

Original Article

EXPLORING DENTAL STUDENTS PERCEPTIONS OF CAREER PATHWAYS IN DENTISTRY

Muhammad Khawaja Hammad Uddin¹, Hassan Baber², Ambreen Murtaza³, Muhammad Hamza Khan⁴, Ahmed Babar Dar⁴, Misbah Rehman Malik⁴, Mah Zul Kaif⁵, Bilquees Saba⁶, Ayesha Akram⁷

¹Department of Sciences of Dental Materials, Dr Ishrat Ul Ebad Khan Institute of Oral Health Sciences, Dow University of Health Sciences, Karachi, Pakistan

²Department of Oral Biology, Dow International Dental College, Dow University of Health Sciences, Karachi, Pakistan.

³Department of Oral Pathology, Institute of Dental Sciences, Khyber Medical University, Kohat, Pakistan.

⁴Dow International Dental College, Dow University of Health Sciences, Karachi, Pakistan.

⁵Department of Science of Dental Materials, Baqai Medical University, Karachi, Pakistan.

⁶Department of Medicine & Allied, Ziauddin Medical College, Ziauddin University, Karachi, Pakistan.

⁷Bahria Medical and Dental College, Bahria University of Health Sciences, Karachi, Pakistan.

ABSTRACT

Objectives: Globally students are often confused with respect to their career choices and the future prospects. This cross-sectional study aims to identify these issues among dental students as a cross-sectional survey study.

Materials and Methods: The sample size calculated for the study is 264, and the study was conducted at the Dow University of Health Sciences campuses for the duration of 8 months. Data collected via a custom-made questionnaire were input into SPSS, and chi-square was used to interpret and compare different motivational factors.

Results: The results indicate that 64.7% males and only 47% females had made up their minds regarding their prospects in dentistry; the majority of respondents (35.3% males and 44.1% females) stated they chose dentistry as a way of serving the community. The study also reported the inclination of male respondents to pursue further studies abroad.

Conclusion: This study concluded that most of the participants feel they are in the right place. Personal interest and desire motivated them to choose dentistry, and most want to pursue postgraduate study, particularly overseas, and the majority prefer practising the profession as a private dentist or in state-owned hospitals.

Key words: Career Choice, Career Motivation, Dental Students, Dentistry Specialization, Future Career Plans, Perception.

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INTRODUCTION

Dentistry has become a highly compelling field

Correspondence:

Muhammad Khawaja Hammad Uddin

Assistant Professor

Department of Sciences of Dental Materials, Dr Ishrat Ul Ebad Khan Institute of Oral Health Sciences, Dow University of Health Sciences, Karachi, Pakistan

Email: khawaja.hammad@duhs.edu.pk

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of study as it combines health sciences, patient care, and technological advancements in healthcare. Research on motivations for choosing dentistry as a career highlights several recurring factors, including job security, potential income, career flexibility, and the desire to contribute positively to patients' lives. Literature addresses the challenges faced by dental students and professionals, such as the cost of education and stress management. This study focuses on understanding on motivations, challenges, and

perceptions surrounding a career in dentistry.

Several studies have investigated the motivations for pursuing a career in dentistry. According to a study by Kabil et al., students often cite factors such as a stable income and job security as primary motivators¹. It provides a mix of intellectual challenge and manual dexterity, which appeals to students seeking a balance between science and practical skills². Dental programs are known for their high costs, demanding schedules, mental and physical challenges and high academic expectations, which lead to stress and burnout³. Dentistry offers diverse opportunities for specialization, like Orthodontics, Oral surgery, and Pediatric dentistry. Studies show that availability of these specializations can be a major draw for students, allowing them to tailor their careers to specific interests⁴. Advancements in technology and dentistry's evolving role in public health influences career choices. The integration of digital technologies (3D imaging and computer-assisted design) provides a dynamic field where innovation continuously reshapes practice. Studies like those by Inglehart and Stefanac (2014) suggest that this technological integration improves patient outcomes and appeals to tech-savvy individuals⁵.

The aims and objectives of study:

- To assess how much time dental students require for deciding regarding their future in dentistry.
- To assess which specialization is more popular among dental students and why.
- To assess what percentage of students want to specialize in their desired fields and what percentage of students plan to start practice right after Bachelors of Dental Surgery (BDS) degree.

MATERIALS AND METHODS

Sample size for this study was calculated using sample size calculator Open Epi with population size derived from the study setting of Dow University of Health Sciences campuses for the duration of 8 months as 850. We kept 5% standard error of mean, keeping 95% confidence interval. The anticipated sample size came out as n=264. The questionnaire made in light of existing literature and approved by two dental consultants, comprised of 13 questions divided across three sections. After ethical approval (KMU/IPDM/IEC/202561) from the Institutional Ethical Committee, data was collected by sharing the

questionnaire in different social media groups of the institution. Data was analyzed through IBM SPSS version 26.0. Responses were compared through bar graphs. Association of clarity about future path with year of study was computed through Pearson's Chi squared test.

Dental students of all years and house officers from multiple institutions of DUHS, Karachi were included in the study. Students from any field other than dentistry and outside Karachi were excluded.

RESULT

64.7 % males were certain regarding their future in dentistry while only 47% of females were certain. Participants from one campus showed a higher degree of certainty. A great proportion of House officers, i.e. 58.1% seemed most certain. First year students reported not being satisfied, while all others reported satisfaction.

Regarding motivation, 35.3% males and 44.1% females chose personal interest and desire to serve community, followed by flexible working hours by 21.6% males and 27.2% females; both were opted by females more. Influence of family members was least selected option among females at only 4.7% while among males, the least selected option was society acceptance at 7.8%. Regarding their future, most females (39.4%), wanted to pursue master's degree and most males (39.2%) wanted to practice dentistry outside Pakistan. Lectureship was least selected option, with interest only from 3rd year students. Regarding specialization, Oral Surgery was most popular among all years and both males and females. Followed by Restorative Dentistry, mainly selected by house officers (29%). A high proportion of 1st year students (35.7%) were unsure followed by 2nd year students at 34%.

Most participants reported uncertainty when asked if their plans would be subject to change in future with the highest percentage i.e. 66% of 2nd year students. House officers were most certain regarding their future plans at 19.4%. Lack of career guidance was most common reason for cluelessness about a future in dentistry with the greatest percentage (64.7%) of 4th year students. Among those that don't want to choose clinic practice in future, majority were unsure of the reason with the greatest percentage i.e. 68.9% of 3rd year students

choosing this option, poor clinical conditions were the second most common reason, selected mainly by house officers (25.8%). Difficulty in handling clinical work was reported by 10.3% females and 5.9% males and mostly chosen by 3rd year students (11.1%). Competitive environment was reported by 33.3% females and 23.5% males. Society/family pressure was selected by 11.8% males and 3.8% females and was mostly selected by house officers (6.5%). Losing interest in dentistry was least popular reason. The most appealing work environment was Private Practice selected by 39.2% males and 29.1% females while 31% females preferred Government hospital. Private practice was most common among 2nd year (38.0%). Government hospital was mostly

preferred by 3rd year students at 39.2%.

DISCUSSION

Sonkar et al in his study on students of Switzerland stated that majority prefer private practice after graduation as it offers flexibility and financial freedom. This is in line with our study where majority of participants especially males preferred private practice after graduation. One study on Turkish dental students also reported similar findings as fresh graduates and students preferred private practice. However, a study among Brazilian students reported that specializing after graduation was the preferred option⁶⁻⁸. These differences can be attributed to professional status, security of job, flexible hours

Table 1: Demonstrates participants response with respect to their gender

		Male	Female
Have you made up your mind regarding future prospects?	Yes	64.7%	47%
	No	15.7%	22%
	May be	19.6%	31%
Do you feel you are in the right place?	Yes	82%	70%
	No	4%	5%
	May be	13.7%	25%
What motivated you to pursue a career in dentistry?	Personal interest & desire to serve the community	35.3%	44.1%
	Flexible working hours	21.6%	27.2%
	Financial stability	23.5%	15.0%
	Influence of family members	11.8%	4.7%
	Society acceptance	7.8%	8.9%
What are your future plans regarding dentistry?	Overseas career as a dentist	39.2%	28.2%
	Clinical practice	19.6%	22.5%
	Master's degree	31.4%	39.4%
	Gov job as a dentist	7.8%	9.9%
	Lectureship	2.0%	0.0%
If you want to do specialization, which field are you most inclined towards?	Restorative dentistry	23.5%	15.0%
	Orthodontics	11.8%	8.9%
	Oral Surgery	52.9%	38.5%
	Periodontics	2.0%	1.4%
	Prosthodontics	2.0%	1.4%
	Not sure yet	7.8%	34.7%
Are your plans bound to changes?	Yes	33.3%	29.1%
	No	17.6%	13.6%
	May be	49%	57.3%
Which environment would you prefer working in?	Government hospital	35.3%	31%
	Private clinic	39.2%	29.1%
	Private University hospital	9.8%	19.2%
	I am not sure	15.7%	20.7%

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and career independence. The reasons differ from country to country. Dhima et al stated main reason altering the choice is career and personal gratification. An Indian study reported freedom of working hours as main reason. Another factor influencing career choices is family members or friends in dentistry, which aligns with our findings⁹⁻¹¹. However, in our study, most students (73%) were self-motivated to study dentistry. Yolov (1986) conducted a professional satisfaction survey and found that majority (83.5%) chose dentistry on their own while remainder (16.5%) were influenced by relatives or their exam score was not high enough for their first choice (medicine or pharmacy). Majority dissatisfied dentists were influenced by relatives or who were not practicing their preferred profession¹².

The decision making about future career requires sufficient time for understanding priorities and consequences related to the profession. Majority (75%) of Bulgarian students made the decision in high school¹³. A paper by ADEA on dental trends reported that in US a small number of dental graduates opt for faculty positions while most choose private practice and post-graduation. Studies have reported that dental graduates in general are not trained to teach and are unfamiliar with careers in academia and as a result fail to make an informed decision about careers^{14,15}.

Identifying obstacles that discourage dental students from choosing a career in academia can provide valuable insights into how educators and

Table 2: Awareness LASER in endodontic disinfection among dental practitioners (n=159)

		1st Y	2nd Y	3rd Y	4th Y	House Officer
Have you made up your mind regarding future prospects?	Yes	50.0%	42%	44.4%	54.9%	58.1%
	No	21.4%	20%	33.3%	17.6%	14.5%
	Maybe	28.6%	38%	22.2%	27.5%	27.4%
Do you feel you are in the right place?	Yes	21.5%	70%	68.9%	82.4%	67.7%
	No	7.7%	8%	4.4%	2%	8.1%
	Maybe	23.3%	22%	26.7%	15.7%	24.2%
What motivated you to pursue a career in dentistry	Personal interest & desire to serve the community	39.3%	32%	55.6%	37.3%	48.4%
	Flexible working hours	21.4%	32%	24.4%	25.5%	27.4%
	Financial stability	30.4%	12%	11.1%	15.7%	12.9%
	Influence of family members	1.8%	10%	0%	11.8%	6.5%
	Society acceptance	7.1%	14%	8.9%	9.8%	4.8%
What are your future plans regarding dentistry?	Overseas career as a dentist	26.8%	32%	24.4%	39.2%	29%
	Clinical practice	19.6%	20%	20%	23.5%	25.8%
	Master's degree	48.2%	34%	37.8%	29.4%	38.7%
	Gov job as a dentist	5.4%	14%	15.6%	7.8%	6.5%
	Lectureship	0%	0%	2.2%	0%	0%
If you want to do specialization, which field toward are you most inclined?	Restorative dentistry	7.1%	6%	20%	19.6%	29%
	Orthodontics	5.4%	16%	6.7%	5.9%	12.9%
	Oral Surgery	48.2%	44%	40%	39.2%	35.5%
	Periodontics	1.8%	0%	2.2%	3.9%	0%
	Prosthodontics	1.8%	0%	0%	3.9%	1.6%
	Not sure yet	35.7%	34%	31.1%	27.5	21%
Are your plans bound to changes?	Yes	30.4%	24%	28.9%	37.3%	29%
	No	16.1%	10%	13.3%	11.8%	19.4%
	May be	53.6%	66%	57.8%	51%	51.6%
Which environment would you prefer working in?	Government hospital	25.0%	18.0%	37.8%	39.2%	38.7%
	Private clinic	19.6%	38.0%	35.6%	27.5%	35.5%
	Private University hospital	30.4%	14.0%	8.9%	15.7%	16.1%
	I am not sure	25.0%	30.0%	17.8%	17.6%	9.7%

Table 3: Demonstrates participants reasoning for future uncertainty and not choosing clinical practice.

		Male	Female	1st Y	2nd Y	3rd Y	4th Y	House Officer
Reason for you not being able to decide what to do after getting your degree in BDS?	Lack of career guidance/counselling	56.9%	57.3%	62.5%	46%	51.1%	64.7%	59.7%
	Competitive environment	23.5%	33.3%	30.4%	32%	44.4%	21.6%	30.6%
	Stepping into dentistry because of society or family pressure	11.8%	3.8%	5.4%	6.0%	2.2%	5.9%	6.5%
	Losing interest in dentistry gradually	7.8%	5.6%	1.8%	16%	2.2%	7.8%	3.2%
What may be the reason for you not choosing clinical practice?	Poor clinical conditions	21.6%	21.6%	25%	14%	17.8%	23.5%	25.8%
	Lack of confidence	5.9%	7.0%	8.9%	10%	2.2%	9.8%	3.2%
	Difficulty in practical/handling work	5.9%	10.3%	7.1%	12%	11.1%	9.8%	8.1%
	I'm not sure	66.7%	61%	58.9%	64%	68.9%	56.9%	62.9%

policymakers can enhance dental education and improve faculty recruitment and retention. In a related study, Karibe et al. examined dental students' attitudes toward career choices and dental education across three countries: Canada, Thailand, and Japan. He reported majority graduates from these countries chose dental practice as their career choice, 3% chose teaching, and similar to our study majority participants chose private practice¹⁶. In Pakistan, this can be attributed to higher number of dentists against faculty positions and limited vacancies. Furthermore, number of dentists against country population is low so a practicing dentist will be advantageous for local community^{17,18}.

A study by as a Berkant Sezar et al on students' motivation of choosing dentistry profession reported that female participants' main reason for choosing dental profession was helping people while males stated "Being my own boss" as main reason¹⁹. This is in line with our study where 44% females stated desire to serve the community as main reason of pursuing dentistry. Furthermore, the study reported post-graduation a compulsory component after BDS. Participants stated it takes time to acquire practical skills and increasing number of dentists and dental institutes is a threat¹⁹. Similarly, our study reported female participants (39.4%) believe a master's degree is essential after BDS. The threat of increase in number of dentists and institutes can be due to saturation of dentists, promoting competition. A study in Saudi Arabia reported females did not choose post-graduate study due to family responsibilities.

This is contrary to western countries where women have more independent lifestyle²⁰. It further reported participants' reason for choosing dentistry was ease of acquiring job, flexible working hours and better salary compared to similar professions. This is in line with Du Toit's study which reported job security, flexibility of working hours and money as some of the main reasons for choosing dentistry²¹. In our study, low number of participants chose money as a factor for choosing dentistry and many studies state that flexible working hours is one of the main reasons for choosing dentistry in Pakistan.

Berkant sezar et al¹⁹ reported that while choosing specialty, most participants chose Oral surgery and Orthodontics. This is in line with studies by Tanalp et al and Hatipoglu et al^{22,23}. In our study, Oral surgery was preferred by participants for specialization and orthodontics was preferred much less than other similar studies reported here. Instead, operative dentistry was the second most preferred option in our study. This can be explained by the fact that as a developing country majority patients are from lower and middle class and Orthodontic treatment is considered most expensive. Patients address their issues only when they have pain and want to eliminate^{24,25}.

CONCLUSION

This study concludes that most of the participants stated they chose their career path and feel they are in the right place. Personal interest and desire motivated them to pursue dentistry. Many want to pursue post-graduate study particularly overseas,

and majority prefer practicing the profession as a private dentist or in state owned hospitals. Further cross-cultural studies including both longitudinal and cross sectional, using validated questionnaires will provide a larger perspective on this topic.

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CONFLICT OF INTEREST
Authors declare no conflict of interest.
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AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design: MKHU, HB, AM, MHK
Acquisition, Analysis or Interpretation of Data: ABD, MRM, MZK
Manuscript Writing & Approval: BS, AK ABD, MKHU

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



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