



Evaluation of Dentistry Students' Perspectives of Specialization in Restorative Dentistry

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ABSTRACT

Aim: The aim of this study was to evaluate the perspectives of the students studying at the faculty of dentistry on the specialization in the field of restorative treatment.

Materials and Methods: A total of 139 students, comprising 4th and 5th graders enrolled at the Gaziantep University Faculty of Dentistry, participated in the study. Of these, 71 students were in the 4th grade, while 68 were in the 5th grade. Students were administered a 10-question questionnaire about their evaluation of specialization in dentistry. The data collected was subjected to statistical analysis using the chi-square test. The statistical significance of the findings is at a level of $p < 0.05$.

Results: The most popular specialty in dentistry is Oral and Maxillofacial Surgery, with 45.3% of respondents selecting it as their first choice. The majority of respondents, at 66.9%, reported that they first became aware of the Restorative Dentistry department within the preclinical department. According to the survey, 47.5% of the students stated that the Restorative Dentistry department was primarily influenced by their clinical experience.

Conclusion: It is widely acknowledged that the preclinical period is a critical juncture in shaping dental students' initial impressions of various specialties. Furthermore, a range of factors, including clinical exposure, income expectations, and personal interests, play a significant role in determining the specialty that a student may choose to pursue.

Key Words: Dentistry, restorative dentistry, specialization.

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Introduction

All dentists who have earned their degree from the faculty of dentistry are equipped with the necessary authority and expertise to provide general dentistry treatments. However, there may be instances where more specialized information and techniques are required, in which case post-graduate education becomes crucial.

The "Omnibus Law" numbered 6225, published in the Official Gazette on April 26, 2011 and identified as numbered 27916, designated 8 specialties as Oral and Maxillofacial Radiology, Oral and Maxillofacial Surgery, Prosthodontics, Endodontics, Restorative Dentistry, Pediatric Dentistry, Periodontology, and Orthodontics.¹ It is important to note that the Orthodontics and Oral and Maxillofacial Surgery departments provide a 4-year program of detailed theoretical and practical training, while the other departments offer a 3-year program of the same nature. Upon completion of these programs and the submission of a thesis that has been successfully evaluated, physicians may be granted the title of "Specialist Dentist" or "Restorative Dentistry Specialist" in the Restorative Dentistry department.^{2,3}

Restorative Dentistry is a branch of dentistry that focuses on enhancing the aesthetic, functional, and phonetic qualities of teeth that are unacceptable due to various factors such as disease, trauma, wear, or developmental defects.⁴ This field utilizes both indirect and direct methods, including procedures such as inlay, onlay, and overlay restorations, closure of interdental diastemas, laminate-composite veneers, in-office and at-home bleaching procedures, and devital bleaching procedures. These techniques can be performed in a Restorative Dentistry treatment clinic.

The advancement of technology and the more active role of social media in our lives have brought along aesthetic concerns that are becoming increasingly widespread in society. Especially smile design and whitening treatments, which are common applications in restorative treatment clinical operation, increase the interest in restorative treatment. However, studies in the literature have shown that many factors such as interest in the field of specialization, the city where the specialization will be carried out, the financial gain to be obtained after the specialization and the duration of the specialization program are effective in preferences.⁵⁻⁷

Based on the information provided, our study aimed to examine the perspectives and motivations of students from the Gaziantep University Faculty of Dentistry in the 4th and 5th grades regarding their interest in specializing in Restorative Dentistry after graduation.

Materials and Methods

Given the importance of knowledge and experience in selecting a specialty in dentistry, the survey was designed to be administered solely to 4th and 5th grade students. Prior to its implementation, the necessary approval was obtained from the Gaziantep University Clinical Research Ethics Committee, which granted authorization with the decision number 2023/173.

During the academic year 2022-2023, a total of 139 students enrolled in the 4th and 5th grades at the Faculty of Dentistry of Gaziantep University were involved in the study. All participants provided their consent by signing the consent forms and were informed of their right to withdraw from the study at any time without consequences. The questionnaires were administered on a voluntary basis at the end of the class hour, and no personal identifying information was collected from the participants. The enquiries posed to the students were akin to those employed in the research conducted by Aksoy *et al.*⁸ and the survey questions are presented in Table 1. The inquiries encompassed both preferences for specialization in dentistry and perspectives on the Restorative Dentistry specialization.

IBM SPSS Statistics 22 (IBM SPSS, USA) program was preferred for statistical analysis of the findings obtained in the study. Chi-square test was used to evaluate the data obtained. Statistically, a significance level of 0.05 was accepted.

Results

A total of 139 students, comprising 70 from the 4th grade and 69 from the 5th grade, were enrolled in the Faculty of Dentistry at Gaziantep University during the 2022-2023 academic year and were selected for this study. The answers to the survey questions were examined. The distribution of the answers to the questions is shown in Table 1.

A statistically significant proportion of respondents, namely 66.9%, indicated that they were initially introduced to the Restorative Dentistry department during their preclinic experience, while 14.4% reported that they were first made aware of it during the pre-school and university preference periods. No significant difference was observed between the responses of male and female participants in this regard ($p=0.885$).

With regards to the most influential introductory experience regarding the Department of Restorative Dentistry, 47.5% ($n=66$) of respondents indicated that it was their clinical experience, while 20.9% ($n=29$) attributed it to their preclinical course. Furthermore, 17.3% ($n=24$) believed that it was their faculty member teaching the Restorative Dentistry lecture. No significant

difference was observed between the responses given by male and female participants ($p=0.0887$).

With regards to their experience with the Restorative Dentistry department, 60.4% ($n=84$) of the respondents expressed mostly positive sentiments. Similarly, when asked about their general perception of the future need for the Restorative Dentistry department, 51.1% ($n=71$) of the participants held a mostly positive outlook. No significant discrepancies were observed between genders in either question ($p=0.275$, $p=0.896$).

The selection of a specialty was primarily based on the level of interest in the field, with 59.7% ($n=83$) of respondents indicating that this was the most crucial factor. This was followed by the faculty of specialty training with 27.3% ($n=38$). The city of specialty training was marked by 5.8% ($n=8$). While 'financial gain' received the highest number of responses from both male and female participants, no significant difference was observed in gender comparison ($p=0.085$).

When the participants were inquired about their preferred specializations within the first three departments, the results indicated that 45.3% ($n=63$) of the respondents expressed a strong inclination towards Oral and Maxillofacial Surgery. Furthermore, 17.3% ($n=26$) of the participants opted for Pedodontics, while 12.9% ($n=18$) showed a keen interest in Periodontology. In terms of second choices, 31.7% ($n=44$) of the participants preferred Periodontology, 24.5% ($n=34$) opted for Prosthodontics, and 21.6% ($n=30$) showed a strong inclination towards Pedodontics. Orthodontics was the third choice with 53.2% ($n=74$), followed by Restorative Dentistry with 31.7% and Prosthodontics with 8.6%. When the effect of gender on preferences was analyzed, it was seen that the first three preferences of both male and female participants were the same departments and there was no statistically significant difference in these rates, respectively ($p=0.669$, $p=0.785$, $p=0.369$).

The results of the study indicate that the majority of participants, 34.5%, believed that they would obtain the greatest financial gain in the field of Orthodontics. Additionally, 27.3% of participants believed that they would gain the most financial benefit in Prosthodontics, while 15.1% believed that Oral and Maxillofacial Surgery was the best option. Restorative Dentistry was ranked sixth with only 2.9% of participants selecting it. It is worth noting that Orthodontics was the most popular choice among both male and female participants, with no significant difference between them ($p=0.838$).

When queried concerning the most notable department in terms of both patient care and dentistry, Oral and Maxillofacial Surgery emerged as the top choice, with 29.5% of participants citing its effectiveness in patient care and 33.8% in dentistry. Restorative Dentistry was found to be the third most effective department, with 11.5% of participants recognizing its excellence in patient care and 12.9% in dentistry. When analyzed in terms of gender, it was observed that preferences were always parallel and there was no statistically significant difference between them ($p=0.182$, $p=0.279$).

The primary motivation for wishing to specialize in Restorative Dentistry was a strong sense of personal skills, which was reported by 43.2% of respondents (n=60). The decision to specialize is influenced by several factors, including the contribution to professional life (22.3%), patient need (15.8%), and financial gain (11.5%). While 60.52% of men and 36.63% of women answered 'personal skills' to this question, a significant difference was found between genders (p= 0.043).

Discussion

In this study, the perspectives of students studying in different years of education on specialization in Restorative Dentistry were evaluated. In addition, a comparison was made with other specialty departments of dentistry through survey questions.

The importance given to specialization in dentistry is increasing. This is clearly seen in the studies evaluating the perspectives and motivations of dental students towards specialization after graduation. It was stated that the majority of dental students want to specialize and will prepare for the Dental Specialization Examination (DSE).^{9,10}

Studies have shown that Oral and Maxillofacial Surgery is the most preferred department for dentistry students⁹⁻¹¹. In our study, the department of Oral and Maxillofacial Surgery was the most preferred department with 45.3%. We think that Oral and Maxillofacial Surgery department is preferred first because of the high financial gain and the fact that much more complicated and advanced procedures are learned only during the specialization period compared to the undergraduate period.

The first preference of female students was Oral and Maxillofacial Surgery with 46.53%, while this rate was 42.10% for male students. Although there is no significant difference between them, the rate of girls' preference for the department of Oral and Maxillofacial Surgery is higher. This is consistent with other studies in the literature.^{8,12}

Participants expressed their general experience with the Restorative Dentistry department as 'mostly positive' with 60.4%, 'sometimes positive' with 33.8% and indifferent with 5.8%. Although it is pleasing to see that 'mostly negative' and 'sometimes negative' statements in the options are not marked, it is seen that this does not have much effect on the order of preference. In the ranking of the first three departments to be preferred, Restorative Dentistry was not marked at all in the first place in the order of preference, but only in the second and third preferences. We maintain that the root cause of this situation lies in the response provided to question 7 (In which specialty do you think you can earn more money?), specifically the answer "Restorative Dentistry department" which accounted for 2.9% of the votes. It is possible that the relatively low preference ranking for the Restorative Dentistry department is also influenced by the belief among students that they will improve their manual skills in this area through the courses they will take after completing their undergraduate studies.

It is expected that the participants will opt for the Orthodontics department as the one that will bring them the most financial benefits, yet the Oral and Maxillofacial Surgery department is considered to be the first choice among the top three departments, due to a keen interest in the field of specialization rather than financial prospects during preferences. Our research shares similarities with the investigation conducted by Erhamza *et al.*¹³, in that the participants expressed the belief that they would attain the greatest financial benefits in the field of Orthodontics.

In 4th and 5th graders' first three department preferences, although the first and third preferences were the same, there was a concentration in different departments in the second preferences. 4th graders were assigned to Periodontology and 5th graders were assigned to Prosthodontics as their second choice. In response to the inquiry regarding the most impactful introductory experience in their field of expertise, 47.5% of the participants indicated that it was their "clinical experience". Given the challenging nature of certain procedures, such as taking impressions and preparing teeth, for 4th grade students to not choosing the Prosthodontics Department comparing 5th grade, it is possible that the increased clinical exposure and communication opportunities available to 5th grade students may have influenced these results.

It has been observed in our study that personal interest in a particular specialty was deemed to be the most critical factor in specialty choice, regardless of gender and period of study. This finding is consistent with other studies in the relevant literature.^{14,15} In a related study, it was disclosed that the economic prosperity and development of a nation have a profound impact on the specialization choices of individuals.¹⁶

While an undergraduate dental student receives clinical training on the basics of a wide range of specialties, when he/she starts a specialty training program, he/she learns the knowledge and practice of a specific area in more detail.¹⁷ A plethora of professional, personal, and economic factors, regardless of gender or period of education, impact a person's selection of specialization.

Conclusions

The decision of students to specialize in a particular field is influenced by a variety of factors, including observing the preclinical and clinical operations of eight different specialty departments, attending theoretical lectures, applying theoretical knowledge in clinical practice, individual abilities and aptitudes, financial considerations, and the city in which they are studying.

Although both the experience and the general perception about the future needs of the department are mostly positive, Restorative Dentistry does not find a place at the top of the preference list.

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None

Conflicts of Interest Statement

None

References

1. Taşsöker M, Kök H, Şener SÖ. Knowledge on dental specialties among dental patients who referred to a dental faculty. *Yeditepe J Dent* 2017;13:25-30.
2. Barnard D, Pendlebury M. Career pathways. *Br Dent J* 2000;188(11):583-583.
3. Paquette JM, Sheets CG. The second 'DDS' degree: A formula for practice success. *The J Am Dent Assoc* 2004;135(9):1321-1325.
4. Hilton TJ, Ferracane JL, Broome JC, Santos Jd, Summitt JB. Summitt's fundamentals of operative dentistry: a contemporary approach. (No Title) Quintessence 2013.
5. Saeed S, Jimenez M, Howell H, Karimbux N, Sukotjo C. Which factors influence students' selection of advanced graduate programs? One institution's experience. *J Dent Educ* 2008;72(6):688-697.
6. Ambrozy DM, Irby DM, Bowen JL, Burack JH, Carline JD, Stritter FT. Role models' perceptions of themselves and their influence on students' specialty choices. *J Assoc Am Med Coll.* 1997;72(12):1119-1121.
7. Basco Jr WT, Reigart JR. When do medical students identify career-influencing physician role models? *Acad Med* 2001;76(4):380-382.
8. Aksoy A, Yanikoğlu N. Diş hekimliği fakültesi öğrencilerinin protetik diş tedavisi anabilim dalında uzmanlaşma konusundaki motivasyonlarının değerlendirilmesi. *Atatürk Univ Diş Hekim Fak Derg* 2019;29(4):623 - 630
9. Taşsöker M, Çelik M. Diş hekimliği öğrencilerinde mezuniyet sonrası kariyer ve uzmanlık motivasyonu. *Selcuk Dent J* 2019;6(4):108-111.
10. Çulhaoğlu AK, Kiliçarslan MA, Deniz KZ. Diş hekimliğinde uzmanlık sinavının farklı eğitim seviyelerdeki algı ve tercih durumlarının değerlendirilmesi. *Atatürk Univ Diş Hekim Fak Derg* 2021;31(3):420-426.
11. Halawany HS. Career motivations, perceptions of the future of dentistry and preferred dental specialties among Saudi dental students. *Open Dent J* 2014;8:129.
12. Kizilci E, Duman B, Demiroğlu C. Diş Hekimliği Fakültesi Öğrencilerinin Pedodonti Anabilim Dalında Uzmanlaşma Konusundaki Tercihlerinin Değerlendirilmesi. *Selcuk Dent J* 2022;9(1):147-152.
13. Erhamza TS, Çiğirim SÇ. Diş Hekimliği Fakültesi Öğrencilerinin Ortodonti Uzmanlığına Bakış Açıları. *Selcuk Dent J* 2021;8(2):427-435.
14. Kanmodi K, Badru A, Akinloye A, Wegscheider W. Specialty choice among dental students in Ibadan, Nigeria. *Afr J Health Prof Educ* 2017;9(1):21-23.
15. Dhima M, Petropoulos VC, Han RK, Kinnunen T, Wright RF. Dental students' perceptions of dental specialties and factors influencing specialty and career choices. *J Dent Educ* 2012;76(5):562-573.
16. Alrashdan MS, Alazzam M, Alkhader M, Phillips C. Career perspectives of senior dental students from different backgrounds at a single Middle Eastern institution. *BMC Med Educ* 2018;18(1):1-9.
17. Arora R, Panwar NK, Dhar V. Reason for choosing pediatric dentistry as career—Survey among post-graduate dental students. *J Oral Health Comm Dent* 2011;5(2):86-89.

Table 1. Distribution of participants' answers to questions by gender and grades

	Grade 4	Grade 5	p	Female	Male	p
1. When were the students first introduced to Restorative Dentistry?						
Pre-school	10 (14.08%)	10 (14.71%)		16 (15.84%)	4 (10.53%)	
University preference period	10 (14.08%)	10 (14.71%)		14 (13.86%)	6 (15.79%)	
Preclinical course	49 (69.01%)	44 (64.71%)	0.698	67 (66.34%)	26 (68.42%)	0.885
Clinical practice	2 (2.82%)	2 (2.94%)		3 (2.97%)	1 (2.63%)	
Other	0 (0%)	2 (2.94%)		1 (0.99%)	1 (2.63%)	
2. Which introductory experience to Restorative Dentistry influenced students most?						
Preclinical course	21 (29.58%)	8 (11.76%)		21 (20.79%)	8 (21.05%)	
Clinical practice	26 (36.62%)	40 (58.82%)		48 (47.52%)	18 (47.37%)	
Faculty member delivering lecture	10 (14.08%)	14 (20.59%)	0.005	17 (16.83%)	7 (18.42%)	0.887
Dental journal/dental website	10 (14.08%)	2 (2.94%)		10 (9.90%)	2 (5.26%)	
Other	4 (5.88%)	4 (5.88%)		5 (4.95%)	3 (7.89%)	
3. Were these experience about Restorative Dentistry positive or negative?						
Mostly positive	32 (40.07%)	52 (76.47%)		57 (56.44%)	27 (71.05%)	
Sometimes positive	31 (45.59%)	16 (23.53%)		38 (37.62%)	9 (23.68%)	
Indifferent	8 (11.27%)	0 (0%)	0.000	6 (5.94%)	2 (5.26%)	0.275
Sometimes negative	0 (0%)	0 (0%)		0 (0%)	0 (0%)	
Mostly negative	0 (0%)	0 (0%)		0 (0%)	0 (0%)	
4. What is the students' overall perception of the future need of Restorative Dentistry?						
Mostly positive	37 (52.11%)	22 (32.35%)		52 (51.48%)	19 (50%)	
Sometimes positive	34 (47.89%)	26 (38.24%)		35 (34.65%)	13 (34.21%)	
Indifferent	10 (14.08%)	6 (8.82%)	0.249	12 (11.88%)	4 (10.53%)	0.896
Sometimes negative	2 (2.82%)	0 (0%)		1 (0.99%)	1 (2.63%)	
Mostly negative	0 (0%)	2 (2.94%)		1 (0.99%)	1 (2.63%)	
5. What is the most important criterion that students pay attention to choose a specialization?						
Interest in the specialization	41 (57.75%)	42 (71.76%)		57 (56.44%)	26 (68.42%)	
Faculty where you will receive your specialization program	22 (30.99%)	16 (23.53%)		33 (32.67%)	5 (13.16%)	
The location of specialization program	4 (5.88%)	4 (5.88%)	0.730	4 (3.96%)	4 (10.53%)	0.085
Cost of specialization program	0 (0%)	0 (0%)		0 (0%)	0 (0%)	
Length of the specialization program	0 (0%)	0 (0%)		0 (0%)	0 (0%)	

Other	4 (5.88%)	6 (8.82%)		7 (6.93%)	3 (7.89%)	
6. Which top three careers do students want to pursue?						
Oral and Maxillofacial Surgery	33 (46.48%)	30 (44.12%)				
	First choice	First choice				
Oral and Maxillofacial Radiology						
Endodontics	42	32				
	(59.15%)	(47.06%)				
Orthodontics						
	Third choice	Third choice				
Pediatric Dentistry						
	24					
	(3.80%)					
Periodontology						
	Second choice					
Prosthodontics		26				
		(38,24)				
		Second choice				
Restorative Dentistry						
7. What specialties do students believe have the highest salaries?						
Oral and Maxillofacial Surgery	15 (21.13%)	6 (8.82%)		16 (15.84)	5 (13.16%)	
Oral and Maxillofacial Radiology	0 (0%)	0 (0%)		0 (0%)	0 (0%)	
Endodontics	0 (0%)	0 (0%)		0 (0%)	0 (0%)	
Orthodontics	28 (39.44%)	20 (49.41%)	0.001	33 (32.67%)	15 (39.47%)	0.838
Pediatric Dentistry	2 (2.82%)	16 (23.53%)		13 (12.87%)	5 (13.16%)	
Periodontology	2 (2.82%)	8 (11.76%)		9 (8.91%)	1 (2.63%)	
Prosthodontics	22 (30.99%)	16 (23.53%)		27 (26.73%)	11 (29.95%)	
Restorative Dentistry	2 (2.82%)	2 (2.94%)		3 (2.97%)	1 (2.63%)	
8. How do students perceive specialties according to their impact on patient care?						
Oral and Maxillofacial Surgery	21 (29.58%)	20 (49.41%)		27 (26.73%)	14 (36.84%)	
Oral and Maxillofacial Radiology	8 (11.27%)	4 (5.88%)		11 (10.89)	1 (2.63%)	
Endodontics	8 (11.27%)	2 (2.94%)		9 (8.11%)	1 (2.63%)	
Orthodontics	4 (5.88%)	6 (8.82%)	0.074	7 (6.93%)	3 (7.89%)	0.182
Pediatric Dentistry	8 (11.27%)	4 (5.88%)		9 (8.91%)	3 (7.89%)	
Periodontology	6 (8.45%)	18 (26.47%)		18 (17.82%)	6 (15.79%)	
Prosthodontics	8 (11.27%)	6 (8.82%)		12 (11.88%)	2 (5.26%)	
Restorative Dentistry	8 (11.27%)	8 (11.76%)		8 (7.92%)	8 (21.05%)	
9. How do students perceive specialties according to their impact on dental field?						
Oral and Maxillofacial Surgery	27 (38.03%)	20 (49.41%)		32 (31.68%)	15 (39.47%)	
Oral and Maxillofacial Radiology	8 (11.27%)	2 (2.94%)		9 (8.91%)	1 (2.63%)	
Endodontics	8 (11.27%)	4 (5.88%)		8 (7.92%)	4 (10.53%)	
Orthodontics	6 (8.45%)	6 (8.82%)	0.034	8 (7.92%)	4 (10.53%)	0.279
Pediatric Dentistry	0 (0%)	4 (5.88%)		3 (2.97%)	1 (2.63%)	
Periodontology	2 (2.82%)	8 (11.76%)		8 (7.92%)	2 (5.26%)	
Prosthodontics	10 (14.08%)	16 (23.53%)		23 (22.77%)	3 (7.89%)	
Restorative Dentistry	10 (14.08%)	8 (11.76%)		10 (9.90%)	8 (21.05%)	
10. What the most important criteria for students to while choosing Restorative Dentistry as a specialization?						
Contribution to professional life	13 (18.31%)	18 (26.47%)		24 (23.76%)	7 (18.42%)	
Patients' needs	16 (22.54%)	6 (8.82%)		21 (20.79)	1 (2.63%)	
Financial salary	6 (8.45%)	10 (14.71%)	0.038	12 (11.88%)	4 (10.53%)	0.043
Personal abilities	28 (39.44%)	32 (47.06%)		37 (36.63%)	23 (60.53%)	
Other	8 (11.27%)	2 (2.94%)		7 (6.93%)	3 (7.89%)	