



COMPARATIVE CAREER CONTENTMENT: A NATIONWIDE EXPLORATION OF DENTAL PROFESSIONALS' SATISFACTION ACROSS CAREER STAGES IN PAKISTAN

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Abstract

Career satisfaction pertains to the level of contentment and fulfillment a dentist experiences in their job, encompassing various factors like job responsibilities, relationships with colleagues and supervisors, and workplace policies. This study aimed to fill a research gap by assessing the satisfaction of dental professionals at different career stages in Pakistan, a low-income country. It also explored the connection between career satisfaction and factors such as gender discrimination, provincial background, highest education level, and practice type. This cross-sectional study involved 566 dental professionals from various provinces in Pakistan. A modified Dentist Satisfaction Survey (DSS) form was distributed electronically. Statistical tests like Mann–Whitney U and Kruskal–Wallis were used to compare satisfaction scores among the variables being investigated. The median total career satisfaction score was 117.0 out of 190, indicating an overall professional satisfaction rating of 3.14 on a 5.0 scale. Dentists with 6-10 years of practice experience tended to have higher career satisfaction scores, while those in the late stages of their careers reported the highest overall professional satisfaction. Significant associations were also found between total career scores, overall professional satisfaction, and factors such as gender, education level, provincial background, and working sector. This study emphasizes the importance of career satisfaction in both attracting and retaining dentists in the field. It underscores the need for career guidance and counseling services to support individuals considering dentistry as a profession.

Keywords: Pakistan, career-satisfaction, dental professionals, dentist satisfaction survey, comparative analysis, nationwide survey

Introduction:

Dental healthcare plays a pivotal role in maintaining overall well-being, and dental practitioners are at the forefront of ensuring oral health in Pakistan. Professional satisfaction among dentists is crucial not only for their individual well-being but also for the quality of dental care provided to the population. This study aims to examine the levels of professional satisfaction among dental professionals across various phases of their careers and identify the factors contributing to their contentment or dissatisfaction. Career satisfaction in the field of dentistry refers to the contentment and fulfillment that dentists experience in their profession.^{1,2,3} It encompasses their satisfaction with aspects such as job description, colleagues, supervisors, and workplace.^{1,2,3} Factors such as a competitive salary, opportunities for career growth, job security, and a healthy work-life balance also contribute to professional satisfaction.^{1,2,3} It is closely intertwined with personal life gratification, since both mutually influence an individual's happiness, well-being, and their interactions in both work and social settings.^{1,2,3} There are numerous studies on the professional satisfaction of dentists in many countries.^{5,6,7,8} In-depth literature probing revealed that dentists from high-income countries generally exhibit moderate to high job satisfaction levels, with specialists reporting higher satisfaction than general dentists.⁴ Key factors influencing satisfaction are patient relationships, respect received from their profession, delivery of patient care, auxiliary staff, and working environment.⁴ Conversely, parameters such as personal time, stress and burnout, insufficient compensation, practice management, and professional time are associated with low satisfaction.⁴

Developing countries especially South Asian countries are experiencing the phenomenon of brain drain. It refers to the migration of skilled professionals including healthcare professionals to developed countries across the globe to seek better living standards, improved quality of life, higher salaries and gain an access to advanced technology.⁹ As highlighted in the study based on 24 Labor-Exporting Countries, World Bank report(2003) shows that among 165,425 Pakistani immigrants to USA, 110,430 had tertiary level of education, mirroring the image that healthcare personnel within our country are not happy with their quality of life.⁹ Therefore, it is imperative to periodically evaluate the level of career satisfaction of prestigious occupations including dentistry and identify the specific challenges within the local context. This survey primarily aimed to evaluate the level of professional satisfaction among dentists at different stages of their careers (early, middle, and late-career) in Pakistan. The secondary objectives were to check the association of their satisfaction levels in terms of gender disparity, provincial background, practicing sector (government, private, and personal clinics) and qualification.

Materials and Methods:

Study Design

This cross-sectional study was carried out among the dental fraternity residing in Pakistan through the forum of Bahria University Dental College, Karachi, during the period of November 2020 to July 2021. Prior to the commencement of the study, informed consent was obtained from all individuals who participated in the research. To ensure confidentiality and protect the privacy of the participants, their responses were kept anonymous. Formal ethical approval was obtained from the Ethical Review Committee at Bahria University Dental College, in accordance with the principles outlined in the Declaration of Helsinki. The approval number assigned to this study was ERC 56/2020. The inclusion criteria comprised of registered Pakistani dentists possessing permanent Pakistan Medical Council (PMC) license whereas the temporary license holders, non-consenting individuals, non-relevant study population or those currently residing outside of Pakistan were excluded from the survey to ensure the validity of the study. This study will employ a nationwide survey approach to gather data from dental professionals across Pakistan. The sample will include dental students, recent graduates, early-career dentists, mid-career dentists, and experienced practitioners. The survey questionnaire will cover a range of topics, including work-life balance, job security, income, patient interaction, professional development, and overall career satisfaction.

Sample Size

The sample size for this study was initially determined through Open Epi calculator as 374, which was based on a 50% prevalence rate. Since the total number of registered dentists in Pakistan is 12856, a multistage cluster sampling technique was used to ensure equal representation of all provinces.¹⁰ The first stage involved identifying central locations of practicing Pakistani dentists using social media. In the second stage, the total number of dentists registered in each province was determined, with 8665 (67%) in Punjab, 3195 (25%) in Sindh, 595 (5%) in KPK, and 401 (3%) in Baluchistan. In the third stage, the sample of 374 was divided into proportional sub-samples for each province: 250 (67%) from Punjab, 94 (25%) from Sindh, 19 (5%) from KPK, and 11 (3%) from Baluchistan, ensuring that each province was equally represented in the survey. However, in order to get the maximum response rate, the research tool was intentionally sent to the greater number of participants than the required sample size.

Survey Instrument

The Dentist Satisfaction Survey (DDS) questionnaire was slightly modified to reflect the language and cultural context of Pakistan, taking into account the differences from the original version used in the United States.^{1,11}

The questionnaire consisted of two main parts. The first part intended to collect demographic data such as age, gender, practicing experience, provincial background, working sector, graduation year, and qualification while the second part included 37 closed-ended questions that focused on factors affecting career satisfaction, such as auxiliary staff, income, professional relationships, professional environment, professional time, delivery of care, respect and overall satisfaction. Participants were asked to rate their agreement with each statement using a 5-point Likert scale, ranging from 1 representing "strongly disagree," 2 "disagree," 3 "slightly disagree," 4 "slightly agree," 5 "agree" and 6 "strongly agree." Professional satisfaction was categorized into low (1.0-2.5), moderate (>2.5 but <3.5), high 3.5-5.0 while years of practicing experience was grouped into three career stages namely: early career stage(< 5 years), middle career stage (6-10 years) and late career stage(>10 years).¹ A pilot survey was conducted to assess its reliability of the modified questionnaire. Thus, a pilot survey was conducted on 20 participants that revealed a strong intra-class correlation of 0.71. To facilitate data collection, the proforma was converted to online version using Google forms. The link to the online form was then shared with potential participants, allowing them to complete the survey forms electronically.

Statistical Analysis

Statistical Package for the social sciences (SPSS 22.0) version was used for statistical analysis. Descriptive and inferential analysis was conducted to assess the collected data. Since the collected data did not pass a normality test, nonparametric Mann-Whitney U and Kruskal-Wallis tests were used to compare mean rank differences in satisfaction scores across the variables under investigation.

Results:

Out of the 600 digitally shared links, 580 responses were retrieved with a response rate of 96.6%. However, 14 questionnaires were incomplete and hence, were discarded from the analysis. The total of 566 responses, 134 (23.7%) and 432 (76.3%) were male and female respectively. The mean age of the participants was 33.7 ± 7.4 year. While exploring their ethnic background, 256 dentists belonged to Punjab province, 226 had the parental origin of Sindh, 66 and 18 were the residents of Khyber Pakhtunkhwa (KPK) and Balochistan respectively. Regarding their working status and the type of setup they are in association, 120 were unemployed, 83 and 130 were jobholders in government and private sector respectively. Furthermore, 92 reported owning their personal dental setups. In addition to this, there were 25 dental professionals who were engaged in both government employment and owned their personal setups too. Similarly, 116 participants were hired in private organizations while possessing their personal setup as their additional practice arena. In terms of their working experience, 390 fell in the category of their early stage of practice, 76 and 100 were in their middle and late career stages. The median of total career score was 117.0 out of 190, with interquartile range of 18.0. However, the overall mean professional satisfaction was 3.14 out of 5.0.

While correlating the total career score and overall professional satisfaction with respect to gender discrimination, males had higher mean rank values 329.07 and 345.60 as compared to females who had 269.37 and 264.24 ($p=0.000$) ($p=0.000$), respectively. Male dentists reported a higher mean rank in their earnings (333.56) professional time (331.86), delivery of care (318.78), personal time (316.26), professional environment (308.28), respect (324.99), as compared to their female counterparts, indicating potential gender-based disparities. (Table 1)

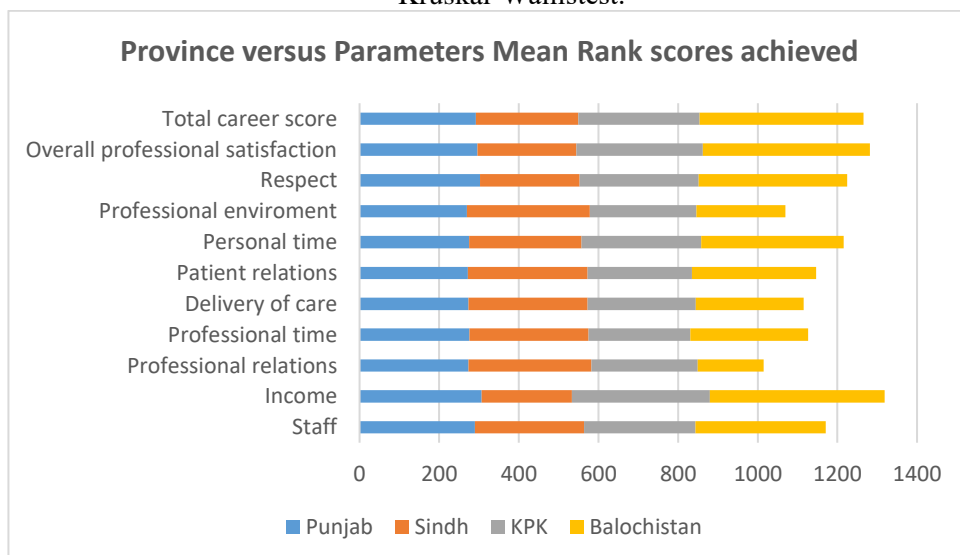
Upon conducting an in-depth analysis of total career scores in relation to their practicing tenure, it was found that dentists in their middle career years had a higher mean rank value (313.39), followed by those who were in their late stage (308.58) and early stages of their practicing years (271.24) ($p=0.029$). The dentists highlighted that income, professional relationships, professional time, personal time, and working environment played significant roles in this regard ($p=0.000, 0.022, 0.036, 0.002, 0.002$). Contrary to this, in terms of professional satisfaction, dentists in their late career stage exhibited a higher mean rank value of professional satisfaction (357.02) as compared to those who were in their middle (321.84) and early stages (257.18) ($p=0.000$). (Table 2)

In regard to the total career score and overall professional satisfaction based on their provincial background, Balochistan exhibited higher mean rank values of 419.28 and 411.28, respectively, followed by KPK with values of 317.68 and 304.74 ($p=0.000$). Income generated, interpersonal relationships, working environment, and respect were identified as significant factors influencing this satisfaction ($p=0.000, 0.001, 0.014, 0.000$). (Graph 1)

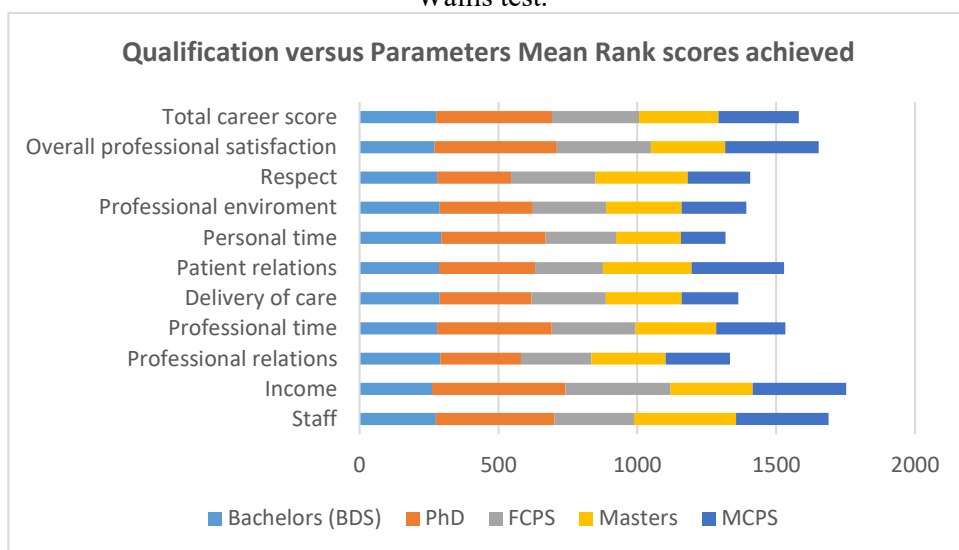
While analyzing the association of practicing type with total career scores and professional satisfaction, the significant variation noted among all working statuses with Government employees were at the top of mean career scores (328.92) and professional satisfaction (331.60) while unemployed ones had the least mean values of career scores (232.220) and professional satisfaction (191.90). The factors of income, professional time, and working environment emerged as key contributors to the perceived satisfaction, with statistically significant impacts ($p=0.000, 0.036, 0.044$). (Table 3)

The association of total career score and overall professional satisfaction with the acquired qualification, PHD holders exhibited higher mean rank values of 417.50 and 440.0 respectively, followed by FCPS with values of 313.45 and 339.35. The dimensions of salary packages, auxiliary staff and patient relations were positively affect the satisfaction status ($p=0.000, 0.003, 0.002$). (Graph 2)

Graph 1: “Comparison between dentists’ provincial backgrounds with career satisfaction variables using Kruskal-Wallis test.”



Graph 2: “Association between dentists' qualifications and career satisfaction variables using the Kruskal-Wallis test.”



	GENDER	N	Mean Rank	Sum of Ranks	Sig
Staff	Male	134	288.59	38671.00	.675
	Female	432	281.92	121790.00	
	Total	566			
Income	Male	134	333.56	44697.00	.000
	Female	432	267.97	115764.00	
	Total	566			
Professional Relations	Male	134	291.17	39017.00	.526
	Female	432	281.12	121444.00	
	Total	566			
Professional Time	Male	134	331.86	44469.00	.000
	Female	432	268.50	115992.00	
	Total	566			
Delivery of Care	Male	134	318.78	42717.00	.004
	Female	432	272.56	117744.00	
	Total	566			
Patient Relations	Male	134	291.72	39091.00	.502
	Female	432	280.95	121370.00	
	Total	566			
Personal Time	Male	134	316.26	42379.00	.007
	Female	432	273.34	118082.00	
	Total	566			
Professional Enviroment	Male	134	308.28	41309.00	.042
	Female	432	275.81	119152.00	
	Total	566			
Respect	Male	134	324.99	43549.00	.001
	Female	432	270.63	116912.00	
	Total	566			
Overall Professional Satisfaction	Male	134	329.07	44095.00	.000
	Female	432	269.37	116366.00	
	Total	566			
Total Career Score	Male	134	345.60	46311.00	.000
	Female	432	264.24	114150.00	
	Total	566			

Table 1: “Comparison of rank mean values for various career dimensions by gender using Mann Whitney test.”

	Experience	N	Mean Rank	Sig
Staff	Early	390	281.02	.066
	middle	76	257.47	
	Late	100	312.94	
	Total	566		
Income	Early	390	259.30	.000
	middle	76	309.68	
	Late	100	357.98	
	Total	566		
Professional Relations	Early	390	297.68	.022
	middle	76	273.37	
	Late	100	235.88	
	Total	566		
Professional Time	Early	390	271.73	.036
	middle	76	314.18	
	Late	100	306.10	
	Total	566		
Delivery of Care	Early	390	285.61	.898
	middle	76	279.05	
	Late	100	278.64	
	Total	566		
Patient Relations	Early	390	278.65	.554
	middle	76	290.79	
	Late	100	296.88	
	Total	566		
Personal Time	Early	390	299.36	.002
	middle	76	254.03	
	Late	100	244.06	
	Total	566		
Professional Environment	Early	390	296.97	.002
	middle	76	282.39	
	Late	100	231.82	
	Total	566		
Respect	Early	390	276.51	.306
	middle	76	301.76	
	Late	100	296.90	
	Total	566		
Overall Professional Satisfaction	Early	390	257.18	.000
	middle	76	321.84	
	Late	100	357.02	
	Total	566		
Total Career Score	Early	390	271.24	.029
	middle	76	313.39	
	Late	100	308.58	
	Total	566		

Table 2: “Association of rank mean scores for different professional factors based on experience levels using Kruskal-Wallis test.”

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	Setup	N	Mean Rank	Sig
Staff	Not Working	120	263.75	.348
	Government Setup	83	269.42	
	Private Setup	130	282.27	
	Personal Setup	92	308.14	
	government and personal	25	312.66	
	private and personal setup	116	289.56	
Income	Total	566		.000
	Not Working	120	239.18	
	Government Setup	83	366.16	
	Private Setup	130	285.86	
	Personal Setup	92	269.76	
	government and personal	25	381.26	
Professional relations	private and personal setup	116	257.38	.348
	Total	566		
	Not Working	120	288.10	
	Government Setup	83	271.83	
	Private Setup	130	288.03	
	Personal Setup	92	263.25	
Professional time	government and personal	25	341.42	.036
	private and personal setup	116	285.59	
	Total	566		
	Not Working	120	306.90	
	Government Setup	83	277.97	
	Private Setup	130	256.24	
Delivery of care	Personal Setup	92	319.07	.854
	government and personal	25	257.54	
	private and personal setup	116	271.19	
	Total	566		
	Not Working	120	272.95	
	Government Setup	83	278.02	
Patient relations	Private Setup	130	278.45	.934
	Personal Setup	92	300.84	
	government and personal	25	287.30	
	private and personal setup	116	289.42	
	Total	566		
	Not Working	120	277.58	
Personal time	Government Setup	83	299.62	.149
	Private Setup	130	279.91	
	Personal Setup	92	276.35	
	government and personal	25	282.74	
	private and personal setup	116	287.95	
	Total	566		
Professional environment	Not Working	120	301.25	.044
	Government Setup	83	297.46	
	Private Setup	130	268.55	
	Personal Setup	92	304.43	
	government and personal	25	280.78	
	private and personal setup	116	255.88	
Respect	Total	566		.060
	Not Working	120	316.02	
	Government Setup	83	292.95	
	Private Setup	130	262.11	
	Personal Setup	92	297.36	
	government and personal	25	283.14	
Overall professional satisfaction	private and personal setup	116	256.16	.000
	Total	566		
	Not Working	120	257.02	
	Government Setup	83	290.55	
	Private Setup	130	293.31	
	Personal Setup	92	319.27	
Total career score	government and personal	25	236.38	.000
	private and personal setup	116	276.65	
	Total	566		
	Not Working	120	191.90	
	Government Setup	83	331.60	
	Private Setup	130	327.84	
	Personal Setup	92	299.72	.000
	government and personal	25	265.90	
	private and personal setup	116	285.09	
	Total	566		
	Not Working	120	232.22	
	Government Setup	83	328.92	
	Private Setup	130	296.84	.000
	Personal Setup	92	311.14	
	government and personal	25	271.98	
	private and personal setup	116	269.66	
	Total	566		

Table 3: “Correlation between practice types and professional satisfaction variables using Kruskal-Wallis test.”

Discussion:

To confront the growing trend among Pakistani dentists transitioning to alternative careers or pursuing opportunities abroad (commonly referred to as the "Brain drain") and to fill the research gap that states that there is a need to assess career satisfaction and its determinants in low-income regions (Africa, Southern Europe, and Central, Southern, and Southeastern Asia),^{9,12} this research work was carried out to assess the professional satisfaction at different stages of dental career and to investigate the various socio-demographic factors impacting this well-being.

To improve the statistical power of the study, the decision was made to analyze the responses of 520 dentists, surpassing the originally calculated sample size of 374. This larger sample size allowed us for a more comprehensive representation of the target population, increasing the generalizability of the study findings.¹³ To evaluate Dentist Job Satisfaction (DJS), Dentist Satisfaction Survey (DSS), which was introduced by Shugars et al in 1990, was employed.¹¹ The DSS has been widely regarded as a comprehensive instrument for assessing DJS. However, minor modifications of the DSS was done to cater to specific socio-culture conditions of Pakistani community.¹¹

The majority of participants exhibited a neutral attitude towards professional satisfaction, with overall reasonable and satisfying career score values. Professional time, dentist-patient relationship and received respect were ruled out to be more satisfying facets of job while working environment, inter-personal relations and personal time were the most bothersome issues for the Pakistani dental community. These findings were in close alignment with a survey held among Indian dentists who also reported higher job satisfaction in terms of autonomy, resources and relationships with staff, patients and colleagues, and lower for personal time, compensation and administrative duties.¹⁴ Another study conducted at a Metropolitan dental hospital of upper-middle-income country, where Chinese dentists also reported a neutral attitude (3.18 out of 5.0) towards professional satisfaction, with a mean career score of 123.17.¹ However, the survey done in South Korea, Sweden and Denmark revealed overall neutral or satisfied perception towards dentistry based on the total career score, but there was significant variability noted in satisfaction levels.^{7,15}

The present survey revealed that male dentists were more professionally satisfied with their profession with greater career scores as compared to the females based on the job parameters of their total earned income, opportunities of career advancement, working environment, and respect received, and the delivery of dental treatment while enjoying their optimal personal time as well. A closely related survey from Pakistan and Saudi Arabia also revealed the same outcome that female medical and dental under graduates showed a significant predilection to stress and anxiety than males.^{16,17} However, this is in contradiction with the research work by Cui X et al and Luzzi L who reported that young female dentists having less than 40 working hours per week were more having peace of mind with their profession as compared to their counterparts.¹⁵ An investigation by Molina-Hernández J et al showed no gender discrimination in perception of well being at work place.¹⁸ This may be attributed to the societal and cultural expectations that place greater emphasis on women prioritizing their family responsibilities over their professional pursuits or these differences in stress levels can be partially explained by the gender role theory stating that women are more likely to openly express their work-related fatigue and burden, while men tend to suppress their emotions.^{14,18}

Although the higher career scores were observed for the practice tenure of 5-10 years mainly because of monthly wages, professional relationships, career advancement opportunities, leisure time, and working environment factors, but the overall professional satisfaction was noted in dentists having practicing years above 10 years. This is in consistent with the several studies that indicated that there is a positive correlation between the professional satisfactions with career advancement.^{5,6,18,19} But the study in China negates the above finding by exploring better satisfaction rating among young dentists.¹ The observed trend in the present study may be attributed to the fact that younger dentists, who are in the process of establishing their practice, often encounter substantial career demands and pressures. In contrast, older dentists, already established in their careers, exhibit greater resilience and are less vulnerable to these stresses. Additionally, generational differences may shape how dentists prioritize work, family, and leisure aspects of their lives.

Furthermore, the present study showed the raised total career scores and overall professional satisfaction observed among government employees in Balochistan and KPK Provinces, majorly due to their salary packages, the appealing working conditions with due regard and honour received from their patients and fellow dentists. This contradicts with the study did by Kobza j et al who reported better satisfaction ratings among private practitioners of large cities due to higher wages and bonuses than the public sector dentists.²⁰ Moreover, private sector dentists had greater autonomy and comfort in their environment.²⁰ Contrasting findings were also reported in the professional survey held in Australia, Sweden, Denmark and U.K where the limited funds in the public sector restrict resources and treatment options to be executed unanimately.^{5,15,21} Luzzi L et al stated that public sector dentists reported low mean job satisfaction scores with greater stress and burnout complains on the grounds of autonomy, relationships with patients, relationships with staff and community, compensation and resources.²² The job satisfaction among registered clinical dentists in the United Arab Emirates (UAE) also presented that private sector dentists had a higher level of satisfaction compared with the public sector in many work-related factors.²³ However, a survey conducted across Pakistani dentists by Gul H et al in 2018, titled "Depression among Dental Professionals in Pakistan," reported moderate levels of depression among dentists in Punjab, Sindh, and the Federal Capital while dentists in KPK province showed mild levels of depression, suggesting higher job satisfaction among dentists in KPK as compared to the ones in Federal Capital, Punjab, and Sindh.²⁴ These findings closely align with our own research results. The higher level of satisfaction observed among dentists employed in the government sector in our study could be attributed to various factors, such as enhanced job

stability and security, superior retirement plans, comprehensive healthcare coverage, and a supportive work environment with less competition, compared to their counterparts in the private sector, particularly in Pakistan.

A positive correlation was observed between dentist's qualification status and overall career satisfaction. This is consistent with findings from Harris et al. and Fahim et al., who reported higher satisfaction levels among specialists compared to general dentists.^{25,26} Similarly, Canadian orthodontists expressed greater job satisfaction, attributed to the opportunities offered through professional associations.²⁷ Completing a post graduate degree in dental surgery has a significant impact on the satisfaction levels of dentists.¹⁴ It results in higher mean scores in most dimensions of job satisfaction, except for the relationships with colleagues and staff.¹⁴ Similar findings were noted in study by Gul H et al who stated that the low job satisfaction and higher prevalence of depression was observed among junior dentists having graduation, which may be due to the increased competition and challenges they face in their early careers and family lives. While established consultants having post graduation degree experience had milder depression symptoms and hence, improved professional satisfaction.²⁴

The strength of this study is large sample size that attempted to involve the representation of the dental professionals across Pakistan through a multistage cluster sampling technique. Moreover, the inclusion of responses from unemployed dentists further adds to the generalizability of the findings regarding satisfaction scores. Furthermore, a high response rate of 96.6% obtained from the study population as compared to the other studies in the given research area, enhances authenticity of the study outcomes.^{1,28} However, the study did not consider the association of career satisfaction with age, working hours and workload conditions. Since this study was based on a questionnaire and had a cross-sectional design, there is a need for qualitative or longitudinal research to search deeper into contextual factors and explore additional normative variables. Further research would offer a thorough grasp of the changing needs and challenges experienced by dental professionals in Pakistan, specifically in relation to the brain drain phenomenon. Additionally, it would offer valuable insights for making informed career choices.

Conclusion:

The study findings indicate that the median of total career score was 117.0 out of 190, with interquartile range of 18.0. The overall mean professional satisfaction was 3.14 out of 5.0. Dentists having practicing tenure in the range of 6-10 years showed greater mean career rank values in various job aspects like salary package, professional relationships, professional time, personal time, and working environment. However, dentists in their late career stages exhibited overall high professional satisfaction. Male dentists, post-graduation degree holders, government employees in Balochistan and KPK demonstrated improved mean career rank values and overall professional satisfaction levels. This nationwide survey will provide valuable insights into the levels of professional satisfaction among dental practitioners in Pakistan and shed light on the factors affecting their career contentment. By comparing satisfaction levels across different career phases, this study will help identify areas where improvements can be made to enhance the well-being of dental professionals and, consequently, the quality of dental care in the country. Ultimately, the findings will contribute to a better understanding of the dental workforce in Pakistan and aid in the development of policies and initiatives to support the dental profession

Abbreviations:

- PMC- Pakistan Medical council
- DSS- Dentist Satisfaction Survey
- DJS- Dentist job satisfaction
- KPK- Khyber Pakhtunkhwa
- MCPS-Member of the College of Physicians and Surgeons
- FCPS-Fellowship of College of Physicians and Surgeons
- PhD -Doctor of Philosophy

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None disclosed

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