

Dental Post Graduate Educational Programmes Preferences in Pakistan and Factors Affecting it: A Cross Sectional Survey Conducted at Karachi, Pakistan

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Abstract

Background: Attainment of professional education is a dream for both parents and dental students. Professional dental education provides a track by which students can choose their postgraduate program as per the choice and opportunity available.

Objective: The objective of this study was to explore the reasons and preferences of choosing dental post graduate educational programmes among dental students and house officers of Karachi dental colleges.

Study type, settings and duration: This descriptive cross-sectional study was conducted among students and house officers of dental colleges in Karachi, from July 2016 to December 2016.

Methodology: Data was collected on predesigned questionnaire. Inclusion criteria was 3rd and 4th year BDS students and house officers of dental colleges of Karachi. Students were asked for pursuance of postgraduate programs and reason of choosing any specific field. Data was analyzed on SPSS version 20.0.

Results: Out of 246 participants, 46.5% answered to choose postgraduate study because of their personal interest while 11.80% have not decided yet. Total 48.3% of participants choose to pursue Fellowship of College of Physicians and Surgeons (FCPS) while 34% chose in Oral and Maxillofacial Surgery (OMFS) and 19.5% chose Orthodontics as their desirable field to pursue Postgraduate dental education. Personal interest is the major factor of choosing any specialty.

Conclusion: A majority (84%) of study participants desired to get post-graduation, almost half of them wanted to get FCPS degree (48.3%). Majority of participants wants to pursue post-graduation in OMFS and personal interest was the major factor.

Key words: Dental students, Post-graduate education, affecting factors.

Introduction

Dentistry is one of the primary occupation that has proved to be an important pillar in improving the health care sector.^{1,2} For the proper functioning of country's health system, a strong

finance mechanism, a fully trained and highly motivated workforce and reliable data is mandatory on which they can back their policies and decisions to adequately improve the service level, patient satisfaction and decrease the complication rate.³⁻⁵ In Pakistan, more than 2400 dental students graduate from over 40 dental colleges annually. Out of them 810 students graduated from 13 different dental colleges of Karachi.⁶ Pakistan is in the phase of development and many factors may influence and affect the student's choice of postgraduate program. Pakistan's dental education has been largely based on conveying knowledge focused on dental diseases and techniques rather than the needs of the population and the dental workforce. Post-graduation is important as it helps to keep the carrier in long run.^{7,8} Post graduate students have high expectations that the training in any field of specialty will give them immense work exposure as

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MK, AS & NN conceptualized the project & did the drafting, revision & writing of manuscript. MK, AS & did the Data collection. MK, NN & AI performed the literature search. Statistical analysis was done by MK & AS.

well as formulates a strong academic backbone which will be of importance in their clinical practice. They also aims that postgraduate training enables the students to not only treat the disease but also enhances their vision for prevention and early diagnosis of oral pathological lesions.⁹

There has been an exponential growth in the postgraduate programs of dentistry. Advancement in dentistry including the technology and scientific research is significant to maintain a respected practice based patient care profession. Clinical service providers and basic science researchers are two main disciplines of workforce in Pakistan¹⁰ in the field of medicine and dentistry. The clinical specialties in dentistry includes Orthodontics, Endodontic, Oral Maxillofacial Surgery (OMFS), Periodontics, Peadodontics, Restorative dentistry, Prosthodontics while basic science includes Dental Materials, Oral Biology, Community Dentistry and Oral Pathology. There are few less preferable fields although highly needed such as; pediatric dentistry, forensic dentistry, dental public health etc. A study conducted in Agha Khan University Hospital, reported the need of trained and skilled pedodontist in the country.¹¹ It is often assumed that students do not make their career preferences until after they have graduated from dental college.⁷ However, not only graduated dentists, but even dental students in their early years, often have strong preferences for or against some dental fields. Both extrinsic consideration like economic return or privileged status in the society, and intrinsic motivators like desire to pursuit dentistry or clinical experience can be a reason to select the respective post graduate field.¹² Dental educator's play an important role in identifying the post graduate aspiration of incoming dentists and also in nurturing their future goal earlier in there career.

In Pakistan, as a large number of students are now attracted towards dentistry. Studies taking stock of the profile of the students yield important information for the planning of educational policies and strategies, and need of qualifying the faculty in order to solve the issues related to education.¹³ There has been a dearth of dentists in our society since long.¹⁴ Efforts have been made by government to overcome this problem but still more needs to be done. More dental colleges need to be open up to deal with this shortage. As the demand of dental specialists and consultants is very high in our country, there is also lack of interest and fascilities in some domains such as peadodontics, forensic dentistry which cannot be neglected. Although the demand of medical and dental specialists is very high in our country, this situation

gets worse once the graduated drift away from the dental field due to social reasons, lack of interests and finding better paying job abroad or in some other filed.¹⁵ After in depth search of data few local studies were found on the post-graduation preference of dental students. So the objective of this study is to determine the preference of post-graduation field among dental students of Karachi, Pakistan and the reasons which are responsible for choosing the respective field.

The objective of this study was to explore the reasons and preferences of choosing dental post graduate educational programmes among dental students and house officers of Karachi dental colleges.

Methodology

A descriptive cross-sectional study was carried out among 3rd year and 4th years BDS students and house officers of dental colleges in Karachi, Pakistan. The duration of study was 6 months from July 2016 to December 2016. The sample size was 246 participants. The sample size was calculatied by Raosoft software with the confidance level of 95%, margin of error 5%, response distribution of 50% and population size of 677.⁵ The sample was selected through stratified random sampling. Data collection tool was a predesigned questionnaire designed particularly for this study and filled by the third year, final year students and house officers of dental colleges after taking informed verbal consent. The inclusion criteria was 3rd and 4th year BDS students and house officers of dental colleges of Karachi. The exclusion criteria was first and second year students and those who didnot give consent for the study. The participants were asked for pursuing of postgraduation, their field of interest and the reason/s to choose the respective field. Data was entered and analysed on SPSS version 20.0.

Results

The basic demographic details of the participants were summarized in Table-1 which showed that females constitute 83.2% of the sample and approximately 40.5% participants were in the age range of 21 years. Figure-1 shows the percentage of respondents to pursue for the postgraduate education and it revealed that 84.3% wanted to get postgraduate qualification while 11.3% had not decided and 4.4% are not sure about their postgraduate qualification.

Table 1: Demographic details of the participants.

Variables	n (%)
Age of Participants	21 (40.5)
	22 (29.8)
	23 (30.2)
Gender	
Male	48 (16.8)
Female	238 (83.2)

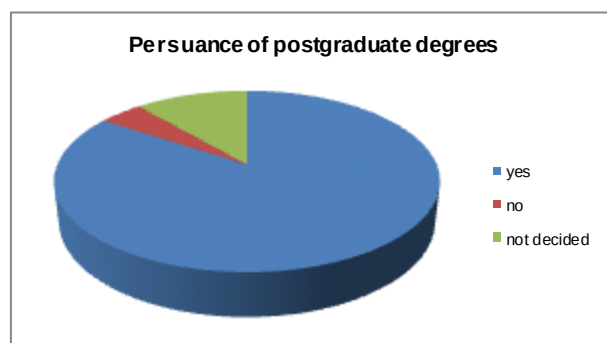


Figure 1: Showing percentage of participants for the pursuance of postgraduate qualification.

Table 2: Reasons for choosing the postgraduate field.

Reason	Percentage of response (%)
Advice from teacher	0.7
Afraid of operative procedure	0.3
Early settlement	2.3
Family background	1.3
For teaching as a hobby	0.5
Influenced by friends	0.3
Intellectual content of specialty	1.0
Job security	1.0
Less competition	0.5
Less hours of practice	1.5
Less investment	1.0
More income	12.3
More scope	8.8
Not interested	3.8
Not decided	11.8
No on call	1.3
Personal interest	46.5
Professional reputation	5.0
Patients satisfaction	0.3

The Table-2 shows different reasons for choosing the postgraduate field. Most of the respondent i.e. 46.5% answered to choose postgraduate study because of their personal interest. The Figure-2 shows that in Pakistan FCPS (48.3%) is the most preferable field of postgraduate programmes in which they would like to pursue as their postgraduate career. While 11.80% of the respondents has not decided the type of postgraduate programme in which they will plan to involve. Figure-3 shows Oral and Maxillofacial surgery (34%) was the most promising field

chosen by the participants followed by Orthodontics (19.5%).

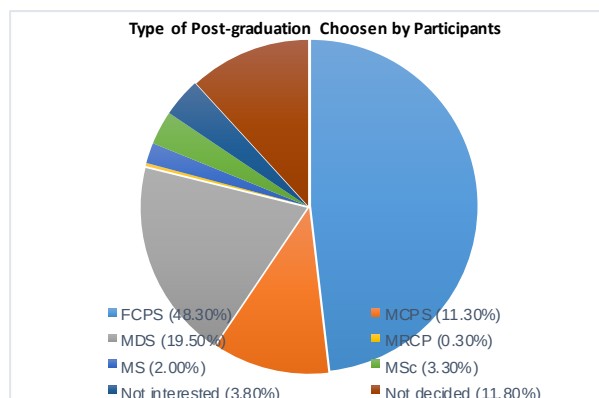


Figure 2: Showing type of post-graduation chosen by participants in Pakistan.

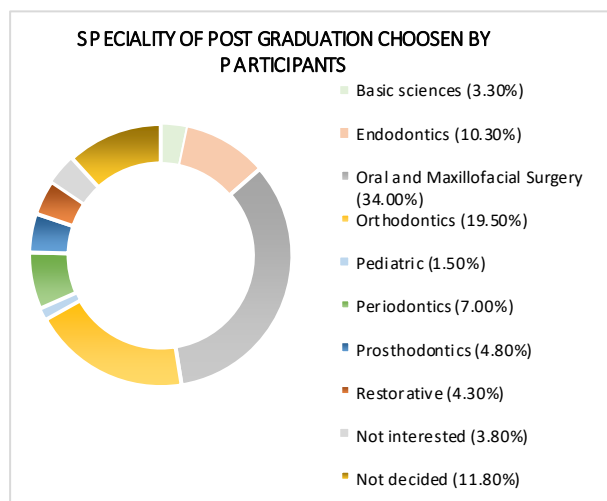


Figure 3: Showing speciality of postgardaution chosen by participants.

Discussion

According to the data collected, the findings demonstrate that majority of the undergraduates are female being 83.4% with male being in minority 14.8%. This reflects that there is a female predominance which lights the fact that there is more enrolment of female students in the field of dentistry as compared to male students. This is similar to the study conducted in 2014 at Lahore which also showed female predominance in their study participants. i.e. 70.5%.¹⁶

Out of the 246 undergraduates, 84.3% students showed interest in post-graduation whereas 11.8% had not decided yet and about 4.4%

were not sure about post-graduation. The reason for most of the students deciding to opt post-graduation is that they have an idea that only a degree of BDS will not suffice them for a suitable job, and that post-graduation and specialization is necessary for a good job and career. While 4.5% of the students don't want to pursue any post-graduation, the answer of which might be unaffordability to take higher studies, or early settlement of especially males who need to earn for their families and do not have enough resources to study more. A note of interest to why some students don't want to acquire post-graduation are some females students which are unable to pursue their education after marriage as this is very common in our country. A postgraduate study conducted in 2012 revealed that 60.4% students from medical profession wanted to pursue postgraduate medical education abroad because of their better financial stability and better standard of living.¹⁷

Keeping aside the 11.8% students who did not decide to do post-graduation or not and the other 4.5% students who didn't want to pursue post-graduation, the remaining 84.3% were asked about the reasons for opting post-graduation. As the undergraduates do not have sufficient knowledge about the specialization fields, so options for choosing post-graduation were put front like; personal interest, professional reputation, more income, more scope, advice from teachers, etc. all of which are stated in table 2. Out of the 84.3% students, majority of the students, i.e. 46.5% undergraduates marked personal interest as their choice for opting post-graduation followed by more income (12.3%), more scope (8.8%), professional reputation (5.0%), early settlement (2.3%), less hours of practice (1.5%), family background (1.3%), no on-call (1.3%), advice from teacher (1.0%), etc. This makes it clear that majority of all the undergraduates believe that bachelors degree alone, is not enough for a dentist's desirable career and that post-graduation is important if want to attain a good and reputable job.¹⁸

The demographic data collected showed that there was preference given to FCPS programme (48.30%) when asked for the type of post-graduation, the undergraduates would like to pursue. Followed by MDS (19.50%), MCPS (11.30%), MSc (3.30%), MS (2.0%) and MRCP (0.30%). Moreover, 11.80% undergraduates hadn't decided yet and about 3.8% were not interested. Figure 1, outlines the types of post-graduate studies and the preference among the dental students for their persuasion. FCPS being the most chosen post graduate education for its importance as a reputable and standard course of Pakistan with a chance of

getting a much more desirable job after doing the course. Interest in academic courses (master's programme) was comparatively less than in post-graduate courses for specialization.

The specialty in post-graduation, as seen in Figure-2, Oral and Maxillofacial Surgery has been a domain of interest with 34% preference amongst the undergraduates followed by Orthodontics (19.50%), Endodontics (10.30%), Periodontics (7.0%), Prosthodontics (4.80%), Restorative (4.30%), Basic Sciences (3.30%) and Pediatrics (1.50%). Whereas, 11.80% have not decided and 3.80% undergraduates are not interested in post-graduation. Oral and Maxillofacial Surgery being the most promising field in Pakistan among the undergraduates for its known popularity in the country and worldwide because of its extensive scope and oral and maxillofacial surgeons being one of the highest paid professionals all around the world.¹⁹ Orthodontists are also well known for their work in our country and also worldwide and accepted as highly paid professionals worldwide. Endodontists are the specialists that perform the root-canal treatments conserve teeth into normal occlusion and health. It has also proven to be a popular field of choice amongst the undergraduates. In a study conducted at Karachi regarding students preferences for career choice in 2017 expressed similar results as our study in which 28% students choose Oral surgery, 22% for Orthodontics and endodontics respectively.¹⁸ However, a study conducted at King Saud University, Riyadh, Saudi Arabia in 2017, revealed that male students choose endodontics and female students choose operative dentistry as their career choices for postgraduate studies in Kingdom of Saudi Arabia.²⁰

Another study conducted at King Saud University revealed that most dental graduates get postgraduate degree in restorative dentistry followed by pediatrics and advanced general dentistry.²¹

The limitation of this study is small sample size and cross sectional design. This study does not cover the choice of basic dental sciences as to be chosen as careers.

However, it is recommended that further studies should be done at national level so that in the light of bigger data policies can be made and further institutes with better training standards can be planned. Moreover, such studies help policy makers in determining the efforts to be directed in areas of requirement. However, there is a dire need of "counseling programs" to create awareness for other academic fields like paedodontics, periodontics and prosthodontics and basic sciences. Research based infrastructure is also important to

develop in order to increase the quality of dental education and clinical practice.

It is recommended that particular changes should be made in the curriculum of highly preferable fields i.e. Oral surgery and Orthodontics so that students will have sturdy foundation of the subjects before opting it as a postgraduate professional education. In addition, academic faculty of the field should develop comprehensive curriculum for the improvement of the speciality. They must also develop valuable evaluation assessment system in order to develop highly cognitive attitude of students.

This study concludes that the desire to pursue post-graduation has greatly been increased among dental students. Clinical specialty especially Oral and Maxillofacial surgery and Orthodontics are the main area of interest. The main factors for selecting the respective field are personal interest and more income.

Conflict of interest: None declared.

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