



Job Satisfaction among Dentists according to Workplace in Tehran

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ABSTRACT

Objectives: The purpose of the present study was to assess the level of job satisfaction among dentists in Tehran, according to background determinants, working environment elements, and type of workplace in 2018.

Materials and Methods: In this cross-sectional study, 350 dentists, selected by convenience sampling, completed a validated Persian job satisfaction questionnaire in a dental congress (with about 1100 participants) in Tehran, and in 59 dental clinics. The questionnaire included 39 structured questions (in 12 domains) on job satisfaction, reporting the satisfaction level according to a 5-point Likert scale. The level of satisfaction was measured by summing the weighted scores of each domain. The mean job satisfaction score (out of 100) was reported according to demographic factors (age, gender, level of income, years of experience, marital status, and number of children), working environment elements (number of assistants, number of colleagues, type of workplace), and stress score (8 questions). Linear regression was applied for statistical analysis.

Results: The mean score of job satisfaction was 70 ± 10 . The analysis showed that women, dentists with a low income, those working in the public sector, and those with higher stress scores had lower job satisfaction scores ($P < 0.05$). The number of dental assistants, number of colleagues, age, work experience, marital status, number of children, and monthly number of patients had no significant correlation with job satisfaction ($P > 0.05$).

Conclusion: The level of job satisfaction was mainly related to individual determinants. Improving job satisfaction can foster the whole dental care system and working environment elements.

Keywords: Job Satisfaction; Dentists; Workplace

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INTRODUCTION

Job satisfaction is a complex set of interrelationships of tasks, roles, responsibilities, interactions, incentives, and rewards. Job satisfaction may be defined as a person's attitude toward his/her job. Individuals with high level of job satisfaction are more likely to hold positive attitudes toward their jobs [1,2]. Job satisfaction is an

indicator that may have an influence on career longevity. It can also encourage an individual to leave a profession. It has been reported that improved quality of the work environment may increase the career longevity of all individuals including dentists [3]. Several studies in different countries have shown that the overall job satisfaction of dentists usually ranges from good to very good

[4,5]. Today, dentistry is an attractive, but not an easy profession. The dominant perception of the society is that dentistry is a high-income and luxury manual profession; however, it is demanding and difficult. Dentistry is described as a stressful occupation, and stress may be a significant feature of this job [6]. Therefore, dentistry is classified as a stressful profession. Excessive stress may put an early end to the professional life of dentists. Financial concerns, anxious and sensitive patients, employment issues, resource constraints, poor working conditions, and the repetitive nature of the work are common stressors for dentists [7]. Moreover, dentists are exposed to a variety of occupational risk factors, such as infectious and orthopedic diseases, which largely affect their general health. Small work environments, special social relationships between dentists and patients, exposure to personal and private affairs, sensitive human relationships, personal characteristics, and dentists' and patients' emotions are only some of these particular situations [8]. What makes it difficult to measure job satisfaction is that it may be satisfactory from some aspects but unsatisfactory from some other aspects. As a result, in the majority of job satisfaction surveys, some factors known as occupational aspects are considered in the evaluation of certain elements involved in job satisfaction [9,10]. To improve the dentists' job satisfaction, the role of various unknown elements such as the social reputation, position in the society, work environment, and many other factors of daily life is important. Satisfaction produces happiness, motivation, creativity, and skills. Knowledge about the dentists' job satisfaction and the effect of environmental factors on it are important. In this regard, questionnaires are the main tools for assessment of job satisfaction [11]. Few studies have investigated job satisfaction of dentists in Iran, and shown that the occupational satisfaction of dentists was generally higher than average [12,13]. However, none of them examined the workplace and the type of management system. Therefore, this study was performed on dentists working in Tehran to improve our understanding of this topic. The aim of this study

was to enhance the current understanding of job satisfaction-related elements that may affect job satisfaction of dentists, including job demands, job resources (i.e. income, payment method), psychosocial factors (i.e. stress score), and professional conflicts among dentists.

MATERIALS AND METHODS

This study was based on a previous study [14] in which a standardized questionnaire was designed to assess the dentists' job satisfaction. The questionnaire was developed by evaluating the opinions of eight experts (an epidemiologist, a psychologist, a sociologist, and five dental public health specialists). The final questionnaire was completed by 20 dentists, and its reliability was measured using the Cronbach's alpha coefficient. The Kappa agreement and statistical value were determined and reported for each question [14]. The Kappa agreement was 0.81.

The job satisfaction questionnaire contained the following items: income, sense of sympathy and altruism, social respect, independence, skills, sense of ability, work environment characteristics, work ethics, relationship with colleagues, staff and patients, executive responsibilities, feeling ability and confidence, and reasons for choosing dentistry (Fig. 1). Finally, the dentists' job satisfaction questionnaire was designed with 39 items (Likert questions: strongly agree, agree, no opinion, disagree, and strongly disagree). The content validity index (CVI) was between 85% and 90% for all questions.

To examine the questionnaire's reliability, the Cronbach's alpha coefficient was calculated. Moreover, the CVI, content validity ratio (CVR) and inter-class correlation coefficient were reported for the job satisfaction questionnaire. To calculate the CVI, the opinions of the experts in this field were used. After explaining the objectives of the test and providing definitions related to the content of the questions, they were asked to rate each question using a three-point Likert scale as "necessary", "useful, but not necessary," and "unnecessary". This indicator was calculated according to the formula presented in Figure 2, and the minimum acceptable CVR was determined

based on the number of experts who answered the questions.

The experts determined the "relevance", "clarity", and "simplicity" of each item using a 4-point Likert scale (for relevance: 1= irrelevant, 2= relatively relevant, 3= relevant, 4= highly relevant; for simplicity: 1= not simple, 2= relatively simple, 3= simple, 4= very simple; for clarity: 1= not clear, 2= relatively clear, 3= clear, 4= very clear), and CVI was calculated as such (Fig. 2). The Cronbach's alpha coefficient was 0.813, CVI was estimated to be 25%-75%, and CVR was 80%-95% for all questions. The intraclass correlation coefficient was calculated twice, and was found to be 0.97. The purpose of the study was to select a large number of general dentists living in Tehran. All dental practitioners working in private and public health centers in Tehran whose working license was registered in the Ministry of Health were selected as the study population. The inclusion criteria were graduation from Iranian

dental colleges with at least 3 years of work experience.

We had a sub-section part in the first page of the questionnaire that participants had to write their demographic information.

The main focus of this study was on the working sector of each dentist (public, private, or both). Most dentists that work in clinics often work in their private offices as well [15]. Dentists who only worked in their own private offices were excluded from the study, because the focus of this study was on the workplace and job satisfaction among dentists who worked in public and private clinics. In public dental clinics, the payment method is usually salary-based, while it is fee for service in private dental clinics. Based on the regression rule of thumb [16] and according to the number of study variables, at least 200 samples were required for this study, and finally 398 questionnaires were completed. To reach a convenience sample, dentists participating in the Iranian General Dentists

Table 1. Description of domains of job satisfaction and stress score questionnaire in Tehran in 2018

NO	Domain	Description	Number of questions
1	Income	Average amount earned by the dentist per month	1
2	Sense of sympathy and altruism	Willingness to do things that bring advantages to others, even if it results in disadvantage for yourself	1
3	Social respect	Feeling the pleasure and satisfaction,	1
4	Independence	Freedom to make treatment plan or decisions without being governed or controlled by another person or organisation	2
5	Skills	The ability to use one's knowledge effectively and readily in execution or performance	1
6	Sense of ability	Sense of physical, mental, or legal power to do something	2
7	Work environment characteristics	Surrounding conditions in which an employee operates. The work environment can be composed of physical conditions	13
8	Work ethics	A system of moral principles that apply values to the practice of clinical procedures and relationship with colleagues and staff	3
9	Relationship with colleagues, staff and	Feeling the pleasure, satisfaction, and high attractiveness of The dental profession, including relationship with colleagues,	3
10	Executive responsibilities	A duty or obligation to satisfactorily perform or complete a task	3
11	Feeling ability and confidence	The quality or state of being able; especially: physical, mental, or legal power to do something	3
12	Reasons for choosing dentistry	The main reasons for choosing dentistry as a profession	6
13	Stress score	The mean score obtained from the stress section of the questionnaire ranging from 0 to 100	8

Congress in Tehran were requested to complete the questionnaire. If there was an incomplete questionnaire, the dentist would be asked to complete it; otherwise, it would be excluded from the study. The questionnaire comprised of three parts: general information, job satisfaction, and stress score. The general information section included questions about the demographic information, type of workplace, number of assistants, monthly number of patients, level of income, number of colleagues, years of experience, and working time. Job satisfaction level was assessed by 39 questions and calculated by the weighted sum of scores obtained from the answers and adjusted between 0 and 100 scale. Eight questions were related to stress at workplace, and their sum of scores was considered as the stress score and adjusted in a scale of 0 to 100. Table 1 shows the job satisfaction domain of the questionnaire. Statistical analysis was performed using SPSS version 22.

The linear regression model was applied to

analyze the data. P-values less than 0.05 were considered significant.

RESULTS

After collecting the questionnaires and reviewing them carefully, 350 completed questionnaires (response rate was %36) underwent further analyses. The age range of the participants was 27-67 years. The mean years of experience in dental profession ranged from 3 to 40 years. Table 1 shows the percentage of job satisfaction according to the domains among 350 dentists that participated in the study. Two-hundred and twenty-six participants were males and 124 were females. The mean number of children of dentists was 0.97, and their mean level of income was \$1,270±12 per month. According to the results of Table 2, the mean job satisfaction score was 70±10 (range: 36-90) for dentists who worked in the private sector, 66±10 for those who worked in the public sector, and 69±9 for those working in both sectors.

Table 2. Distribution of dentists according to background and working environment elements in Tehran in 2018

Variable	Subgroup	Number (%)	Job satisfaction score	Job stress score
			Mean (SD)	Mean (SD)
Gender	Male	226 (64)	64(9)	59(15)
	Female	124 (36)	70(12)	65(13)
Marital status	Single	149 (43)	69(14)	58(14)
	Married	201 (57)	68(15)	63(15)
Number of children	0	158 (46)	69(12)	59(12)
	1	72 (20)	67(14)	60(14)
	2	95 (27)	69(14)	62(14)
	3	22 (6)	68(9)	61(9)
	4	3 (1)	71(15)	64(15)
Type of workplace	Private	195 (56)	65(9)	60(14)
	Public	107 (30)	70(10)	63(15)
	Both	48 (14)	69(8)	61(15)
Number of assistants per dentist	0	134 (38)	66(9)	60(12)
	1	183 (52)	69(10)	63(14)
	2	16 (6)	69(10)	62(13)
	3 and more	12 (3)	68(9)	45(9)
	One assistant for two dentists	5 (1)	67(9)	59(12)
Number of colleagues	0	128 (37)	66(9)	59(14)
	1	120 (34)	67(9)	60(15)
	2	64 (18)	66(10)	62(14)
	3	22 (6)	67(12)	60(14)
	4	16 (5)	66(10)	65(15)
Total		350 (100)	70 (10)	62 (16)

The mean monthly number of visited patients was 62 ± 17 patients per dentist. The results showed a significant relationship between the job satisfaction of dentists and their monthly income, gender, stress score, and workplace ($P < 0.001$). The results of linear regression analysis showed that dentists who worked in the private sector had higher job satisfaction scores than those who worked in the public sector ($P = 0.001$). Age, years of work experience, marital status, number of children, number of colleagues, number of assistants, and working time showed no significant relationship with job satisfaction (Table 3).

DISCUSSION

The findings of this study provided an understanding on the moderate to high level of job satisfaction among dentists according to their work place in Tehran. Our sampling frame was based only on dentists who worked in private or public dental clinics, or both. The results showed a significant difference according to gender, type of workplace, income, and stress score among dentists in relation to their job satisfaction. The type of workplace was one of the significant variables in this study.

The results showed that dentists who worked in the private sector had higher job satisfaction than those working in the public sector. This can be explained by the fact that dentists working in the private sector have more flexible schedules and higher level of income, and the number of patients in the public sector is much higher compared with the private sector, which is the reason for higher workload in the public sector possibly leading to burnout. According to a similar study, the dentists who work in the public (governmental) sector are paid fixed salaries that usually affects their motivation and leads to lower level of job satisfaction [17]. Male dentists usually seem to have a better feeling about their profession, which could be explained by the fact that women usually have more responsibilities at home which may affect their job satisfaction. Furthermore, dentistry is a profession that requires physical ability, which is higher in men. Similarly, some other studies found that male dentists had higher mean career satisfaction scores compared with female dentists [18]. However, another study found no difference in job satisfaction between male and female dentists [19].

Table 3. Results of linear regression analysis for job satisfaction score adjusted for demographic and environmental elements among dentists in Tehran in 2018

Variable	Unstandardized B	SE	Standardized Coefficient Beta	T	p-value	
Age	0.080	0.08	0.065	1.08	0.31	
Gender	2.620	1.09	0.13	2.42	0.01	
Years of experience	0.009	0.08	0.01	0.12	0.90	
Income (US Dollars)	0.181	0.06	0.22	3.01	0.03	
Type of workplace	Private	4.86	1.13	-0.12	-2.34	0.01
	State	-4.85	0.69	0.08	1.68	0.60
	Both	3.36	1.67	-0.11	-1.89	0.01
Marital status	1.294	1.02	0.07	1.26	0.20	
Stress score (0-100)	-0.097	0.03	-0.15	-2.87	0.04	
Number of children	-0.110	0.49	-0.01	-0.23	0.81	
Number of assistants	0.180	0.45	0.02	0.39	0.69	
Number of colleagues	-0.24	0.35	-0.04	-0.68	0.49	
Monthly number of	-0.006	0.01	-0.02	-0.43	0.66	
Working time (hours)	0.05	0.04	0.07	1.33	0.18	

Statistical analysis: Linear regression analysis, stepwise method. Dependent Variable: Job satisfaction (0-100), $P = 0.05$. Predictors: (Constant) gender, years of experience, type of workplace, stress score (0-100), marital status, number of children, number of assistants, monthly number of patients, number of colleagues, working time, age, income

The stress score shows the level of stress and workload in the workplace. Stress may negatively affect the job quality. This study found a significant inverse correlation between the stress score and job satisfaction. It is easy to understand how lower stress scores lead to higher job satisfaction. There is a significant inverse correlation between the level of occupational stress and the ability to work, which shows that the work ability decreases as the occupational stress increases. Our findings were consistent with the findings of a study in Korea that showed dentists with severe occupational stress had lower work ability scores [20].

According to the findings of this study, marital status, number of children, number of colleagues, number of patients per month, number of assistants, and working time had no significant relationship with job satisfaction. In private clinics, the working time is usually up to dentists, while public clinics usually have a fixed working time. Working time flexibility is an opportunity for dentists to make better plans, which decreases their stress of completing the treatment in a specific time frame [21]. The results showed that job satisfaction had no relationship with age or years of experience. In contrast to our study, a study conducted in Turkey showed that older dentists had higher job satisfaction level [5]. In some countries like the United States, studying dentistry is expensive and some students use loans that should be paid off after graduation. Accordingly, the stress of a new workplace and lack of experience may lead to high stress and low job satisfaction levels among young dentists [22].

The present findings showed that older dentists had higher job satisfaction levels, but the difference was not significant. Dentists can improve their ability to solve professional problems after several years of working, which helps them have higher job satisfaction level. It should be considered that all participants in the present study had at least 3 years of experience; thus, after this period they could usually acquire a standard level of experience. The number of children and marital status had no significant relationship

with job satisfaction. However, according to the findings of a study in Saudi Arabia, female dentists faced obstacles in their dental practice due to family and cultural factors [23]. One strength of this study was sampling a similar group of dentists. The dentists that had their own offices were excluded and the study was done only on dentists worked for others. All dentists had graduated from Iranian universities and had at least 3 years of experience. Therefore, the participants were selected with utmost care and sensitivity. However, the present findings might be subject to selection bias, and interpretation of the results should be done with caution.

All participants worked in Tehran, capital of Iran. Therefore, their workplace and city were similar. Living in Tehran is more expensive than other cities in Iran, and financial capabilities and problems are almost similar [24]. Dentists from other cities of Iran may have different patterns of dental services or different levels of income. Meanwhile, we were unaware of the dentists' field of interest. The authors believe that other studies are required taking into account the field of interest of dentists.

CONCLUSION

The results of this study showed that male dentists working in private dental clinics had a higher level of job satisfaction than those working in public dental clinics and female dentists. Some determinants were correlated with job satisfaction that should be considered as the main determinants to improve job satisfaction among dentists. Finding the most important determinants in job satisfaction of dentists can improve the quality of the dental care system.

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CONFLICT OF INTEREST STATEMENT

None declared.

REFERENCES

1. Pau A, Sabri B. Relationship between emotional intelligence and job satisfaction in newly qualified Malaysian dentists. *Asia Pac J Public Health* 2015 Mar;27(2):1733-41.
2. Khamisa N, Oldenburg B, Peltzer K, Ilic D. Work related stress, burnout, job satisfaction and general health of nurses. *Res Environ J Int*. 2015 Jan;12(1):652-66.
3. Adriaenssens J, De Gucht V, Maes S. Determinants and prevalence of burnout in emergency nurses. A systematic review of 25 years of research. *Res Environ J Int*. 2015 Feb;52(2):649-61.
4. Naidu R, Newton JT, Ayers K. A comparison of career satisfaction amongst dental healthcare professionals across three health care systems. comparison of data from the United Kingdom, New Zealand and Trinidad & Tobago. *BMC Health Serv Res*. 2006 Dec;6(1):1-5.
5. Sur H, Hayran O, Mumcu G, Soylemez D, Atli H, Yildirim C. Factors affecting dental job satisfaction Jun: a cross-sectional survey in Turkey. *Eval Health Prof*. 2004 Jun;27(2):152-64.
6. Puriene A, Janulyte V, Musteikyte M, Bendi nskaitė R. General health of dentists. Literature review. *Stomatologija, Baltic Dent Maxillofacial J*. 2007 Mar;9(1):10-20.
7. Chang WJ, Chang YH. Patient satisfaction analysis, Identifying key drivers and enhancing service quality of dental care. *J Dent Sci*. 2013 Sep;8(3):239-47.
8. Lee KT, Chen CM, Huang ST, Wu YM, Lee HE, Hsu KJ, et al. Patient satisfaction with the quality of dental treatment provided by interns. *J Dent Sci*. 2013 Jun;8(2):177-83.
9. Lacy FJ, Sheehan BA. Job satisfaction among academic staff: An international perspective. *High Educ*. 1997 Oct;34(3):305-22.
10. Squires JE, Hoben M, Linklater S, Carleton HL, Graham N, Estabrooks CA. Job satisfaction among care aides in residential long-term care: a systematic review of contributing factors, both individual and organizational. *Nurs Res Pract*. 2015 Aug; 2015.
11. Logan HL, Muller PJ, Berst MR, Yeane DW. Contributors to dentists' job satisfaction and quality of life. *The Journal of the American College of Dentists*. 1997 Jan;64(4):39-43.
12. Reza A, Vahabi S, Kadkhodazadeh M, Dalaie K, Mirakhori M, Saeed S. Evaluation of job satisfaction among faculty members of Shahid Beheshti Dental School: a cross sectional study in 2012. *J Med Council IRI*. 2013 Mar;31(3):224-30.
13. Seraj B, Ghadimi S, Mirzaee M, Ahmadi R, Bashizadeh H, Ashofteh-Yazdi K, et al. Job satisfaction and its influential factors in dental academic members in Tehran, Iran. *Annals of Med Health Sci Res*. 2014;4(2):192-7.
14. Emrani R, Hessari H, Jafari A. Designing and evaluating a questionnaire for assessing job satisfaction of dentists. *Int J Med H Res*. 2019;4(5):90-5.
15. Emrani R, Sargeran K, Grytten JI, Hessari H. A survey of common payment methods and their determinants in dental clinics in Tehran. *Eur J Den*. 2019 Oct;13(4):535-9.
16. Norman GR, Streiner DL. *Biostatistics: the bare essentials*. PMPH USA; 2008:395-6.
17. Gilmour J, Stewardson DA, Shugars DA, Burke FJ. An assessment of career satisfaction among a group of general dental practitioners in Staffordshire. *British Dent J*. 2005 Jun;198(11):701-10.
18. Matjila SA, Madiba TK, Annandale-Dippenaar L, Olutola BG. Assessment of job satisfaction among dentists working in different settings in the Tshwane metro. *South African Dent J*. 2019 Jun;74(5):230-5.
19. Ayers KM, Thomson WM, Rich AM, Newton JT. Gender differences in dentists' working practices and job satisfaction. *J Dent*. 2008 May;36(5):343-50.
20. Song KW, Choi WS, Jee HJ, Yuh CS, Kim YK, Kim L, et al. Correlation of occupational stress with depression, anxiety, and sleep in Korean dentists: cross-sectional study. *BMC Psychiatry*. 2017 Dec;17(1):1-11.
21. Hamasha AA, Alturki A, Alghofaili N, Alho maied A, Alsanee F, Aljaghwanani F, et al. Predictors and level of job satisfaction among the dental workforce in national guard health affairs. *J Int Soc Prevent Communit Dent*. 2019 Jan;9(1) 89.
22. Gallagher J, Clarke W, Wilson N. Understanding the motivation: a qualitative study of dental students' choice of professional career. *Eur J Dent Edu*. 2008 May;12(2):89-98.
23. Rajeh M, Nicolau B, Qutob A, Pluye P, Esfandiari S. A survey of the barriers affecting the career practice and promotions of female dentists in Saudi Arabia. *J Dent Res*. 2019 Apr;4(2):187-95.
24. Enami A, Lustig N, Taqdiri A. Fiscal policy, inequality, and poverty in Iran: assessing the impact and effectiveness of taxes and transfers. *Mid-East Develop J*. 2019 Jan;11(1):49-74.