

Evaluation of the Perception of Oral Maxillofacial Surgery Among Other Dental Specialties in King Abdulaziz University, Saudi Arabia

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ABSTRACT

Aim: To find out if junior dental students perceive OMFS as a subject of importance in the dental school as well as the stand of other dental specialties.

Materials and methods: 531 students of 2nd, 3rd, 4th years, were selected from King Abdul-Aziz University (KAU), college of dentistry, for data collection. The senior years of 5th, 6th, and internship were excluded. A survey was conducted, which consisted of questions related to participants' demographic characteristics and their career priorities. Participants' responses were analyzed using the Chi-square test and was validated with Cronbach's alpha and binary regression analysis.

Results: The findings showed that most of the students perceived general dentistry as the most important subject of study (76%), while, Orthodontics and OMFS came second (60%). On the contrary; forensic dentistry and oral radiology were found to be significantly under-estimated (20% and 26%, respectively), as the majority of the students found those subjects not to be of any importance. Cronbach's Alpha test proved that the obtained results were reliable results between the variables.

Conclusion: Dental students perceived OMFS as an important topic among other dental specialties, while perceived forensic dentistry and oral radiology as of not important. However, it is clear that junior dental students considered general dentistry to be the main area of focus and interest. Such might indicate that pre-college orientation program is needed to clarify the importance of different specialties as well as the future career line afterward.

Clinical significance: The comprehension of different dentistry lines is needed among dental students. Such can be accomplished *via* pre and intra-college orientation programs.

Keywords: Dentistry, Knowledge, Oral Maxillofacial Surgery, Specialty perception.

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INTRODUCTION

It is identified that motivated and skilled individuals are effective in providing dental health service to the society. Research on student's motivation and anticipations of dental practitioners can assist the health authorities to develop a model to recruit and retain experts that benefit the community.¹ Understanding the factors affecting the selection of a dental profession are essential to orient dental students and residency training programs anticipations.²

Several studies have indicated that the majority of the dental students' desire to continue their education toward specialization in the field of interest. This has considerable implications for the dental workforce planning in any country.³ A striking balance between demand and supply is unavoidable with an elevation in demand for the specialized dental treatment and with an elevation in supply of dental institutions.⁴ However, the perception of the dental specialties among junior dental students is considered vague, due to the lack of a clear pre-college orientation programs.^{2,3} OMFS is considered a major specialty that conjoins dental and medical sciences together as it deals with head and neck injuries, pathology, and reconstruction. When compared to other dental specialties it takes the longest residency training programs. Hence, dental students might find it to be a complex subject to perceive.

Some factors have been reported in the literature that aided the comprehension of OMFS and other dental specialties to be chosen as

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a line of study and career such as; helping people, the artistic nature of the career, the ability to be self-employed, and the perception of higher social status and income.^{5,6} However, a truthful perception of all the dental specialties is needed, and such would be if applied via boot-camp career programs at high school and pre-college years to orient students to different working lines in the community.^{5,6}

There are merely restricted number of studies carried out on dental specialty and career preferences in Saudi Arabia.^{7,8} Much remains to be explored regarding the perceptions of dental students and factors affecting their selection. The current literature is scarce on students' perceptions of OMFS and how is that affecting the college years and future career choice. Thus, the objective of this study is to assess student's perception of OMFS and dental

specialties; to determine which of them is perceived important and which is not, from their point of view.

MATERIAL AND METHODS

The present cross-sectional study was reviewed and approved by the ethics committee of the College of Dentistry Research Center, King Abdul-Aziz University (KAAU), Jeddah, Saudi Arabia. Informed consent was obtained from each participant according to the ethical principles of the Institutional Review Board (IRB). The sample size of 500 students was assessed by G-Power software, version 3.1.9.4. based on an alpha of 0.05, power of 85%, assuming effect size 0.5 needed to detect difference among the students.

This study has targeted second, third, and fourth-year dental students studying at KAAU, (5th, 6th, and internship years were excluded). The total of 600 questionnaires (closed ended questions) were distributed manually in the lecture rooms. The objective of the survey was explained to the participants and was written on the preface of the questionnaire.

The items of the questionnaire were developed after an explicit review of previously published literature. A pilot study of the questionnaire was conducted in English language with 30 randomly selected students to determine any barriers and essential changes were then made accordingly. The random selection was performed by numerous systems in which every student had an equally possible chance of participation. These students were excluded from the final analysis. The questionnaire was divided into demographic, perception of importance, and final GPA, in the form of closed answers.

The students had indicated their preference among the available specialties and general dentistry as one of them.^{2,10} All the items were rated on a 4-point Likert rating scale; extremely important field (1), important field (2), neutral (3), and less important field (4).

The Statistical Package for Social Sciences (SPSS, version 20, IL, USA) was used to analyze the data collected for completeness and fulfillment of the objectives. Cross-tabulations with chi-square

tests were used to complete statistical analysis. A *p*-value of less than 0.05 was set as the level of significance. The internal consistency of the two categories of factors influencing specialty or general dentistry preferences and career options was evaluated through Cronbach's alpha. The number and percentages of the responses were determined through descriptive statistics. Binary logistic regression was used for determining the factors associated with each specialty.

RESULTS

A 531 student-response was received (response rate 88.5%), and the data was collected and tabulated for analysis. It presented 59.8% male and 40.2% female students. Among all these students, 76.6% had Saudi nationality and the remaining 23.4% were non-Saudi nationals. The majority of the students were Saudi because the study was conducted in one national institute. It was shown that 84.9% were either single or divorced, while the remaining 14.8% were married. The age of these students ranged from 20 to 26 years, in which 76% aged 22–24 years. The students were asked about the final expected GPA and found that 72.1% of the student were very hopeful as they were expecting GPA of 3–4 out of 4. However, 27.8% of the students were not satisfied with their performance and were expecting a GPA score of 2–3 out of 4 (Table 1). It was found that the gender has a correlation with the outcome unlike the other parameters.

After obtaining the demographic details of the students, they requested for their specialty perception, and career interest. It was clear that general dentistry recorded the highest importance rate among all the 531 responders (76%). OMFS scored an importance perception in about 60%, and oral pathology and medicine scored 80%. The specialty of prosthodontics scored 50% chance between being at the important zone vs the neutral/less important zone. It is very interesting that, at the neutral/not important zone; forensic dentistry and oral radiology scored 80% and 74%, respectively. Which proves the lack of knowledge in regard to the importance of those two topics. The results were validated

Table 1: Participant's demographics

Variable	Frequency (n = 531)	Percentage (%)	P values
Gender			0.184
Male	317	59.8%	
Female	214	40.2%	
Nationality			0.000*
Saudi	407	76.6%	
Non-Saudi	124	23.4%	
Marital Status			0.000*
Single/Divorced	452	84.9%	
Married	79	14.8%	
Age			0.000*
20–22 years	56	10.5%	
22–24 years	403	76%	
24–26 years	72	13.5%	
Expected CGPA			0.000*
Between 2–3	148	27.8%	
Between 3–4	383	72.1%	

*(*P* < 0.05)



using the Cronbach's Alpha reliability test and recorded the value of seven, and such considered as reliable. Further validation was done with binary regression and such obtained a non-significant outcome ($p < 0.05$) (Table 2).

The observation among specialties and the questions related to the importance of the field was measured using a Spearman's correlation to analyze the interrelation between the two parameters, 0.254 (Table 3).

DISCUSSION

Students in every faculty are concerned about their careers and their future options. They seek some mentoring before completing their graduate degree. The aim of the present study is to evaluate student's perception of the dental specialties and to perceive an idea of importance level of each subject.

The analysis of the responses disclosed a very diversified answer. Most of the students wanted to pursue their career with advanced general dentistry because it has a wide scope. Studies from other universities and regions also validate our findings that general dentistry and advanced general dentistry are the most selected field among the students.^{2,9} The influence of gender, age, and marital status on the selection of these specialties was tested and did not find any significant results in general dentistry. However, oral radiology and periodontics selection carry gender discrimination as most of the female students considered oral radiology as a less important field, however, male students considered it important.

Similar results were found in case of restorative and esthetic dentistry, where female students showed higher interest when compared to male students. Baker et al. reported that females considered esthetics as the most important field in comparison to any other specialty in dentistry, among his group.¹²

OMFS is considered a major specialty that deals with head and neck injuries, pathology, and reconstruction. It usually takes the longest training years when compared to other dental specialties. Also, it was measured as an important specialty by the male and female students equally. Another study reported that males were leaning to the importance of OMFS more than females, a study conducted by Halawany et al.² Such results indicate the variation in study sample according to the pre-emptive perception mainly.¹¹ The field of forensic dentistry was found to be significantly underestimated.^{10,13} Most did not give any importance to this field, as per our survey, which could be due to the lack of knowledge.¹⁴⁻¹⁶

Table 2 shows no significant differences in all the parameters in relation to the type of question or the specialty chosen by students. This was unparallel with the results published by Alwadani et al.¹⁰ and Halawany et al.² The aforementioned, presented the relation between different specialties and the choice of "Extremely Important Field", and the result showed high response in the following topics: general dentistry, oral medicine and pathology, restorative and esthetic dentistry, as they scored 76.4%, 66.4%, and 59.6%, respectively. Alwadani et al. performed a similar study in a different city and found different results. Interestingly, endodontics recorded the

Table 2: Students interest towards different specialties

Specialties	Extremely important field		Important field		Neutral		Less important field		Total N (%)
	Frequency (n = 531)	Percentage (%)	Frequency (n = 531)	Percentage (%)	Frequency (n = 531)	Percentage (%)	Frequency (n = 531)	Percentage (%)	
Restorative and Esthetic	317	59.6%	89	16.7%	87	16.3%	38	7.15%	531 (100%)
Prosthodontics	115	21.6%	175	32.9%	118	22.2%	123	23.1%	
Orthodontics	47	13.3%	252	47.4%	63	9.98%	169	31.8%	
Oral and Maxillofacial Surgery	116	21.8%	208	39.1%	93	17.5%	114	21.4%	
General Dentistry	408	76.8%	75	14.1%	40	7.53%	08	1.5%	
Periodontics	237	44.6%	165	31.0%	114	21.4%	15	2.82%	
Forensic dentistry	79	14.8%	27	5.08%	208	39.1%	217	40.86%	
Oral medicine and oral pathology	358	67.4%	73	13.7%	76	14.3%	24	4.5%	
Oral Radiology	54	10.1%	82	15.4%	112	21.09%	283	53.2%	
Advanced Oral Dentistry	54	10.1%	254	47.8%	196	36.9%	27	5.08%	
P values	0.060		0.073		0.135		0.089		

Table 3: Spearman's correlations between specialties and the questions related to the importance of field in the studied sample

Variables	Different specialties		Questions related to the importance of field
Spearman's rho	Different specialties	Correlation coefficient	0.254**
		Sig. (2-tailed)	0.000

**Correlation is significant at the 0.01 level (two-tailed)

highest percentage (22.4%) among the other dental specialties. Such goes along with our study as endodontics was considered as part of general dentistry in our work.¹⁰ In contrast to Alwadani et al.¹⁰ who found prosthodontics and orthodontics of much less interest rate, recording 12.7% and 13.9%, respectively, while in our results recorded prosthodontics recorded 53% importance, while orthodontics recorded 60% of importance.¹⁰ This might be explained by the different social background, education, and living environment between the two cities Jeddah and Jazan. Such conforms the variation in recording the oral medicine/pathology which showed 7% only in Jazan university while around 74% in Jeddah.

The study has some limitations such as the questionnaire-based type of study at a single institute and the lack of comparison group which could've been compared with more senior students at the college to gauge if any variation in the perception does exist. A multi-center study to compare the perception at different universities will help analyzing the geographic variation effect on the outcomes.

CONCLUSION

The perception of OMFS among junior dental students was of importance, while completely the opposite when looking at Forensic dentistry and oral radiology which may be considered importance once understood in details.^{16,17} Junior students are eager about general/esthetic dentistry and considered them the most important.

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