

Research Report

## Evaluation of The Factors Affecting the Choice of Profession of The Dental Students

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### ABSTRACT

**Background:** Researches on motivation of students to choose dentistry as a profession has been conducted for many years. Students may choose to become dentists for reasons such as serving, being independent, working with their hands, gaining prestige, and financial security. **Purpose:** The aim of this study is to evaluate the factors in the career preferences of dental students, their expectations and opinions in the education process. **Methods:** 1,007 participants who answered the web-based questionnaire were included in this study. Obtained data were analysed using SPSS version 23.0 (Inc., Chicago, IL, USA). The Independent t test was used for intergroup comparisons in the data were normally distributed. Variables in more than two groups were compared using the one-way ANOVA test. Statistical significance was accepted as  $p < 0.05$  in all analyses. **Results:** A total of 1007 dentistry students, 370 (36.7%) male and 637 (63.3%) female, with a mean age of  $21.15 \pm 1.96$  participated in the survey study. 236 (23.4%) of the participants were in the first grade, 236 (23.4%) in the second grade, 192 (19.1%) in the third grade, 261 (25.9%) in the fourth grade, and 82 (8.1%) in the fifth grade. 44% of the participants chose the option 'they want to be medicine or dentistry, but gaining dentistry because of their score in the university entrance exam' as the reason for choosing dentistry. **Conclusion:** Such studies will be useful for the procedures to be followed in eliminating stress and anxiety in students and in the pre-detection of problems.

**Keywords:** Dental students; dentistry; choice of profession

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### INTRODUCTION

There are many years of research on students' motivation to choose dentistry as a career. Students may choose to become dentists for reasons such as serving, being independent, working with their hands, gaining prestige, and financial security.<sup>1,2</sup> Undergraduate dental education stands out as a unique pedagogical procedure. It includes acquiring the necessary academic, clinical and interpersonal communication skills in 4–6-year programs. Such a challenge is unlike anything students have faced before. In addition, situations that can be considered stressful in themselves, such as having personal responsibility for a patient's health, performing irreversible surgical procedures in a confined space due to the nature of dental practice, are quite difficult for young undergraduate students.<sup>3,4</sup> A study of dental students revealed that financial motivations such as income and financial security play a large role in choosing a profession, and person-oriented factors such as helping

people are of low priority.<sup>5,6</sup> In recent years, pedagogical innovations such as problem-based or case-based learning, patient simulations, web-based learning, learning by doing, and evidence-based oral care concepts and strategies designed to help students develop critical assessment skills have been reported in the dental education literature.<sup>7</sup> By taking the opinions of the students, the concerns about the dentistry education should be eliminated and the student satisfaction and education level should be increased. Also, an ideal environment of academic education should be provided to meet professional development of students, psychosomatic and social needs in the best way for their future professional lives.<sup>7-9</sup>

The aim of this study is to evaluate the opinions of the students of the faculty of dentistry about the factors in their choice of profession, their expectations in the educational process and the necessity of doctoral/specialty education, to examine their psychosomatic and social needs and to contribute to the literature as a result of these researches.

**MATERIALS AND METHODS**

The study protocol and procedures were approved by the Harran University Ethics Committee (ethical approval no: E-76244175-050.04.04-113064), and informed consent was obtained from all participants prior to participation in the questionnaire study.

It was assessed the clarity of the statements and the adequacy of the content of the questionnaire that was prepared using Google Forms. It was performed a pilot questionnaire with 5 students who were later excluded from the last analysis. According to the suggestions of these students, it was revised the questions that those with grammatical errors and those that were difficult to understand.

The final online questionnaire was sent to dental students in Turkey by WhatsApp, email, and private social platforms, such as Instagram and Facebook. A stratified random sampling method was used in this cross-sectional observational study. Data were collected between March 1 and 7, 2022.

Participants were informed of the purpose, risks, and benefits of the study, and they had the option of opting out of the study. The questionnaire comprised 2 sections. The first part of the questionnaire included basic questions that provide demographic data (3 questions). The questions (14 questions) about their views on dentistry education processes and university settings, and their views on the need for doctoral/specialty training in the second part.

As a result of the power analysis, we found that surveys with 829 or more individuals needed to have a 98% confidence interval, a population about size of 40,000 individuals, with the real value within ±4% of the surveyed value. However, in order to increase the reliability of the findings of this study and sample size, we included 1.007

individuals who answered the web-based questionnaire during the survey application period. The data were analysed using Statistical Package for Social Science version 23.0 (SPSS Inc., Chicago, IL, USA). The median, minimum-maximum, and percentage values were calculated for descriptive statistics. Histograms and the Kolmogorov-Smirnov test was used for the normality of the data distribution. The Independent t test was used for intergroup comparisons in the data were normally distributed. Variables in more than two groups were compared using the one-way ANOVA test. Statistical significance was accepted as  $p < 0.05$  in all analyses.

**RESULTS**

A total of 1007 dentistry students, 370 (36.7%) male and 637 (63.3%) female, with a mean age of  $21.15 \pm 1.96$ , participated in the survey study. 236 (23.4%) of the participants were in the first grade, 236 (23.4%) in the second grade, 192 (19.1%) in the third grade, 261 (25.9%) in the fourth grade, and 82 (8.1%) in the fifth grade (Table 1). Of 44% the participants selected the option “I wanted to be a medicine or dentist, but my score allowed me to win dentistry” as the reason for choosing dentistry (Table 2).

It was observed that most of the participants (63.2%) preferred dentistry after medicine or other professions (Table 3 and Table 4). Table 5 shows at which entrance the participants passed the university exam. It was determined that 36.2% of the students won the faculty of dentistry at the first entrance to the university exam, and 48.2% at the second entrance. To the question “If you had to choose today, would you choose dentistry again?” 33.8% of the participants answered ‘definitely yes or yes’ and 33.6% ‘absolutely no or no’. It was seen that the majority

**Table 1.** Distribution of participants by duration of education and gender.

Year of Education	Men n (%)	Women n (%)	Total n (%)
1.year	92	144	236 (23.4)
2.year	80	156	236 (23.4)
3.year	78	114	192 (19.1)
4.year	92	169	261(25.9)
5.year	28	54	82 (8.1)
Total	370	637	1452 (100)

**Table 3.** Which rank was dentistry faculty you entered as your preference?

Q2	Men n (%)	Women n (%)	Total n (%)
First	52 (5.2)	94 (9.3)	146 (14.5)
Second	40 (4.0)	63 (6.3)	103 (10.2)
Third	27 (2.7)	42 (4.2)	69 (6.9)
Fourth	18 (1.8)	35 (3.5)	53 (5.3)
Other	233 (6.5)	403 (7.9)	636 (63.2)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 2.** Why did you choose the dentistry profession?

Q1	Men n (%)	Women n (%)	Total n (%)
My ideal was to be a dentist.	89 (8.8)	161 (16.1)	250 (24.8)
I wanted to be a medical doctor or dentist, my score of university entrance exam was suitable for dentistry.	148 (14.7)	298 (29.6)	446 (44.3)
I wanted to choose a profession related to health, my score of university entrance exam was suitable for dentistry.	40 (4)	76 (7.5)	116 (11.5)
I wrote dentistry among my preferences, it came across by chance.	0 (0)	0 (0)	0 (0)
Other	65 (6.5)	80 (7.9)	192 (19.1)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 4.** When you think about your ideal profession, in which position did ‘Dentistry’ take place as a profession choice?

Q3	Men n (%)	Women n (%)	Total n (%)
The only profession in my ideal was “dentistry”.	60 (6.0)	96 (9.5)	156 (15.5)
Although my first choice was dentistry, it was among my preferences in other professions in the field of health.	54 (5.4)	115 (11.4)	169 (16.8)
It was my first choice, but there were also non-health related professions among my preferences.	37 (3.7)	63 (6.3)	100 (9.9)
It was behind “medical doctor” or other professions in my preference order.	160 (15.9)	273 (27.1)	433 (43.0)
I wrote “dentistry” even though I didn’t want it very much and it happened.	59 (5.9)	90 (8.9)	149 (14.8)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 5.** At what time entrance did you pass the university entrance exam of the faculty of dentistry?

Q4	Men n (%)	Women n (%)	Total n (%)
I won on the first attempt.	144 (14.3)	227 (22.5)	371 (36.8)
I won on the second attempt.	167 (16.6)	318 (31.6)	485 (48.2)
I won a few years after graduating from high school	42 (4.2)	75 (7.4)	117 (11.6)
I earned it while studying at another faculty	11 (1.1)	12 (1.2)	23 (2.3)
I won after graduating from another faculty	6 (0.6)	5(0.5)	11 (1.1)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 6.** If you had to choose today, would you choose the profession of dentistry again?

Q5	Men n (%)	Women n (%)	Total n (%)
Absolutely yes	88 (8.7)	139 (13.8)	227 (22.5)
Yes	41 (4.1)	72 (7.2)	113 (11.3)
Maybe	142 (14.1)	287 (28.5)	429 (42.6)
No	47 (4.7)	75 (7.4)	122 (12.1)
Absolutely no	52 (5.2)	64 (6.4)	116 (11.5)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 7.** How did you feel about the faculty and its environment when you started your university education?

Q6	Men n (%)	Women n (%)	Total n (%)
Nothing was as I imagined; I didn’t like it at all.	91 (9.1)	133 (13.2)	224 (22.2)
I didn’t have any expectations so I didn’t feel anything different	87 (8.6)	133 (13.2)	220 (21.8)
I didn’t like it because I didn’t find the environment the way I thought it would.	74 (7.3)	143 (14.2)	217 (21.5)
It wasn’t exactly what I imagined, but I still liked it.	105 (10.4)	202 (20.1)	307 (30.5)
I found everything as I wanted and I loved it.	13 (1.3)	26(2.6)	39 (3.9)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 8.** What did you think about the city you live in when you first started your dentistry education?

Q7	Men n (%)	Women n (%)	Total n (%)
Since I live in this city, I am familiar with the environment.	112 (11.1)	219 (21.7)	331 (32.9)
I found what I feared and i never loved.	40 (4.0)	51 (5.1)	91 (9.0)
It didn’t meet my expectations, I didn’t like it much.	73 (7.2)	128 (12.7)	201 (20.0)
Although it wasn’t exactly what I wanted, I got used to it easily.	117 (11.6)	191 (19.0)	308 (30.6)
I found it exactly as I expected and I loved it.	28 (2.8)	48(4.8)	76 (7.5)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 9.** What are your thoughts on the intensity of the theoretical lesson hours?

Q8	Men n (%)	Women n (%)	Total n (%)
It should definitely be reduced.	126 (12.5)	178 (17.7)	304 (30.2)
It could be better if it was reduced a little.	89 (8.8)	200 (19.9)	289 (28.7)
It does not matter to me.	78 (7.7)	101 (10.0)	179 (17.8)
I find the intensity of the theoretical courses quite appropriate.	55 (5.5)	129 (12.8)	184 (18.3)
It should never be reduced.	22 (2.2)	29(2.9)	51 (5.1)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 10.** What are your thoughts on reducing the intensity of practical applications?

Q9	Men n (%)	Women n (%)	Total n (%)
It would be very accurate to reduce	60 (6.0)	80 (7.9)	140 (13.9)
Reducing is good	44 (4.4)	86 (8.5)	130 (12.9)
It does not matter to me.	83 (8.2)	103 (10.2)	186 (18.5)
It would be better if it wasn't reduced	86 (8.5)	146 (14.5)	232 (23.0)
It would be bad to reduce, practical applications may be missing	97 (9.6)	222(22.0)	319 (31.7)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 11.** Are you satisfied with the education period of dentistry?

Q10	Men n (%)	Women n (%)	Total n (%)
Yes, I am very satisfied.	142 (14.1)	284 (28.2)	426 (42.3)
It could have been 1 year longer.	22 (2.2)	38 (3.8)	60 (6.0)
First, medicine and then dentistry education could be given.	38 (3.8)	61 (6.1)	99 (9.8)
Could have been 1 year shorter.	109 (10.8)	170 (16.9)	279 (27.7)
It does not matter to me	59 (5.9)	84 (8.3)	143 (14.2)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 12.** Do you find dental education stressful?

Q11	Men n (%)	Women n (%)	Total n (%)
Yes, I find it very stressful.	255 (25.3)	533 (52.9)	788 (78.3)
Although I find it quite stressful, I am not impressed.	59 (5.9)	38 (3.8)	97 (9.6)
I find it as stressful as it should be.	49 (4.9)	59 (5.9)	108 (10.7)
It is not stressful, it can even be called fun.	5 (0.5)	6 (0.6)	11 (1.1)
It is not stressful at all, the environment is extremely positive.	2 (0.2)	1 (0.1)	3 (0.3)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 13.** Do you think specialization or doctorate education is necessary after dentistry education?

Q12	Men n (%)	Women n (%)	Total n (%)
Absolutely necessary.	104 (10.3)	186 (18.5)	290 (28.8)
It would be better if done.	178 (17.7)	361 (35.8)	539 (53.5)
It doesn't matter if it's done or not.	66(6.6)	73 (7.2)	139 (13.8)
It would be better if it didn't.	6 (0.6)	2 (0.2)	8 (0.8)
Not necessary.	16 (1.6)	15 (1.5)	31 (3.1)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 14.** In which department would you most like to study after graduation?

Q13	Men n (%)	Women n (%)	Total n (%)
Oral and Maxillofacial Surgery	113 (11.2)	144 (14.3)	257 (25.5)
Dentomaxillofacial Radiology	5 (0.5)	7 (0.7)	12 (1.2)
Endodontics	24(2.4)	34(3.4)	58 (5.8)
Orthodontics	92 (9.1)	190 (18.9)	282 (28.0)
Periodontology	19 (1.9)	20 (2.0)	39 (3.9)
Restorative Dentistry	5 (0.5)	18 (1.8)	23 (2.3)
Prosthodontics	16 (1.6)	38 (3.8)	54 (5.4)
Pediatric Dentistry	14 (1.4)	40 (4.0)	54 (5.4)
Indecisive	82(8.1)	146(14.5)	228 (22.6)
Total	370 (36.7)	637 (63.3)	1007(100)

**Table 15.** Do you think the number of faculty members in your university is sufficient?

Q14	Men n (%)	Women n (%)	Total n (%)
Absolutely Not Enough	93 (9.2)	123 (12.2)	216 (21.4)
Insufficient	73 (7.2)	187 (18.6)	260 (25.8)
Mediocre	54 (5.4)	67 (6.7)	121 (12.1)
Sufficient	122 (12.1)	226 (22.4)	348 (34.6)
Absolutely Enough	28 (2.8)	34 (3.4)	62 (6.2)
Total	370 (36.7)	637 (63.3)	1007(100)

(42.6%) remained undecided, perhaps marking the answer (Table 6).

It has been learned from the answers given to the questions directed to the students about the city, university and faculty environment in which they are located, that the majority of them are already accustomed to the environment or get used to it over time, even if it is not in accordance with their dreams (Table 7 and Table 8).

While 58.9% of the participants stated that it would be appropriate to definitely reduce or slightly reduce the theoretical course hours (Table 9), 54.7% of them noted that it would not be appropriate to reduce the practical course hours (table 10). While it was seen that the duration of dentistry education was in line with the expectations of 42.3% of the students, other students stated that it should be shorter (27.7%) or longer (15.8%) (Table 11).

Table 12 shows the distribution of answers given to the question "Do you find dental education stressful?" It was determined that 78.3% of the students found it quite stressful. While the majority of students (82.3%) thought that specialty/doctoral education should be done after undergraduate education, 3.9% of them stated that they did not consider specialty/doctoral education necessary (Table 13). Table 14 shows the departments in which the participants want to receive postgraduate specialization/doctorate education. While the majority of the participants stated that they wanted to study in the fields of orthodontics (28%) and surgery (25.5), 22.6 of the participants were undecided. While 47.2% of the participants stated that they found the number of faculty members in their universities insufficient, 40.8% stated that it was sufficient (Table 15).

## DISCUSSION

It is seen that the studies examining the undergraduate dentistry education in the literature evaluate the opinions and ideas of the administrators or academicians and deal with the problems of order, structure and content. There are few studies focused on student views, some of them evaluated the views on career choice and professional expectations, and some aimed to determine teacher-student relationships. Unlike most published studies that focus on dental admissions or newcomers, this study is larger in sample size and examines the motivation of students in all classes.

Bernabe et al.<sup>10</sup> examined the reasons for choosing dentistry in choosing a profession in their study, which included only first-year dentistry students. In the questionnaires answered by the students, it is observed that "economic reasons, professional reasons and family reasons" are mostly involved in choosing a profession. According to the answers of the students, the first reason is "dentistry working environment and conditions". Family reasons take the last place. In our study, the main reason for choosing dentistry as a profession for the participants (44%) was that "they wanted to be a medicine or dentist, but because of their score in the university entrance exams, they

won dentistry". In addition, in our study, it was determined that the majority of the participants (63.2%) preferred dentistry after medicine or other professions.

Hallissey et al.<sup>11</sup> evaluated the knowledge of 150 students in different classes studying in dentistry about choosing a profession. As a result of this study, it is seen that the majority of the students (2/3) have Faculties of Medicine and Dentistry in their first choice. In our study, it was observed that the first choice was mostly medical school, and dentistry was preferred among other choices. Gallagher et al.<sup>12</sup> conducted a survey on 126 senior students from different ethnic backgrounds regarding the choice of profession and investigated the reasons for choosing the profession of dentistry. In this study, it was stated that, unlike our study, the criteria in the first place in the choice of profession include options related to "having regular working hours, having professional dignity and especially occupational safety". Options such as academic and scientific, friends and family factor were in the last place. We think that the reason for this difference is the differences in ethnic origins' needs, philosophy of life and living conditions.

Henzi et al.<sup>13</sup>, emotional states, stress levels and the environment related to the educational experiences of the students studying at the Faculty of Dentistry was evaluated. In the study, 1st and 4th grade students of dentistry, who are at different stages of their education life, took part. According to the findings of the study, it was determined that while the stress level was high in the 4th grade students, the emotional ups and downs were still less in the 1st grade students. In the academic year 2002-03, 605 students officially enrolled in the School of Dentistry of the University of Athens were included in a survey study to examine the stressors. Thirty stressors are grouped into seven categories: "Self-efficacy beliefs", "Teacher and management", "Workload", "Patient treatment", "Clinical training", "Performance pressure" and "Other". "Workload", "Performance pressure" and "Self-efficacy beliefs" were marked as the most stressful factors by students. Specifically, a higher percentage of respondents perceived the following factors as "highly stressful" or "very stressful": "amount of classroom work" (82%), "exams and grades" (76%), "lack of self-confidence, anxiety to become a successful dentist" (70%), "completing graduation requirements" (68%), "school given no time to do homework" (64%) and "no time to rest" (64%).<sup>14</sup> In our study, "Do you find dental education stressful?" when the answers given to the question were examined, it was determined that 78.3% of the students found it quite stressful. By evaluating these results by the faculty members, it will be very useful to determine the problems in advance and take precautions, if necessary, for the procedures to be followed in order to relieve the stress and/or anxiety in the students.

In our study, questions were asked about reducing the theoretical and practical course density and the adequacy of the number of faculty members, taking into account the student's perspective. While 58.9% of the participants stated that it would be appropriate to definitely reduce or slightly

reduce the theoretical course hours, 54.7% of them stated that it would not be appropriate to reduce the practical course hours. And 47.2% noted that they found the number of faculty members in their universities insufficient. A dental program should also be acceptable and satisfying to those involved, including students, faculty, and patients. In this context, the learner perspective is essential for providing feedback on the efficiency and acceptability of educational methods and, more generally, on the 'overall learning experience'.<sup>15</sup>

It is recommended to expand the research and carry out new studies to increase the surveyed sample, as well as further studies evaluating not only the reasons for choosing dentistry, but also socio-economic status, parental profession, and alternative options for getting a university-level education.

## CONCLUSION

As a result, such studies will contribute to the development of appropriate strategies for the continuing student recruitment and dental profession, as they provide information about students' perceptions of dentistry. It will be useful for the procedures to be followed to relieve stress and anxiety in students and will be useful in detecting and eliminating problems beforehand.

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