



A Study of Professionals' Quality of Life among Dentists in Public and Private Healthcare Facilities



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ABSTRACT

Background: Dentists are more susceptible to various negative health outcomes that can significantly impact their professional quality of life. This study aimed to assess the professional quality of life of dentists working in public and private healthcare settings.

Methods: A cross-sectional study was conducted on 68 dentists working in public and private healthcare facilities in Zanjan City in 2021. Data were collected using the Work-Related Quality of Life (WRQoL-2) questionnaire. SPSS version 16 was used to analyze data through descriptive statistics, independent t-tests, ANOVA, and a linear regression model at a 95% confidence interval.

Results: The participants' professional quality of life levels were as follows: 19 participants (27.9%) showed a low level, 14 participants (20.6%) had an average level, and 35 participants (51.5%) reported a high level. There was a significant relationship between income, type of organizational activity, and professional quality of life ($P < 0.05$).

Conclusion: More than half of the dentists had a high professional quality of life. It is recommended that strategies be developed to further enhance the work-related quality of life for dentists, particularly those working in the public sector.

1. Introduction

Dentistry is indeed a fascinating occupation, but it comes with its unique challenges. The nature of the work, along with the demands and pressures of the job, can have a negative impact on dentists' physical and mental well-being, as well as their overall quality of life. The long hours and constant exposure to job-related stress can take a toll on their health and happiness. Dentists need to prioritize self-care and seek support to maintain a balanced and fulfilling professional life (Abraham et al., 2018; Bhat & Nyathi, 2019). In a study, it was found that the prevalence of work-related stress among general dentists was 58%. The study also identified the most common causes of stress among dentists, which were maintaining high levels of concentration and

dealing with time and work pressure. These factors contribute significantly to the overall stress levels experienced by dentists in their professional practice. It highlights the importance of recognizing and addressing these stressors to promote the well-being and job satisfaction of dentists (Pouradeli et al., 2016). Due to their high levels of stress, dentists are more susceptible to various negative health outcomes that can significantly impact their professional quality of life. These include anxiety, alcoholism, sleep disorders, memory impairment, and musculoskeletal complaints. These conditions can have detrimental effects on dentists' overall well-being, job performance, and satisfaction. Dentists must prioritize self-care, seek support, and implement strategies to manage stress effectively in order to maintain a healthier and more



fulfilling professional life (Abraham et al., 2018; Basson, 2013; Kurşun et al., 2014). In recent years, there has been increasing recognition and discussion about the concept of professional quality of life. Professional quality of life refers to the overall well-being and satisfaction that individuals experience in their work as helpers or professionals in helping professions. It encompasses both positive and negative feelings that individuals have about their work (Theofilou, 2013). The professional quality of life assesses the degree to which employees can fulfill their personal needs through their work experience. The individual emotions and perceptions of each employee encompass a range of factors associated with their work, including financial compensation, job perks, job stability, comparisons with colleagues in other organizations, working conditions, career prospects, decision-making authority, and relationships with colleagues and the organization (Garg et al., 2012; Meyerson et al., 2020). Research studies conducted in various medical fields have consistently shown that the quality of the work environment plays a crucial role in job motivation, job satisfaction, work engagement, life satisfaction, happiness, and anxiety levels. These studies have demonstrated that when employees perceive their work environment to be positive, supportive, and conducive to their well-being, they are more likely to be motivated, satisfied with their job, actively participate in their work, experience higher levels of life satisfaction, and report lower levels of anxiety. On the other hand, a negative or unhealthy work environment can have detrimental effects on these factors, leading to decreased motivation, job dissatisfaction, reduced work engagement, lower life satisfaction, increased levels of anxiety, and overall negative effects on employees' well-being. Therefore, creating a positive work environment is essential for promoting employee satisfaction, motivation, and overall well-being in various medical fields (Bakhshi et al., 2019; Zubair et al., 2017). Job satisfaction plays a crucial role in enhancing the professional skills and performance of dentists. When dentists are satisfied with their work, they experience a sense of pleasure, vitality, and motivation, which drives them to continuously improve and advance their skills. This, in turn, benefits not only the dentist but also the patients and the dental care system as a whole (Anzar et al., 2022). A study found that a significant number of female dental faculty members experienced a low quality of life. Their work experience had a negative impact not only on their personal lives but also on their working hours (Meira et al., 2020). Although numerous studies have examined job satisfaction, job burnout, and overall quality of life among dentists, there is a scarcity of research specifically focusing on their professional quality of life (Meyerson et al., 2020; Reddy et al., 2017). Dental professionals provide vital services to people and communities, as well as being responsible for community health; however, researchers know very little about their professional quality of life among employed dentists in Zanjan, a city in the northwest of Iran. The present study aimed to examine the professionals' quality of life of dentists who work in public and private healthcare settings.

2. Materials and Methods

2.1 Setting and Participants

The study was a cross-sectional that conducted in 2021. The research was conducted in private centers (offices and clinics) as well as government centers (dental clinics and hospitals affiliated with Zanjan University of Medical Sciences) in a city in northwest Iran. The target population included all dentists working in these centers. The eligibility criteria were to have at least one year of clinical experience and a willingness to participate. Dentists with known physical or mental disabilities, a history of psychiatric medication use, recent divorce, or the loss of a loved one within the past six months were excluded from the study. Samples were selected using the convenience sampling method. A total of 76 dentists worked at private and government centers that were invited to participate in the study. After considering the inclusion criteria, 68 individuals qualified for the study.

2.2 Data Collection Tools

Data was collected through a two-part questionnaire: Demographic Characteristic Questions and Professional Quality of Life Questionnaire.

2.3 Demographic Characteristic

Demographic questions included age, gender, work experience, type of organizational activity, type of specialty, monthly income, marital status, and indigenouness.

2.4 Professional Quality of Life Questionnaire

The WRQoL-2 questionnaire contains 24 items rated on a 5-point Likert scale and is divided into seven main components: Job Career Satisfaction (items 1, 3, 8, 11, 18, 20), Working Conditions (items 13, 16, 22), General Well-Being (items 4, 9, 10, 15, 17, 21), Home-Work Interface (items 5, 6, 14), Stress at Work (items 7, 19), Control at Work (items 2, 12, 23), and Overall Quality of Working Life (item 24) (Van Laar et al., 2007). For the interpretation of each domain, the total score for the questionnaire was estimated on a scale of 0-100. The questionnaire results were scored in three levels: Each domain's score is interpreted on a scale of 0-100, with higher scores reflecting greater satisfaction with professional quality of life. The questionnaire results are categorized into three levels: scores between 23 and 71 indicate low professional quality of life, 72 to 83 represent a moderate level, and 84 to 115 signify a high level of professional quality of life (Mazloumi et al., 2014; Van Laar et al., 2007). Psychometric properties of the Persian version of the questionnaire were tested in Mazloumi's study and it has been approved with 24 items. In Mazloumi's study, Cronbach's alpha coefficient for the overall professional quality of life was 0.921, and for all its dimensions was between 0.639 and 0.970 (Mazloumi et al., 2017). In our

study, Cronbach's alpha coefficient for the overall professional quality of life was 0.86.

2.5 Statistical analysis

Data were analyzed using SPSS software version 16. To determine the normality of the data, a Kolmogorov-Smirnov test was performed. The results indicated that the data were normally distributed ($p > 0.05$). Descriptive statistics were used to describe demographic data. The association between demographic characteristics and professional life quality was examined using a linear regression model at a 95% confidence level. The independent t-test and ANOVA were used to compare the mean score of professional quality of life and demographic factors.

3. Results and Discussion

The purpose of this study was to investigate the professional quality of life among dentists working in the public and private sectors in Zanaj, a city located in northwestern Iran. The study participants were mostly between 25-34 years (48.5%), female (57.4%), employed in private centers (48.5%), general dentists (54.4%), with sufficient income (45.6%), married (70.6%), and non-native to Zanjan (54.4%) (Table 1).

Table 1. The participants' characteristics were presented as N (%) in the distribution analysis (n = 68)

Variable	Frequency	%	
Age (year)	25-34	33	48.5
	35-44	24	35.3
	45-63	11	16.2
Gender	Female	39	57.4
	Male	29	42.6
Marital status	Single	20	29.4
	Married	48	70.6
Work history (year)	5<	32	47.1
	5-15	28	41.2
	15>	8	11.8
Type of organizational activity	Private	33	48.5
	Governmental	17	25.0
	Private and public	18	26.5
Type of specialization	General	37	54.4
	Root canal treatment	3	4.4
	Prosthesis	4	5.9
	Children	2	2.9
	Radiology	4	5.9
	Orthodontic	5	7.4
	Gum surgery	5	7.4
	Oral and maxillofacial surgery	3	4.4
	Oral and maxillofacial disease	2	2.9
	Restorative	3	4.4
Monthly income	Enough	31	45.6
	Fair	12	17.6
	Good	19	27.9
	Very well	5	7.4
	Excellent	1	1.5
Being a native residency	Yes	31	45.6
	No	37	54.4

3.1 Participants' professional quality of life

The mean (standard deviation) of the total professional quality of life score was 63.53 (± 18.29). As indicated by their scores, 19 participants (27.9%) had a low level of professional quality of life, 14 participants (20.6%) had an average level, and 35 participants (51.5%) reported a high level of professional quality of life. Furthermore, among the components of professional quality of life, the domain of control at work had the highest mean score ($67.15 \pm SD 21.15$), while the domain of home-work interface had the lowest mean score ($56.98 \pm SD 22.88$) (Table 2).

Table 2. The professional quality of life scores of participants (n = 68)

Professional life quality	Mean (100-0)	SD	Minimum	Maximum
Control at work	67.15	21.15	0	100
General well-being	65.80	19.87	0	100
Home-work interface	56.98	22.88	0	100
Job career satisfaction	64.58	19.39	0	100
Stress at work	61.39	24.02	0	100
Working conditions	61.27	23.42	0	100
Overall quality of working life	63.53	18.29	0	100

3.2 The relationship between demographic variables and professional quality of life

There was no significant difference between the professional quality of life and demographic factors ($P > 0.05$). We found no significant relationship between the type of dentistry expertise and their professional quality of life ($P > 0.05$); however, radiologists had the highest average professional quality of life. Lastly, the results revealed that the professional quality of life was not significantly impacted by residency ($P > 0.05$), although native residency had a higher professional quality of life. There was a significant difference between the professional quality of life in terms of organizational activity type. The dentists working in both private and public sectors had a higher average professional quality of life score than those in government positions (Table 3). The linear regression model examined the relationship between age, gender, background, income, type of activity, specialization, marital status, residency, and professional quality of life. Among these factors, income was the only variable significantly associated with professional quality of life. Specifically, individuals with higher income were 0.27 times more likely to have a high professional quality of life (Odds Ratio [OR] = 0.27, $P = 0.027$) (Table 4).

Table 3. The comparison of the professional quality of life scores based on demographic characteristics (n = 68)

Variable	The mean (0-100 scale)	SD***	F	P-value	
Age (year)*	25-34	64.55	20.03	1.05	P = 0.355
	35-44	59.69	17.53		
	45-63	68.87	13.42		
Work history (year)*	5>	59.27	3.82	1.68	P = 0.194
	5-15	67.19	2.75		
	15<	67.79	4.37		
Type of organizational activity*	Private	68.21	17.18	4.20	P = 0.019
	Governmental	53.19	20.49		
	Private and public	64.73	14.71		
Type of specialization*	General	67.27	20.57	0.86	P = 0.562
	Root canal treatment	63.76	22.01		
	Prosthesis	66.03	6.66		
	Children	43.47	1.53		
	Radiology	68.20	12.11		
	Orthodontic	58.04	16.63		
	Gum surgery	53.26	16.76		
	Oral and maxillofacial surgery	61.95	4.61		
	Oral and maxillofacial disease	61.59	9.37		
	Restorative	61.59	9.37		
Monthly income*	Enough	58.16	21.21	1.74	P = 0.152
	Fair	65.94	15.45		
	Good	67.44	12.03		
	Very well	70.86	19.03		
	Excellent	90.21	0.00		
Marital status*	Single	59.67	20.85	1.27	P = 0.264
	Married	65.14	17.09		
	Divorced	0	0		
Gender**	Female	61.64	18.17	-	P = 0.327
	Male	66.07	18.45		
Being native**	Yes	66.97	19.80	-	P = 0.158
	No	60.66	16.64		

* ANOVA test, ** Independent T-test, *** Standard deviation

In the present study, dentists had a mean score of 63.53 ± 18.29. Based on their scores, 19 dentists (27.9%) had a low level of professional quality of life, 14 (20.6%) had an average level, and 35 (51.5%) demonstrated a high level of professional quality of life. Afshar *et al.* (2022) found that the work-related quality of life for most general dentists was moderate, which was lower than the findings of the current study (Afshar *et al.*, 2022). The observed disparity can be attributed to differences in the research populations, data collection tools, and the threshold for determining the working quality of life. Notably, Afshar's study included only general dentists, whereas the current study encompassed both general and specialized dentists. In the current study, a total assessment of professional quality of life was provided by measuring various aspects of work-related quality of life. Our results indicate that the home-work interface had the lowest score, while the work control score was highest, suggesting that dentists' home relationships are most significantly impacted. Work is a crucial element in an individual's life, requiring considerable time, energy, and skills to achieve financial independence and maintain physical, mental, and social well-being (Soren & Ryff, 2023).

A positive outlook toward work can greatly influence one's overall quality of life. Previous studies have revealed positive associations between professional and personal quality of life, which aligns with the findings of the present study (Narehan *et al.*, 2014; Razak *et al.*, 2016). Dental professionals face a variety of stressors due to the nature of their profession and direct interaction with patients. These stressors include high workloads, time pressures, demanding patients, complex treatment procedures, and the responsibility of ensuring patient satisfaction and safety. Additionally, dental professionals may also experience emotional stress related to patient anxiety, pain management, and dealing with challenging cases. The cumulative effect of these stressors can have a significant impact on the well-being and quality of life of dental professionals (Myers & Myers, 2004). Additionally, there is a relationship between dentists' job stress and burnout that can negatively impact their professional quality of life (Basson, 2013). Burnout is the polar opposite of job satisfaction (Han & Yeo, 2024). In our study, more than 72% of dentists expressed moderate to high levels of quality of work. Dang *et al.* (2021) in a systematic review study showed that dentists were generally satisfied with their jobs, with scores ranging from moderate to high. Specialist dentists were more satisfied than general dentists. Patient-physician relationships, respect, type of care, professional relationships among employees, and the professional environment were the most important factors influencing job satisfaction. These findings are consistent with the current study's findings (Dang *et al.*, 2021). Job satisfaction is an important consideration in employment decisions. Dentist immigration has become a new policy that some communities have struggled with in recent years. The first critical aspect of health policy is planning to improve dental workers' job satisfaction and, as a result, their overall quality of life at work (Hajian *et al.*, 2020). In our study, a significant relationship was found between the type of organizational activity and dentists' professional quality of life, with dentists working in private centers having a higher level of professional satisfaction. Furthermore, the linear regression model found that income was significantly related to professional quality of life, implying that high-income dentists have a 0.27 higher chance of being satisfied in their jobs. In the study of Shaban Nejad *et al.* (2012), there was a significant correlation between physicians' professional quality of life and satisfaction with monthly salary and time of receipt (Shabaninejad *et al.*, 2012). The salary was also identified as a significant factor influencing the professional quality of life in Afshar's study, a finding supported and consistent with the current study findings (Afshar *et al.*, 2022). According to a study work facility influence work quality of life. Moreover, the results indicated that physicians' workplace satisfaction is positively correlated with their professional quality of life, implying that having more facilities will lead to increased quality of life; whereas, the study of Shabaninejad found no significant correlation (Shabaninejad *et al.*, 2012). According to our findings, no significant relationship existed between other demographic

variables and dentists' work quality of life. Afshar *et al.* (2022) discovered that dentists' work quality of life was statistically related to their economic status, marital status, and general health, which is consistent with the current study's results in terms of economic factors but not marital status (Afshar *et al.*, 2022). In the non-dental research community, contradictory results have been reported, including studies by Shabaninejad *et al.* (2012) and Mahmoud *et al.* (2015). Despite these differences, previous research has shown that demographic factors can influence the professional quality of life, a consideration that public health planners and policymakers should take into account. (Shabaninejad *et al.*, 2012; Mahmoud *et al.*, 2015).

3.3 Study limitations

The information was gathered through self-reporting. Moreover, since no specific questionnaire on dentists' quality of life was available, a general form was employed. Therefore, it is advised that the current study's findings be used and generalized with caution, considering these limitations.

Table 4. Relationship between participants' professional quality of life and demographic characteristics in the linear regression model (n = 68)

Variable	B	OR	P value	95.0% Confidence Interval for B
Age	-3.504	-0.154	P=0.430	(-12.328, 5.320)
Sex	-2.376	-0.070	P=0.582	(-10.962, 6.210)
Work history	0.480	0.228	P=0.273	(-0.389, 1.348)
The type of organizational activity	-1.189	-0.060	P=0.643	(-6.290, 3.912)
Type of specialization	-0.125	-0.025	P=0.875	(-1.711, 1.460)
Monthly income rate	4.274	0.276	P=0.027	(0.504, 8.044)
Marital status	2.444	0.067	P=0.616	(-7.257, 12.145)
Being native	-5.985	-0.178	P=0.233	(-15.915, 3.945)

4. Conclusion

More than half of the dentists had a high level of professional quality of life. However, it is recommended that strategies be developed to further enhance the work-related quality of life for dentists, particularly those employed in government positions.

Authors' Contributions

Robab Noormohammadi: Conceptualization; Funding acquisition; Project administration; Writing-review & editing. Tooba Ghoflagari: Conceptualization; Investigation; Writing-review & editing. Mehran Faghfour: Investigation; Software; Validation; Writing-review & editing. Azam Maleki: Conceptualization; Methodology; Formal analysis and interpretation; Writing-review & editing.

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Conflicts of Interest

No potential conflict of interest relevant to this article was reported.

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Ethical considerations

The present study is taken from the dissertation project. All procedures followed the ethical standards of the regional research committee. The protocol of the current study was approved by the ethical committee of the Zanjan University of Medical Science with the registration code (IR.ZUMS.REC.1399.127). Written informed consent has been obtained from all participants.

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