wanted to specialize more in the department of oral, dental, and maxillofacial surgery.¹⁴ In a study investigating motivation in the department of prosthetic dentistry, the pleasure of providing specialist services was stated as the most important factor affecting the choice of specialization. In our study, it was also not investigated why the department of prosthodontics was chosen the most.²¹ It may be considered to conduct more detailed survey studies to investigate the reason for this situation.

In the comparison between the fourth and fifth grades, there was no significant difference and no significant relationship between their desire to specialize in orthodontics. Students in both classes preferred the orthodontics department in the third place.

It is seen that the most effective department in terms of dentistry is the department of oral, dental, and maxillofacial surgery, followed by the department of prosthetic dentistry. In a study in which the general impact on dentistry was questioned, orthodontics and oral, dental, and maxillofacial surgery departments ranked first among the specialties with an equal percentage.¹³ In our study, the branch of orthodontics ranks fifth among 8 areas of specialization. In a similar study conducted in our country, the orthodontics department is ranked (fourth) similar to our study in terms of dentistry. In our country, the orthodontics department is in the last place in terms of its effectiveness in dentistry and patient care.

When we questioned whether the orthodontics department will be needed in the future in our study, it was seen that the answer was quite positive. In our country, the incidence of angle class I, II, III, and IV malocclusions is 82.7% in the Mediterranean Region, 24.4% in the Eastern Anatolia Region, 72% in the Aegean Region, 63.4% in the South East Anatolian Region, 53.4% in the Central Anatolia Region, 38.1% in the Black Sea Region, and 65.6% in the

Marmara Region.²² Considering that the prevalence of malocclusion is quite high, it is seen that the students' opinions on this subject are correct. Based on the responses of the students, they consider orthodontics as the most lucrative specialization, followed by prosthetic dentistry. The results of different studies conducted in other countries do not support our study; oral, dental, and maxillofacial surgery department comes first and orthodontics department comes second.¹⁰ They considered the department of restorative dentistry as the department with the least financial gain. In other studies, the department with the least financial gain was stated as oral, dental, and maxillofacial radiology.¹³ The department of prosthetic dentistry, which is the most desired field among students, and the department of oral, dental, and maxillofacial surgery, which ranks second, are behind the orthodontics department in terms of financial gain. In our study, the answer given by the students to the question of the most important criterion they pay attention to in the selection of the specialty branch confirms this result.

Considering the internship difficulties of students in faculties, we know that especially intern students look away from their expertise in that branch. In this case, we believe that the order of preference and popularity of orthodontics will increase if students can better explain all the advantages of orthodontic specialization, its technological side, its field of interest and the fact that it is the most prone to multidisciplinary work.

According to the results of our study, the opinions about the orthodontic specialization were generally positive and the preference was in a good place. Factors such as clinical experience, financial gain, and interest in the specialty were found to be important in the selection of the specialty branch. Moreover, opting to become an expert and selecting a specific department is a highly personal choice influenced by the student's experiences and interests during their undergraduate years. Additionally, job prospects and financial considerations regarding specialized training play significant roles in the decision-making process for choosing a specialization.

Ethics Committee Approval: Ethics committee approval was obtained from İstanbul Aydın University Non-Interventional Ethics Committee (Date: 30.06.2022, Number: 2022/103).

Informed Consent: Written informed consent was obtained from all students who participated in this study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – S.S., E.K.; Design – S.S., E.K., A.H.G.; Supervision – S.S., E.K.; Resources – S.S., A.H.G., E.K.; Materials – S.S., E.K.; Data Collection and/or Processing – M.G., A.H.G. Analysis and/or Interpretation – E.K., S.S., A.H.G.; Literature Search – A.H.G., M.G.; Writing Manuscript – E.K., S.S., A.H.G., M.G.; Critical Review – E.K., S.S.

Declaration of Interests: The authors declare that they have no competing interest.

Funding: The authors declared that this study has received no financial support.

Etik Komite Onayı: Bu çalışma için etik komite onayı İstanbul Aydın Üniversitesi'nden (Tarih: 30.06.2022, Sayı: 2022/103) alınmıştır.

Hasta Onamı: Çalışmaya katılan bütün öğrencilerden yazılı onam alınmıştır.

Hakem Değerlendirmesi: Dış bağımsız.

Yazar Katkıları: Fikir – S.S., E.K.; Tasarım – S.S., E.K., A.H.G.; Denetleme – S.S., E.K.; Kaynaklar – S.S., A.H.G., E.K.; Malzemeler – S.S., E.K.; Veri Toplanması ve/veya İşlemesi – M.G., A.H.G.; Analiz ve/veya Yorum – E.K., S.S., A.H.G.; Literatür Taraması – A.H.G., M.G.; Yazıyı Yazan – E.K., S.S., A.H.G., M.G.; Eleştirel İnceleme – E.K., S.S.

Çıkar Çatışması: Yazarlar çıkar çatışması bildirmemişlerdir.

Finansal Destek: Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

REFERENCES

- Mignonac K, Herrbach O. Managing individual career aspirations and corporate needs: a study of software engineers in France. *J Eng Technol Manag.* 2003;20(3):205-230. [CrossRef]
- Taşşöker M, Çelik M. Diş hekimliği öğrencilerinde mezuniyet sonrası kariyer ve uzmanlık motivasyonu. *Selcuk Dent J.* 2019;6(4):108-111
- Abdulwahab A, Almotairi A, Alkhamis W. Emerging trends in dental speciality and employment choice among male dentists graduating from King Saud University between 2005 and 2015. *Egypt J Hosp Med.* 2018;70(6):943-947. [CrossRef]
- Chmar JE, Weaver RG, Valachovic RW. Dental school vacant budgeted faculty positions, academic years 2005-06 and 2006-07. *J Dent Educ.* 2008;72(3):370-385. [CrossRef]
- Jones MD, Yamashita T, Ross RG, Gong J. Positive predictive value of medical student speciality choices. *BMC Med Educ.* 2018;18(1):1
- Taşşöker M, Kök H, Özcan Şener SÖ. Knowledge on dental specialties among dental patients who referred to a dental faculty. *Yeditepe J Dent.* 2017;13(3):25-30. [CrossRef]
- 6225 Bazı Kanun ve Kanun Hükmünde Kararnamelerde Değişiklik Yapılmasına Dair Kanun, Resmî Gazete Sayı : 27916 26 Nisan 2011. Available at: <https://www.resmigazete.gov.tr/eskiler/2011/04/20110426-1.htm>. Accessed April 18, 2023.
- Dewey M. Who is an "orthodontist"? *Am J Orthod Dentofacial Orthop.* 2015;147(5):523-524. [CrossRef]
- Al-Hamlan N, Al-Ruwaithi MM, Al-Shraim N, El-Metwaaly A. Motivations and future practice plans of orthodontic residents in Saudi Arabia. *J Orthod Sci.* 2013;2(2):67-72. [CrossRef]
- Sonkar J, Bense S, ElSalhy M. Factors affecting pre-doctoral dental students' selection of advanced dental education: A cross-sectional study. *J Dent Educ.* 2020;84(12):1388-1398. [CrossRef]
- Kaptı Y, Özdoğan A. Atatürk Üniversitesi diş hekimliği fakültesi öğrencilerinin protetik diş tedavisi uzmanlığı hakkındaki görüşlerinin değerlendirilmesi. *Selcuk Dent J.* 2021;8(1):69-75
- Aksoy A, Yanıkoğlu N. Diş hekimliği fakültesi öğrencilerinin protetik diş tedavisi anabilim dalında uzmanlaşma konusundaki motivasyonlarının değerlendirilmesi. *Ata Diş Hek Fak Derg.* 2019;29(4):623-630
- Halawany HS. Career motivations, perceptions of the future of dentistry and preferred dental specialties among Saudi dental students. *Open Dent J.* 2014;8(1):129-135. [CrossRef]
- Sezer B, Kolay D, Şen Yavuz B, Güneyligil Kazaz T, Kargül B. Motivations, attitudes for choosing dental profession and preferred dental specialties amongst Turkish dental students. *Eur J Dent Educ.* 2022;26(2):422-433. [CrossRef]
- Sam G. Orthodontics as a prospective career choice among undergraduate dental students: A prospective study. *J Int Soc Prev Commun Dent.* 2015;5(4):290-295. [CrossRef]
- Ersan N, Fişekçioğlu E, Dölekoğlu S, Oktay İ, İlgü D. Perceived sources and levels of stress, general self-efficacy and coping strategies in clinical dental students. *Psychol Health Med.* 2017;22(10):1175-1185. [CrossRef]
- Nassar U, Fairbanks C, Flores-Mir C, Kilistoff A, Easton R. Career plans of graduates of a Canadian dental school: preliminary report of a 5-year survey. *J Can Dent Assoc.* 2016;82(19):g19
- Xu C, Gao L, Zhang S, et al. Motivations and future plans of the final year students in a Chinese dental school. *BMC Med Educ.* 2022;22(1):90. [CrossRef]

-
19. Harrison JL, Platia CL, Ferreira L, et al. Factors affecting dental students' postgraduate plans: A multi-site study. *J Dent Educ.* 2022;86(2):124-135. [\[CrossRef\]](#)
 20. Daud A, Matoug-Elwerfelli M, Du X, Ali K. A qualitative enquiry into dental students' perceptions of dentistry as a career choice in the State of Qatar. *BMC Med Educ.* 2022;22(1):452. [\[CrossRef\]](#)
 21. Dhima M, Petropoulos VC, Salinas TJ, Wright RF. Predoctoral dental students' perceptions and experiences with prosthodontics. *J Prosthodont.* 2013;22(2):148-156. [\[CrossRef\]](#)
 22. Nur B, Ilhan D, Fişekçioğlu E, Oktay I. Prevalence of orthodontic malocclusion and evaluation criteria in 7 geographic regions of Turkey. *Türk J Orthod.* 2014;26:154-161