

Job Satisfaction among Registered Jordanian Dentists

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Abstract

The objective of this study was to measure job satisfaction among registered Jordanian dentists, and to explore factors that may affect the level of their satisfaction.

A questionnaire-based survey was distributed to registered dentist in the Jordanian Dental Association. The survey comprised of two parts. The first included general information to define personal and professional characteristics including gender, age, marital status, years in practice, training status, type of specialty, working hours per week, and working sector. The second included 34 items to assess the level of professional satisfaction and the factors that may affect this satisfaction. The data were analyzed using independent t-test, analysis of variance and multiple regression analysis.

A total of 516 (10.3%) out of 5017 dentists completed the questionnaire. The mean total job score in this study was 2.97 out of 5 (59.4%). Male dentists are significantly more satisfied than females. Also, with increasing age and years of experience dentists' satisfaction scores are significantly increased. Specialists are significantly more satisfied than residents and general dental practitioners. Restorative dentists were significantly the most satisfied among other specialists. Dentists who own private clinics are significantly more satisfied than dentists working in other dental sectors. Jordanian dentists are satisfied in delivery of care, patient relations and equipment and materials, while dissatisfied in relation to COVID-19 and perception of income.

Differences in total job satisfaction existed in relation to age, gender, dental experience, specialty, working hours, and working place. Patient relations and perception of income are important work environment factors for overall professional satisfaction.

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Introduction

Job satisfaction is defined as the feeling of pleasure and achievement that you experience in your job.¹

However, job satisfaction is not only how an individual feels about their job, but also the nature of the job and the individuals' expectation of what their job should provide. Therefore, job satisfaction is comprised of various components, including job conditions, communication, the nature of the work, organizational policies and

procedures, remuneration and conditions, promotion / advancement opportunities, recognition / appreciation, security, and supervision / relationships.²

The public traditionally has held dentistry in high regard as a profession. Nevertheless, dentistry was found to have stressful nature and difficulties in working conditions,³ with low job satisfaction being a contributing factor to stress and burn out.⁴

Many researchers have examined the level of job/career satisfaction of dentists in many countries using the Dentist Satisfaction Survey. This survey evaluates overall job satisfaction and measure different aspects of job satisfaction such as delivery of care, perception of income, personal time, professional time, respect, staff, and stress.⁵ Other researchers evaluated job satisfaction in dentistry using another approach that reflects the way dentists view themselves

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such as asking: "If given the chance, would you choose dentistry again?".⁶

The results of job satisfaction studies vary between countries and according to different variables such as, age, gender, working as employer or employee, working in private or public sectors, working as general practitioner or specialist, and type of dental specialty.⁷⁻¹⁰ In Jordan, Oweis et al. investigated whether dentists in Jordan would choose dentistry again as their career, but unfortunately, the authors reported that more than half of Jordanian dentists would not choose dentistry again as their profession, and basically due to acquired health problems and the low income.¹¹

The objectives of this study were to measure job satisfaction among registered Jordanian dentists, and to explore factors that may affect the level of their satisfaction.

Materials and methods

A questionnaire-based survey was conducted to assess the job satisfaction among dental practitioners who are registered in the Jordanian Dental Association (JDA). Dentists who are unemployed or working outside the country were excluded from the survey. Therefore, the study population as obtained from JDA consisted of 5017 dentists and covered all dental sectors in Jordan including: Royal Medical Services, Ministry of Health, university teaching staff, and private sector as owner or employee. The survey was prepared online using Microsoft forms 365. After obtaining ethical approval, the survey link was distributed through the JDA to all registered dentists using SMS (short message service). An introduction letter was attached to the survey to clarify the objectives of the study. Confidentiality and anonymity were maintained. Completion and return of the questionnaire will indicate the willingness to participate in the study and considered as consent.

The survey utilized in this research was based on the Dental Satisfaction Survey (DSS)⁵ with minor modifications. This survey consisted of 34 items: 8 items to assess overall professional satisfaction, 25 items related to seven work environment factors, and one item related to the effect of COVID-19 on the future of dentistry. The survey comprised of general information to identify personal and professional characteristics including gender, age, marital

status, years in practice, training status, type of specialty, working hours per week, and working sector.

Overall professional satisfaction includes 8 items that questioned if dentists are proud of their job, as dentistry fulfills their job expectation and allow them to make their best contribution, or they found dentistry very stressful job and felt trapped in their current position and wish to drop to do something else. The work environment factors included: perception of income, professional time, personal time, staff, delivery of care, patient relations, and availability of modern equipment and materials.

All items were measured by a 5-point Likert scale: 1= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. According to original DSS, items score for each factor was averaged to determine the degree of satisfaction into three categories based on the mean score: dissatisfied (0–2.5), neutral (2.6–3.5), and satisfied (3.51–5.0). Total job score was defined as total score of all items.

Statistical Analysis

Cronbach's alpha coefficients of the overall job satisfaction (0.89) and for the subscales ranged from 0.61 to 0.85, which indicated adequate internal consistency. Descriptive statistics were produced. Test of normality was done using plotting technique and Shapiro-Wilk test. The assumption of normality was considered met as the (p -value > 0.05). Independent t -test and analysis of variance (ANOVA) were used to compare total job scores and overall professional satisfaction in relation to demographic and practice characteristics. Multiple regression analysis was used to identify predictors of overall professional satisfaction subscale using other subscales (work environment factors) in the questioner. The significance level was set at $P < 0.05$. Statistical analysis was performed using SPSS version 27.0.

Variables	Level	Number (%)	Mean (SD)*	t or F [§]	p-value [¶]
Gender	Male	239 (46.3)	102.46 (12.96)	3.89	<0.001
	Female	277 (53.7)	97.96 (13.25)		
Marital Status	Single	140 (27.1)	98.35 (12.26)	-1.77	0.070
	Married	376 (72.9)	100.68 (13.62)		
Age	≤ 25	30 (5.8)	97.23 (11.16)	10.32	<0.001
	26-35	239 (46.3)	97.82 (12.99)		
	36-45	141 (27.3)	100.15 (13.13)		
	46-54	84 (16.3)	103.53 (13.29)		
	≥ 55	22 (4.3)	114.13 (8.81)		
Training Status	GDP	168 (32.6)	97.66 (12.75)	9.53	<0.001
	Resident	112 (21.7)	97.81 (13.30)		
	Specialist	236 (45.7)	102.81 (13.20)		
Specialty	Orthodontics	57 (11.0)	99.47 (13.06)	2.18	0.030
	Periodontics	45 (8.7)	98.60 (12.37)		
	Pediatric Dentistry	57 (11.0)	101.52 (15.63)		
	Restorative Dentistry	58 (11.2)	104.05 (12.78)		
	Endodontics	49 (9.5)	103.24 (12.07)		
	Oral Surgery	43 (8.3)	100.93 (12.24)		
	Prosthodontics	39 (7.6)	99.76 (15.11)		
	General Dental Practitioner	168 (32.6)	97.66 (12.75)		
Years in practice	Less than 5	125 (24.2)	96.68 (12.46)	9.52	<0.001
	5- < 10	126 (24.4)	98.11 (12.76)		
	10- < 15	95 (18.4)	98.33 (13.27)		
	15- < 20	54 (10.5)	103.66 (11.32)		
	≥ 20	116 (22.5)	105.50 (13.76)		
Hours per week	< 35	112 (21.7)	100.18 (12.05)	3.40	0.010
	35	219 (42.4)	101.35 (13.42)		
	45	132 (25.6)	99.84 (14.41)		
	> 45	53 (10.3)	94.90 (11.36)		
Workplace	Ministry of health	72 (14.0)	94.33 (12.02)	8.82	<0.001
	Royal medical services	208 (40.3)	99.96 (13.12)		
	Universities	30 (5.8)	102.43 (13.11)		
	Private clinic employee	98 (19.0)	97.95 (13.32)		
	Private clinic owner	108 (20.9)	105.25 (12.64)		

Table 1. Descriptive statistics of personal and professional characteristics, independent t-test and ANOVA for comparisons the total job score with two and three or more categories respectively.

*SD: standard deviation, [§]t: independent t test value and F: fisher test value, [¶]significant p-value<0.05.

Results

This questionnaire-based survey was distributed to 5017 dentists. Five hundred and sixteen (516) dentists agreed and completed the survey with a response rate of 10.3%.

Descriptive statistics on personal characteristics, their effect on total job scores is presented in Table 1. Most of the dentists were in the age range 26-45 years, female dentists comprised 54%, and about 73% of the dentists were married. General dental practitioners make up 32.6%, while the remaining dentists were residents and specialists. The dental experience did not exceed 10 years in nearly half of the dentists included in this study. Most of the respondents are military and private sector dentists.

Variables	Level	Number (%)	Mean (SD)*	t or F [§]	p-value [¶]
Age	≤ 25	30 (5.8)	2.88 (0.62)	2.77	0.020
	26-35	239 (46.3)	2.94 (0.65)		
	36-45	141 (27.3)	2.95 (0.62)		
	46-54	84 (16.3)	3.03 (0.74)		
	≥ 55	22 (4.3)	3.39 (0.62)		
Hours per week	< 35	112 (21.7)	2.84 (0.59)	8.21	<0.001
	35	219 (42.4)	3.13 (0.63)		
	45	132 (25.6)	2.91 (0.67)		
	> 45	53 (10.3)	2.75 (0.71)		
Workplace	Ministry of health	72 (14.0)	2.96 (0.72)	5.78	<0.001
	Royal medical services	208 (40.3)	3.09 (0.62)		
	Universities	30 (5.8)	3.17 (0.69)		
	Private clinic employee	98 (19.0)	2.74 (0.65)		
	Private clinic owner	108 (20.9)	2.91 (0.62)		

Table 2. ANOVA for comparing of the overall professional satisfaction score (only significant variables shown t or F and p-value).

*SD: standard deviation, [§]F: fisher test value, [¶]significant p-value<0.05.

Regarding the statistical effect of personal and professional characteristics on total job scores, our results revealed the following: male dentists are significantly more satisfied than females (p-value=0.01); marital status was not significantly different (p-value=0.07); with increasing age and years of experience, dentists' satisfaction scores significantly increased (p-value<0.001 and p-value=0.01) respectively; specialists are significantly more satisfied than residents and general dental practitioners (p-value=0.01); restorative dentists and endodontists were the most satisfied among other specialists, followed by pediatric dentists, oral surgeons, prosthodontists, orthodontists, and periodontists (p-value=0.03); and we found out that satisfaction increased with decreasing working hours (p-value=0.01). The highest satisfaction scores according to the place of work in this study were achieved among those who worked as private clinics owners, followed by those who worked at the universities, then the Royal Medical Services, then private clinics employee, and the lowest among those who worked at the Ministry of Health (p-value<0.001). Among all personal and professional characteristics, only age group, working hours per week and workplace were found to have significant effect on overall professional satisfaction (Table 2). Dentists aged 55 years or older (p-value=0.02), dentists working 35 hours per week (p-value<0.001), and dentists working as university teaching staff (p-value<0.001) had significantly higher overall professional satisfaction.

The mean of total score is 100.03 with standard deviation (SD) 13.3. Table 3 shows the

rank ordered average on the various subscales work environment factors. The table shows that Jordanian dentists are satisfied as the mean score percentage is more than 70% in items related to delivery of care (3.63), patient relations (3.60) and equipment and materials (3.51), while dissatisfied in relation to covid-19 (1.97) and perception of income (2.46) with the mean score percentage less than 50%. The remaining items were neutral with a percentage score between 50%-60%.

Table 4 displays the multiple regression analysis focused on predicting the overall professional satisfaction associated with the work environment factors. The two work environment factors that significantly positively predicted the overall professional satisfaction are perception of income and patient relations (p-values<0.001). The final regression model accounted for approximately 23% of the total variance of the overall professional satisfaction.

Variables	Mean (SD*)	Mean score as Percentage %	Range		Classification
			Maximum	Minimum	
Devilry of care	3.63 (0.63)	72.6	5.00	1.33	Satisfied
Patient relations	3.60 (0.59)	72	5.00	1.50	Satisfied
Equipment and materials	3.51 (0.72)	70.2	5.00	1.00	Satisfied
Overall job satisfaction	2.97 (0.65)	59.4	4.88	1.13	Neutral
Staff	2.96 (0.68)	59.2	5.00	1.00	Neutral
Professional time	2.94 (0.68)	58.8	5.00	1.00	Neutral
Personal time	2.68 (0.88)	53.6	5.00	1.00	Neutral
Perception of income	2.46 (0.70)	49.2	5.00	1.00	Dissatisfied
Covid-19	1.97 (0.95)	39.4	5.00	1.00	Dissatisfied

Table 3. Rank order of job satisfaction variables based on mean score.

*SD: standard deviation.

Predictor variables	Unstandardized Coefficient	Se*	Standardized Coefficient	t-test	p-value ^ψ
Perception of income	0.52	0.05	0.34	8.9	<0.001
Patient relations	0.64	0.08	0.29	7.4	<0.001

Table 4. Variables prediction overall job satisfaction.

Adjusted R²=0.23, Fisher test value (F)=78.5, Se*: standard error, ^ψsignificant p-value<0.05.

Discussion

This study was carried out to measure job satisfaction among registered Jordanian dentists. A total of 516 registered dentists agreed and completed the survey for an overall response rate of 10.3%. This response rate was considered very low in comparison with other studies conducted in different parts of the world, e.g., China (47.4%), Saudi Arabia (55.5%), Dutch

(58.6%), South Korean (62.2%), United Arab Emarets (UAE) (71%).^{10, 12-15} However, our response rate is considered slightly better than Lo Sasso et al. who assessed job satisfaction in relation dental practice setting. They distributed their survey to 27782 dentists registered in the American dental association and only 2171 (7.8%) dentists responded to the survey.¹⁶

The mean of overall professional satisfaction was (2.97) out of 5 or (59.4%). This result is higher than that of Iranian dentists (30%),¹⁷ and slightly higher than Saudia Arabi dentists (58%)¹². While it is less than that of dentists working in South Korean (64%), China (65.6%), India (61.6%), UAE (71%), Lithuania (81.2%), Australia (82.6%) and Poland (90%).^{14,10,18,15, 19-21}

Male dentists in this study are significantly more satisfied than female dentists. This could be related to the fact that in our society, female dentists are trying to balance their professional careers with the competing marriage and childrearing responsibilities. However, literature revealed that job satisfaction varies according to gender, as an example, male dentists in New Zealand were found more satisfied than female dentists,⁸ while Chinese female dentists had higher total satisfaction scores than male dentists.¹⁰ In Turkey, the mean emotional exhaustion score of female dentists was significantly higher than that of male dentists. This was related to culture and emotional differences between sexes.²²

Similar to Egyptian dentists, marital status in our study has no significant effect on job satisfaction.²³ In UAE, single dentists were more satisfied with their jobs compared with married.¹⁵ Psychological studies revealed that married dentists were significantly associated with depressive symptom.²⁴

The effect of age on dentist job satisfaction was significant in some studies,²⁵⁻²⁶ while not in others.^{14, 23} Some researchers found significantly higher job satisfaction with increasing age,^{18, 20} while others found it in younger doctors.²¹ In this study, the level of satisfaction significantly increased with increasing age and years of experience. Increased satisfaction with more years of experience can be related to increased knowledge and skills to manage and cope better with patients and workload. In addition, with increased clinical experience most dentists are expected to be in better job position or a higher

academic degree. On the contrary, younger dentists have greater responsibilities and family commitments, still need to establish their positions, relationships with colleagues, patients, and staff. Younger age was among the most prevalent and significant factors associated with dentist's burnout.²⁷

Specialists in the present study are found significantly more satisfied than residents and general practitioners. The same result was reported by many researchers.^{9, 11, 18, 20} Furthermore, specialists reported significantly better quality of life compared to general practitioners in the psychosocial and environmental domain.²⁸ Our results regarding satisfaction in relation to a specific dental specialty revealed that restorative dentists were the most satisfied among other specialists, while periodontists were the least satisfied. Job satisfaction in relation to a specific specialty was investigated in many countries. Pediatric dentists in USA have a high level of job satisfaction, 92%.²⁹ Orthodontists working in Canada and endodontists working in Saudi Arabia have good job satisfaction with their professions with percentages of 79.3%, and 76.4% respectively.^{7, 30} However, in India nearly half of the public health dentist felt they are yet to achieve the accomplishment from their job and 85% of them felt public health dentistry training needs a major course correction.³¹

Working sectors for dentists in Jordan are divided into private, public, and universities. Royal Medical Services and Ministry of Health are included within the public sector. The highest satisfaction scores in this study were achieved among those who worked in private clinics as owners while the lowest among those who worked at the Ministry of Health. Similarly, Turkish dentists who work in public sector were significantly less satisfied than those working in private sectors and universities.³² Oweis et al. found that the best satisfaction score was found in dental practitioners who worked at the Jordanian universities.¹¹ In England, dentists working fully in the national health services were least likely to be satisfied with their jobs.⁹ It was reported that workplaces that offer flexible working hours may improve dentist job satisfaction.³³

In Jordan, the working hours for dentists in public sectors and universities range from 35 to 45 hours per week. In private sector, dentists'

working hours are more flexible and varies based on personal characteristics as well as on being owners or employees. The present study showed a significantly inverse relation between total job satisfaction scores and working hours per week. Our result is consistent with some researchers,¹¹ while not with others.¹⁴

Overall professional satisfaction which elucidates if dentistry fulfills dentist's job expectation or, on the contrary, s/he wishes to drop and do something else, revealed a neutral result with a mean score of 2.97.

Other studies revealed higher overall satisfaction, South Korean (3.24), China (3.28), India (3.08), UAE (3.55), Lithuania (4.06), Australia (4.13) and Poland (4.5).^{14,10,18,15, 19-21}

This study showed that overall professional satisfaction significantly increased with increasing age and decreasing working hours. However, unlike total job score, the best professional satisfaction score was found among dentists working in universities. The same result was achieved by Bates et al. (2013) who found that dentists working in academic positions were less stressed than in nonacademic settings.²⁹ Dentists in this study were most satisfied with delivery of care (72.6%), patient relation (72%), and equipment and materials (70.2%). Our result regarding patient relations is slightly less than that of South Korean and UAE who scored 77.9%, and 74% respectively.^{14, 15} Lower level of dental facilities and equipment were strongly believed to account for the dentists' dissatisfaction.¹⁷

Many studies found that staff and time are important environment factors for job satisfaction among dentists.^{18, 20} Neutral satisfaction in this research was scored for staff, professional time and personal time. Our results were consistent with South Korean dentists who showed neutral satisfaction with time-related factors,¹⁴ while Lithuanian dentists were dissatisfied with this issue.¹⁹ In Australia and Ghaziabad, they found differences in personal time satisfaction between male and female dentists.^{20, 33}

In this research, the lowest satisfaction apart from the impact of COVID-19 was perception of income. This coincides with Lithuanian dentists where their least satisfaction work aspects were social security and income.¹⁹ On the contrary, income was the most satisfying aspect among dental practitioners in Srikakulam, India.¹⁸ Low income was one of the main reasons

that Jordanian dentists will not choose dentistry again as a profession.¹¹

COVID-19 pandemic had a negative impact on dentists' mental health regarding many issues such as anxiety, concerns, stress, depression, job insecurity.³⁴ Jordan responded to the pandemic by implementing early lockdown from March 17, 2020, followed by the declaration of a state of emergency on March 20, 2020, and then by implementation of a curfew.³⁵ During the lockdown period, dental clinics were closed, and emergency dental treatments were restricted to a few clinics in military hospitals and the Ministry of Health. Substantial protective measures were implemented in functional dental clinics to prevent cross-infection and the spread of the virus. The COVID-19 pandemic had a significant effect on the number of patients seeking dental treatments, and on the types of treatments performed where endodontic treatment accounted for almost 50% of patient load during the lockdown compared to approximately 20% during regular days.³⁶

The multiple regression model shows that patient's relation and dentist's income were only significant predictors for overall job satisfaction. The regression model suggested that the dentists were more satisfied with their jobs when they have a better relationship with patients. In addition, they are more satisfied with their jobs as much as their income increased. These results are consistent with other studies.^{10, 14, 37}

This study was done during the spread of COVID-19 where people are already under severe stress due to pandemic which might affect their satisfaction. The respondent rate was low (10.3%), [[even in consistent with some other studies]].

Conclusions

Differences in job satisfaction exist among private and public sector dentist, and in relation to age, gender, training status, specialties, years of practice and working hours per week. In addition, patient relation and perception of income are associated to dentist overall job satisfaction. These factors need to be addressed to improve satisfaction rate of dentist in active clinical practice in different sectors in Jordan.

Declaration of Interest

The authors report no conflict of interest.

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