

Post-graduate specialty choice among interns of a private dental school in Jeddah



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ABSTRACT

Evidence indicates that the majority of dental students report continuing their education further towards a post-graduate specialty degree. The choice of a career is a critical decision that has an obvious impact on a future life pattern. Based on the various factors that influence the decision of the students in choosing the post-graduate specialty student career counseling may be provided at the university level. This study was done to evaluate the specialty preference and their influencing factors among the interns in a private dental school in Jeddah, Saudi Arabia. The study is a cross-sectional survey conducted using a self-administered questionnaire among final year dental students batch 2020-2021. The response rate for the study was 85% which is 87 out of 102 interns from the batch 2020-21. The subjects of choice to pursue post-graduation among the respondents was Endodontics, Prosthodontics, Pediatric Dentistry, Oral maxillofacial surgery, Periodontics, Orthodontics, Restorative and esthetic dentistry, Advanced General Dentistry, Forensic Dentistry, and Oral Pathology. It is revealed that Oral Surgery followed by Orthodontics may be the leading choice of dental specialization among students and the preferred choice may be Restorative and Aesthetic Dentistry. Our study and literature review suggest that there are few post-graduate specialties that are more preferred in comparison to some that are not. It is warranted that the students should be oriented about all the specializations in dentistry which will help in a targeted approach towards meeting the demand of supplying specialists from all the fields in Dentistry.

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1. Introduction

There are many factors that influence the choice of a dental profession (Folayan et al., 2014). The dental profession plays a significant role in the service of society, and the selection of dentistry as a career is a critical decision in an individual's life, affecting both one's social status and economic status (Orenuga and Costa, 2006). Understanding the career motivations and expectations is crucial so that, where possible, the students may be harnessed in the provision of health care (Abbott et al., 1984; Scarbecz and Judith, 2002). Literature review indicates that the majority of dental students report continuing their education further towards a post-

graduate specialty degree (Sofola et al., 2008; Weaver et al., 2002). The choice of a career is a critical decision that has an obvious impact on a future life pattern. Dentists occupy an important position in society as licensed health care workers. A position paper published in 2012 has outlined three possible scenarios for the future of dental practice and education and linked each to specific socioeconomic predictions (Brown and Nash, 2012). The scenarios were simply referred to as optimistic, moderate, and pessimistic. Although these anticipated scenarios were relating to dentistry within the USA, they could be applied to dental practice in all nations. The motivating factors for selecting any career are complex, and dentistry is no exception. Many issues may be considered when choosing a career, including interests, desires, willingness, and financial ability to complete a possibly lengthy period of training as well as the type of work involved in a particular career, work environment, financial rewards and availability, and attractiveness of alternative careers. Moreover, the

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relative importance of these factors may differ between men and women (Halawany, 2014). Dental students are the future dental professionals of the nation and therefore, demographic studies on them provide an insight into their characteristics (Tanalp et al., 2012). A detailed observation of the career motivations of dental students provides a better insight into their role in society and leads to the debate on dental education and practices (Santos et al., 2013).

The workforce domain in Saudi is divided into clinical service providers and basic science researchers. The clinical specialty in dental practice includes Oral Maxillofacial Surgery (OMFS), orthodontics, Paediatric dentistry, prosthodontics, periodontics, restorative dentistry, radiology, and endodontics, while basic science specialties include dental biomaterials, oral biology, community, and pathology. Although the clinical service is provided at different health care centers, the research aspect is considered weak (Almasri and Nourah, 2015). The interns have a very positive perception of their future career prospects (Halawany et al., 2017). The study is intending to increase insight into how dental institutes can improve the students' insight into the different post-graduate specialty options available for them. Based on the various factors that influence the decision of the students in choosing the post-graduate specialty student career counseling may be provided at the university level (Alnomay et al., 2018). So, the aim of this study is to evaluate the specialty preference and their influencing factors among the interns in a private dental school in Jeddah, Saudi Arabia.

2. Material and method

The study was approved by the ethical committee of Ibn Sina National College for Medical Studies. This is a cross-sectional survey using a self-administered questionnaire among final year dental students batch 2020-2021 from Ibn Sina national college in Saudi Arabia. The study was conducted for fifteen days period starting from the last week of September to the first week of October, the students who are willing to participate were included in the study. The questionnaire was prepared following a review of the literature. The questionnaire enquired about socio-demographic details, the choice of subject for post-graduation, time when the student is considering post-graduate study, and if it will be in Saudi Arabia or abroad including the reason and the time to start post-graduation, and finally the effects of the respondents decisions on choosing the specialty.

Permission from the Vice Dean of the program was obtained to collect information related to the study from the interns. The purpose of the study was given to the interns at the beginning of the questionnaire. There was a google form created for all the questions. Distribution of the questionnaire to the interns was done through WhatsApp. The responses were collected electronically through

google forms and then Excel was downloaded to analyze the data. The data was analyzed using SPSS version 23. The cross-tabulation of the variables was done using the chi-square test and p-value <0.05 was considered statistically significant.

3. Results

The response rate of the study was 85% which is 87 out of 102 interns who responded from the batch 2020-21. The response rate of females was higher which was 73(83.9%) compared to the males which were 14(16.1%). The majority of the participants which is 58(66.7%) were aged 20-25 years. The majority of the interns who responded were Saudi nationals 69 (79.3%).

Table 1 explains the details of the GPA grade versus the details on the knowledge and attitude of respondents in choosing the post-graduate subjects. Forty-six (52.9%) of them responded to have agreed that undergraduate record accurately reflects their effort and ability. The majority that is 44 (50.6%) students reported that the duration of the dentistry program was too long. An equal number of interns showed their desire to pursue continued education abroad 26(29.9%) and in Saudi Arabia 26(29.9%). The basis of the preference of the respondents to pursue post-graduate education is for the excellent students is financial reasons 5(5.7%) and advice from family/friend 5(5.7%). Statistically, a significant result was seen among the GPA grade versus your opinion on post-graduation course duration in Dentistry which was < 0.022.

Table 2 describes the GPA grade versus details on the choice of post-graduate subjects. There was a statistically significant association between the GPA grade and where the respondents intend to pursue their post-graduate education ($p=0.001$), the factors that could affect their decision to specialty/general dentistry choices ($p=0.00$), and the specialty they prefer in dentistry ($p=0.00$). The majority of whom are 43(49.4%) responded to start post-graduation immediately after graduating (within the next six months after graduating). When they asked about their preferred specialty for post-graduate study the results from most to least preferred was: (23.0% Endodontics, 17.2% Prosthodontics, 12.6% OMFS, 12.6% Pediatric dentistry, 9.2% Orthodontics, 9.2% Periodontics, 8.0% Restorative and esthetic dentistry, 3.4% Advanced general dentistry, 3.4% Forensic dentistry, and 1.1% Oral pathology). Regarding the basis of their preference to pursue post-graduate education, the majority which is 35.6% who have financial reasons, while 18.4% choose their PG based on the number of years required, 17.2% with advice from family/friend.

4. Discussion

This study is an analytical study to find what is the choice of post-graduate subject for the interns of the private dental school in Jeddah? The response rate of the students was good so this would help us

reduce the selection bias among the participants. The interns responded to do post-graduation in Endodontics, Prosthodontics, Pediatric Dentistry, Oral maxillofacial surgery, Periodontics,

Orthodontics, Restorative and esthetic dentistry, Advanced General Dentistry, Forensic Dentistry, and Oral Pathology in sequence from highest to lowest percentage.

Table 1: GPA grade versus the details on the knowledge and attitude of respondents in choosing the post-graduate subjects

Question	Response	Excellent	Very good	Good	Acceptable	Chi-square (p-value)
Did you think that your undergraduate record accurately reflects your effort and ability?	Yes	15 (17.2%)	19 (21.8%)	11 (12.6%)	1 (1.1%)	12.320 (.055)
	No	3 (14.3%)	12 (13.8%)	3 (14.3%)	3 (14.3%)	
	I am not sure	2 (2.3%)	13 (14.9%)	5 (5.7%)	0 (0%)	
Would you consider further study after graduating from your current course?	Yes	17 (19.5%)	35 (40.2%)	16 (18.4%)	1 (1.1%)	12.416 (.053)
	No	2 (2.3%)	6 (6.9%)	3 (3.4%)	3 (3.4%)	
	I am not sure	1 (1.1%)	3 (3.4%)	0 (0%)	0 (0%)	
Do you think choosing the post-graduate specialization should be based on the needs of the community?	Yes	19 (21.8%)	39 (44.8%)	15 (17.2%)	4 (4.6%)	3.056 (.383)
	No	1 (1.1%)	5 (5.7%)	4 (4.6%)	0 (0.0%)	
	Too short	2 (2.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
What is your opinion on post-graduation course duration in Dentistry?	Reasonable	13 (14.9%)	16 (18.4%)	11 (12.6%)	1 (1.1%)	14.832 (.022)
	Too long	5 (5.7%)	28 (32.2%)	8 (9.2%)	3 (3.4%)	
	Immediately after graduating (within the next six months after graduating)	10 (11.5%)	21 (24.1%)	11 (12.6%)	1 (1.1%)	
When do you think you might begin your post-graduate study?	Within three years of graduating	6 (6.9%)	13 (14.9%)	3 (3.4%)	0 (0.0%)	14.39 (.109)
	Sometime in the future (more than three years after graduating)	0 (0.0%)	1 (1.1%)	0 (0.0%)	1 (1.1%)	
	I do not know yet/I am not sure	4 (4.6%)	9 (10.3%)	5 (5.7%)	2 (2.3%)	
	Financial reasons	5 (5.7%)	13 (14.9%)	12 (13.8%)	1 (1.1%)	
What is the basis of your preference to pursue post-graduate education?	Advice from family/friend	5 (5.7%)	9 (10.3%)	1 (1.1%)	0 (0.0%)	19.207 (.084)
	Parental occupation	3 (3.4%)	2 (2.3%)	3 (3.4%)	0 (0.0%)	
	It's a trend specialization	4 (4.6%)	8 (9.2%)	3 (3.4%)	2 (2.3%)	
	Based on the number of years required	3 (3.4%)	12 (13.8%)	0 (0.0%)	1 (1.1%)	

There are 79.3% of the participants would like to consider further study after graduating from dental school. The majority of the participants wanted to consider further study after their graduation which is in contrast to the study by Puryer et al. (2016) in which the participants were undecided about pursuing a career by doing post-graduation but have not yet decided where to pursue their post-graduation either abroad or in Saudi Arabia. The opinion of the participants about the course duration in Dentistry was both reasonable and too long.

The results of our study suggest that the majority of the participants were females in line with the study by Kazi et al. (2018). In a study conducted by Halawany et al. (2017) the most preferred post-graduate specialty by the final year students was Restorative and Aesthetic Dentistry. The most important factor in choosing the specialization was the influence of family members.

In this study by Halawany et al. (2017) the preference was given to work in public as compared to the private sector. This is in contrast to the study that was conducted by Baharvand et al. (2011).

In the study by Puryer et al. (2016), among the participants, the most popular post-graduate subjects were Restorative Dentistry and Orthodontics. The response rate in their study was 79%. A study conducted by Al-Dlaigan et al. (2012) Prosthodontics followed by Orthodontics and Endodontics is the most preferred specialties among the male and female students. A study conducted by

Alnomay et al. (2018) have shown to be more inclined towards pursuing their career as an Oral Surgeon studying in international programs.

The findings in the study by Rashid et al. (2013) suggested that there is an interest in post-graduate specialty to achieve financial stability and quality of life. The findings of the various studies warrant the need for the newer graduates to understand the needs of the community which would help in choosing the right post-graduate specialty for the students.

A study conducted by Aggarwal et al. (2012) in India revealed that Oral Surgery followed by Orthodontics was found to be the leading choice of dental specialization among students and another study by Scarbecz and Ross (2007) the preferred choice was Restorative and Aesthetic Dentistry.

The undergraduates in the study by Kazi et al. (2018) also had responded to have an interest in Oral Surgery, Orthodontics, and Endodontics subjects.

The study by Halawany et al. (2017) is in line with our study in which very few students have opted for General Dentistry and Public Health Dentistry. Especially in our study, no one has opted for Public Health Dentistry.

These fields can be opted for if there are openings for jobs in these specialties in both the private and public sectors. As the varied options including all fields of specialties will contribute majorly to engage all the dental workforce in the country (Newton et

al., 2011). Although the graduates may join different post-graduate specializations they are motivated by various individual factors influencing them. Career counseling has a significant influence on students

when choosing the post-graduate specialization (Azad and Rahim, 2015; Fita et al., 2020; Merle and Craig, 2017; Stonebraker et al., 2019).

Table 2: GPA grade versus details on the choice of post-graduate subjects

Question	Response	Excellent	Very good	Good	Acceptable	Chi-square (p-value)		
Where do you intend to pursue your post-graduate education?	In Saudi Arabia	9 (45.0%)	17(19.5%)	0 (0.0%)	0 (0.0%)	22.718 (.001)		
	Abroad	9 (10.3%)	11(12.6%)	5 (5.7%)	1(1.1%)			
	I don't know yet	2 (2.3%)	16(18.4%)	14(16.1%)	3 (3.4%)			
	The overall cost of studying abroad is cheaper than in the K.S.A	7 (8.0%)	3 (3.4%)	3 (3.4%)	0 (0.0%)			
	The courses available are more relevant to my future plans	3 (3.4%)	2 (2.3%)	2 (2.3%)	0 (0.0%)			
	The course I wish to study is not available in the K.S.A	1(1.1%)	2 (2.3%)	4 (4.6%)	0 (0.0%)			
If you will go abroad; What are your main reasons?	The quality of the course I want to study is better abroad	3 (3.4%)	7 (8.0%)	4 (4.6%)	3 (3.4%)	40.833 (.090)		
	The institution that I wish to study at is recognised internationally	0 (0.0%)	5 (5.7%)	2 (2.3%)	0 (0.0%)			
	I want to be closer to my family and friends/return to my home country	1(1.1%)	7 (8.0%)	2 (2.3%)	0 (0.0%)			
	The employment opportunities are better abroad	2 (2.3%)	1(1.1%)	0 (0.0%)	0 (0.0%)			
	I will not study abroad	15 (17.2%)	2 (2.3%)	2 (2.3%)	1(1.1%)			
	Non availability of the subject of choice	3 (3.4%)	4 (4.6%)	1(1.1%)	0 (0.0%)			
	Overall cost of living	4 (4.6%)	4 (4.6%)	2 (2.3%)	1(1.1%)			
	Course fees	0 (0.0%)	7 (8.0%)	2 (2.3%)	0 (0.0%)			
	Being offered a job	1(1.1%)	3 (3.4%)	0 (0.0%)	0 (0.0%)			
	Influence of faculty or colleagues in the dental profession	0 (0.0%)	0 (0.0%)	0 (0.0%)	1(1.1%)			
	Prestige within dental the profession	1(1.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)			
	Family and personal commitments	0 (0.0%)	4 (4.6%)	3 (3.4%)	0 (0.0%)			
	Preference of private practice	0 (0.0%)	2 (2.3%)	0 (0.0%)	0 (0.0%)			
	Predictable working hours	0 (0.0%)	0 (0.0%)	3 (3.4%)	0 (0.0%)			
	What factors could affect your decision to speciality/general dentistry choices?	Intellectual content of the profession	5 (5.7%)	1(1.1%)	0 (0.0%)		0 (0.0%)	93.324 (.000)
Interest in community service		3 (3.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)			
Good income within the speciality		0 (0.0%)	7 (8.0%)	4 (4.6%)	0 (0.0%)			
Challenging diagnostic problems		0 (0.0%)	1(1.1%)	0 (0.0%)	0 (0.0%)			
Possession of talent/skills unique to the speciality		2 (2.3%)	9 (10.3%)	4 (4.6%)	0 (0.0%)			
Increased time in completion of post-graduate specialization		1(1.1%)	2 (2.3%)	0 (0.0%)	2 (2.3%)			
Restorative and esthetic dentistry		1(1.1%)	3 (3.4%)	0 (0.0%)	3 (3.4%)			
Endodontics		4 (4.6%)	8 (9.2%)	8 (9.2%)	0 (0.0%)			
Prosthodontics		3 (3.4%)	9 (10.3%)	2 (2.3%)	1(1.1%)			
Orthodontics		5 (5.7%)	1(1.1%)	2 (2.3%)	0 (0.0%)			
What is the specialty you prefer in dentistry? (Choose any one)		Oral and maxillofacial surgery	2 (2.3%)	3 (3.4%)	6 (6.9%)	0 (0.0%)	69.029 (.000)	
		Pediatric dentistry	0 (0.0%)	11(12.6%)	0 (0.0%)	0 (0.0%)		
		Advanced general dentistry	2 (2.3%)	0 (0.0%)	1(1.1%)	0 (0.0%)		
		Periodontics	1(1.1%)	7 (8.0%)	0 (0.0%)	0 (0.0%)		
		Forensic dentistry	1(1.1%)	2 (2.3%)	0 (0.0%)	0 (0.0%)		
	Oral pathology	1(1.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)			

There was a contrast in the study by Puryer et al. (2016) where there was no evidence that parental occupation had an influence on the students' choice of post-graduate specialty as compared to our study. The parent occupation played an important role in choosing the post-graduate specialization in a study by Kazi et al. (2018). The important motivational factors in their study were financial stability and job security, dentistry being a very caring profession, influences of people and family, experiences with other dentists, and job availability. The basis of our respondent's preference to pursue post-graduate education was financial reasons, it is a trend specialization, the number of years required, advice from family or friend and last the parental occupation.

Our study and literature review suggests that there are few post-graduate specialties that are more preferred in comparison to some that are not. It is warranted that the students should be oriented about all the specializations in dentistry which will

help in a targeted approach towards meeting the demand of supplying specialists from all the fields in Dentistry. Encouraging dental students to pursue post-graduation as per the established national policies will help in the improvement of the outcomes in post-graduate education. Time and effort have to be put into guiding the students in choosing from all the available options to pursue a specialty in post-graduation. This will subsequently help the students in planning taking informed decisions on the subject choice to pursue post-graduation. Student preparedness for choosing the post-graduate specialty is very important. Career fairs, guest presentations, student career counseling programs have to be conducted on a regular basis to ensure that the students are clear as to the path they will be choosing.

However, the study has a limitation of being restricted to one private institute in Jeddah. It is suggested that future studies be conducted at including a representative population of dental

interns in the country also including follow-up of the real outcomes compared to the student's perceptions of choosing the post-graduate subjects.

5. Conclusion

The key findings of our study are that the participants want to consider further study after graduation. The subjects of choice to pursue post-graduation are Endodontics, Prosthodontics, Pediatric Dentistry, Oral maxillofacial surgery, Periodontics, Orthodontics, Restorative and esthetic dentistry, Advanced General Dentistry, Forensic Dentistry, and Oral Pathology. The factors that would affect the decision to specialty/general dentistry choices primarily were good income within the specialty, possession of talent/skills unique to the specialty, the cost of living, and the non-availability of the subject of choice. Most of the participants are not sure about pursuing post-graduation in Saudi Arabia or abroad. The opinion of the participants about the course duration in Dentistry was equivocal with the response of reasonable and too long. The participants think that the undergraduate record accurately reflects the effort and ability to do post-graduation.

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Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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