

Predictors and Level of Job Satisfaction among the Dental Workforce in National Guard Health Affairs

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INTRODUCTION

Job satisfaction is defined as “A pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences.”^[1] The ongoing demand around the world for dental care has increased over time.^[2] As a result, the pressure on the dental health-care workers to provide high-quality dental services is rising. This constant pressure greatly influences the factors leading to a low level of job satisfaction among the dental health-care workers.

Assessment of job satisfaction among health-care workers was first conducted in 1971 among laboratory

personnel working in the United States of America.^[3] Since then, plenty of researches around the world that assess job satisfaction among health-care workers such as physicians,^[4,5] dentists,^[6,7] and dental assistants^[8,9] have been conducted.

A high level of job satisfaction has been associated with better provision of health-care services, leading to

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ABSTRACT

Objective: To assess the level of job satisfaction among the dental workforce in the National Guard Health Affairs (NGHA) in Saudi Arabia and to explore any predictors that have impact on the level of satisfaction.

Materials and Methods: A cross-sectional study targeted dentists, dental assistants, dental hygienists, and dental lab technicians who are workers for the NGHA. A cluster random sampling procedure was conducted from seven dental centers. Data were collected through a self-reported questionnaire that was previously published. Satisfaction questions were related to (a) professional and personal life, (b) income and job security, (c) quality of service, and (d) prestige and self-perception domains. Data analysis included frequency distributions, and a comparison of mean using *t*-test was conducted using SPSS software.

Results: The response rate was 55.5%. The mean satisfaction score was 65.7 out of 112 (2.9 out of 5). Of the four domains pertaining to job satisfactions, the highest mean score was obtained for quality of service (4.2 out of 5), followed by prestige and self-perception (2.8 out of 5), professional and personal life (2.8 out of 5), and income and job security (2.6 out of 5). Non-Saudis were found to be significantly more satisfied in professional and personal life; however, Saudi dentists were more satisfied for income and job security and quality of services.

Conclusions: In general, the dental workforce practicing in NGHA experience a low level of job satisfaction. Professional and personal life, income and job security, and quality of services are all important factors affecting the level of job satisfaction.

KEYWORDS: Dental workforce, job satisfaction, Saudi Arabia

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a higher level of satisfaction among the patients. On the other hand, many studies have shown that a low level of job satisfaction leads to a poor performance by the health-care worker, resulting in patient's dissatisfaction.^[10] Therefore, maintaining a high level of job satisfaction is the primary element behind a worker's high performance.

The dental workforce in Saudi Arabia consists of dentists, dental assistants, dental hygienists, and dental laboratory technicians. Each one of those plays an integral part in the delivery and management of dental health-care services. Duties and tasks performed by these dental health-care workers differ. With varying responsibilities, factors affecting job satisfaction among the dental workforce differ, leading to a range in the level of satisfaction.

There has been insufficient research that inspects the level of job satisfaction among dental health-care workers in the Middle East. Particularly in Saudi Arabia, studies that assess job satisfaction are significantly scarce. One study recently conducted by Al Jazairy *et al.* showed that perception of income had the least satisfaction among dental assistants practicing in Saudi Arabia, whereas quality of service had the most satisfaction. It also showed that Saudi dental assistants are generally more satisfied than non-Saudis.^[9] The aim of this study is to assess the level of job satisfaction among the dental workforce in the National Guard Health Affairs (NGHA) in Saudi Arabia and to explore any predictors that have impact on the level of satisfaction.

MATERIALS AND METHODS

The present study comprises a cross-sectional study of the satisfaction of the dental health-care workers in NGHHA. Ethical approval of the study was approved by the IRB Committee at King Abdullah International Medical Research Center of Saudi Arabia (SP17/0560/R) before the commencement of the study. All participants were requested to sign consent forms before participating in the study.

The target population in this study was dentists, dental assistants, dental hygienists, and dental lab technicians who are currently workers for the NGHHA hospitals and clinics in Riyadh, Saudi Arabia. A list of dentists, dental assistants, dental hygienists, and laboratory technicians of 357 registered personnel in NGHHA, Riyadh, was obtained from the NGHHA administration. A cluster random sampling procedure was conducted by selecting the following seven dental centers as separate clusters: dental centers of King Abdulaziz Medical City, Badr, Hetteen, Al-Yarmouk, Um Al-Hamam, Derab, and Khashm Al-Aan. Inclusion criteria included all dental personnel in these centers. Dentists, dental assistants, dental hygienists, and lab technicians who are not

working full time were excluded from the study. Dentists who hold administrative positions were also excluded. These centers were visited several times over a period of 1 month starting from February, 2018, to increase the response rates.

The data were collected through prepared questionnaires which were intended to be filled by participants as self-reported questionnaires. It comprised the following sections: (1) sociodemographic variables containing eight questions including age, gender, nationality, occupation, dental specialty, years of experience, years working in NGHHA, and hours worked per week; (2) satisfaction statements of 29 questions related to four domains associated with job satisfaction: (a) professional and personal life, including questions related to having enough time to improve their skills, contact with other professionals and personal life, and flexibility of their schedules. (b) income and job security, including four questions about earnings and benefits received, in addition to job security. (c) quality of service, which comprised questions related to the use of skills and abilities to benefit the community by providing high-quality care. (d) prestige and self-perception, including questions inquiring about choosing dentistry and the tendency to encourage others to go in dentistry. The answers of these questions were based on a 5-point Likert scale that ranged from 0 to 4, with 0 being strongly disagree and 4 being strongly agree. This instrument was tested and published in South Korea in 2006.^[11]

A small pilot study which included ten participants was conducted to ensure that questions were comprehended well by the study participants and identify any problems with these questions. The questionnaire was then modified with few minor changes based on the outcome of the pilot study.

Collected questionnaires were entered and analyzed using the Statistical Package for the Social Sciences database software version 22 (IBM Inc., Chicago, IL, USA). Data analysis included frequency distributions with number, percentage means, and standard deviations. A sum of satisfaction scores was calculated, and comparisons of the mean sum of scores with other categorical variables were conducted using *t*-test and one-way analysis of variance. Level of significance was set as $P < 0.05$. 95% confidence interval was used to estimate the precision of our estimates.

RESULTS

Of the 357 practicing dental health-care workers in NGHHA in Riyadh, 198 agreed to participate. The overall response rate of this survey was 55.5%. The sociodemographic characteristics of the study population

are shown in Table 1. Approximately 62% of the participants were female and 38% were male. About two-thirds of the participants were aged 40 years or below and only 4.5% were aged 50 years or more. The most common participants were dentists (43.4%), followed by dental assistants (41.4%), dental lab technicians (11.1%), and, least commonly, dental hygienists (4%). More than half of the participating dental health-care workers were Saudis (52.5%), and about 58% had 10 years of experience or less and only 28% had worked with NGHA for 10 years or more. More than half of the participants worked up to 40 h per week and only 11 worked more than 50 h per week.

Table 2 presents the mean satisfaction score of the total study population. The overall mean score of satisfaction was 65.7 out of 112 (2.9 out of 5). Of the four domains pertaining to job satisfactions, the highest mean score was obtained for quality of service (4.2 out of 5), followed by prestige and self-perception (2.8 out of 5), professional and personal life (2.8 out of 5), and income and job security (2.6 out of 5).

The mean satisfaction score for professional and personal life, income and job security between dentists and dental auxiliaries, males and females, and Saudis and non-Saudis is presented in Table 3. For professional and personal life, non-Saudis were found to be significantly more satisfied than Saudis using independent samples *t*-test ($P = 0.01$). However, there was no significant difference in the mean satisfaction score for professional and personal life between males and females and dentists and dental auxiliaries ($P > 0.05$, using independent samples *t*-tests).

As for income and job security, dentists were more significantly satisfied than dental auxiliaries using independent samples *t*-test ($P = 0.004$), as well as Saudis were more satisfied than non-Saudis using independent samples *t*-test ($P = 0.01$). On the other hand, difference in satisfaction for income and job security between males and females was found insignificant.

Table 4 demonstrates the mean satisfaction score distribution of the quality of service and the prestige and self-perception domains using independent samples *t*-tests. Saudis were found to have a significantly ($P = 0.002$) higher mean of satisfaction than non-Saudis for quality of service, whereas there was no significant difference between dentists and dental auxiliaries or between males and females using independent samples *t*-test. For prestige and self-perception, differences in the mean score for satisfaction between dentists and dental auxiliaries, males and females, and Saudis and non-Saudis were all found to be insignificant using independent samples *t*-test ($P > 0.05$).

Table 1: Sociodemographic characteristics of the study sample

Variable	Category	n (%)
Sex	Male	75 (37.9)
	Female	123 (62.1)
Age (years)	20-30	52 (26.3)
	31-40	74 (37.4)
	41-50	63 (31.8)
	51 or more	9 (4.5)
	Occupation	Dentist
	Dental assistant	82 (41.4)
	Dental hygienist	8 (4)
	Dental lab technician	22 (11.1)
Nationality	Saudi	104 (52.5)
	Non-Saudi	91 (47.5)
Years of experience (years)	<5	50 (25.3)
	5-10	65 (32.8)
	>10	83 (41.9)
Years of working in NGHA	<5	82 (41.4)
	5-10	60 (30.3)
	>10	56 (28.3)
Hours worked per week	20-40	109 (55.1)
	41-50	78 (39.4)
	>50	11 (5.6)

Total $n=198$. NGHA=National Guard Health Affairs

Table 2: The mean satisfaction scores of the total study population

Factor	Mean	SD	Scores out of 5
Overall satisfaction (0-112)	65.7	10.4	2.9
Professional and personal life (0-52)	28.6	6.7	2.8
Income and job security (0-16)	8.3	2.4	2.6
Quality of service (0-16)	13.1	2.6	4.2
Prestige and self-perception (0-28)	15.7	3.7	2.8

Total $n=198$. SD=Standard deviation

DISCUSSION

The overall satisfaction of dentists and dental auxiliaries was low, corresponding to a score of 2.9 out of 5. The mean satisfaction scores of four domains vary from one to another. The satisfaction of the quality of services among dentists and dental auxiliaries was high (4.2 out of 5); however, the satisfaction of prestige and self-perception, professional and personal life, and income and job security was low, ranging from 2.6 to 2.8 out of 5. Saudis were more satisfied with the quality of service domain, whereas non-Saudis were satisfied more with professional and personal life. Dentists were more satisfied than dental auxiliaries with income and job security.

In an attempt to include all dentists and dental auxiliaries working in the NGHA in our study, we have identified a total of 357 dental personnel working in seven dental centers. Questionnaires were distributed to all of them

Table 3: The mean satisfaction score and the distribution of the professional and personal life and income and job security domains

	Group	Mean	SD	t	P
Professional and personal life (0-52)	Dentists	27.8	5.9	-1.5	0.14
	Dental auxiliaries	29.2	7.2		
	Males	28.3	5.7	-0.4	0.68
	Females	28.7	7.2		
	Saudi	27.4	6.5	-2.6	0.01*
Income and job security (0-16)	Non-Saudi	29.8	6.7		
	Dentists	8.6	1.9	2.04	0.04*
	Dental auxiliaries	7.9	2.7		
	Males	8.4	1.9	0.6	0.6
	Females	8.2	2.7		
Saudi	Saudi	8.5	2.1	1.5	0.01*
	Non-Saudi	8.0	2.7		

*Significant if $P \leq 0.05$ using independent samples *t*-test.
SD=Standard deviation

Table 4: The mean satisfaction score and the distribution of the quality of service and prestige and self-perception domains

	Group	Mean	SD	t	P
Quality of service (0-16)	Dentists	13.5	1.9	1.7	0.08
	Dental auxiliaries	12.8	2.9		
	Males	12.9	2.2	-0.9	0.3
	Females	13.2	2.7		
	Saudi	13.5	2.1	2.3	0.02*
Prestige and self-perception (0-28)	Non-Saudi	12.6	2.9		
	Dentists	16.1	3.5	1.3	0.2
	Dental auxiliaries	15.4	3.2		
	Males	15.8	3.4	0.2	0.8
	Females	15.6	3.4		
Saudi	Saudi	15.9	3.6	1.1	0.3
	Non-Saudi	15.4	3.1		

*Significant if $P \leq 0.05$ using independent samples *t*-test.
SD=Standard deviation

over several visits over a period of 1 month. However, the response rate was 55.5. This low response rate may be because of their busy schedules or lack of willingness to participate.^[12] Therefore, generalizability of the results of this survey to all dental health-care workers in the NGHA should be taken with precaution. In addition, generalizability of the results to all Saudi dentists and dental auxiliaries should be considered with uncertainty. It is possible that dentists and dental auxiliaries from other geographical areas may respond differently to the survey instrument used in this study.^[13]

Comparisons of the result of the present study with other studies revealed that the overall satisfaction scores of this study were low. The satisfaction scores in the present study were lower than that of studies conducted among dentists in China,^[7] Poland,^[14] South Korea

(score of 3.2 out of 5),^[11] Lithuania (score of 4.06 out of 5),^[6] and India.^[15] Furthermore, the mean scores of satisfaction among dental assistants reported in this study were lower than that reported earlier in Saudi Arabia by Aljazairy *et al.* reported in 2014.^[9] The considerably low mean satisfaction score in our study could be attributed to the professional and personal life of the dental health-care workers,^[16] their income and job security, and their perception of the prestige that comes with their job.^[17]

In our study, the lowest domain of satisfaction among dentists and dental auxiliaries was income and job security. This is consistent with many other studies where dentists and dental auxiliaries were least satisfied with the income they receive and how secure they feel they are with their jobs.^[9,18] On the other hand, the quality of the services provided by the participating dental health-care workers in our study had the highest mean satisfaction score. This comes in consistence with what has been reported by previous studies, in which dental health-care workers were satisfied with their quality of services more than any other factor.^[19-21]

Among the dental health-care workers participating in our study, dentists had a higher satisfaction for income and job security than dental auxiliaries. This result is similar to the findings of an Indian study which showed that dentists had greater job satisfaction than dental auxiliaries on their payment.^[19] This could be attributed to the fact that dental auxiliaries are generally paid less than dentists.

Furthermore, the study sample consisted of Saudis and non-Saudis, representing the current dental health-care workforce in Saudi Arabia. Results of this study showed that non-Saudis had a higher level of satisfaction than Saudis on the professional and personal life domain. This is consistent with that reported by Aljazairy *et al.*, where non-Saudi dental assistants were more satisfied than Saudi dental assistants with their professional and personal life.^[9] On the other hand, Saudis were more satisfied with their income and job security compared to non-Saudis. This could be attributed to the fact that the majority of the participating Saudis were dentists, whereas non-Saudis were mostly dental auxiliaries. In addition, Saudis had a higher satisfaction on the quality of service than non-Saudis. This has significance in stating that Saudis are more satisfied than non-Saudis with their skills and abilities to provide services for the community.

Nevertheless, in our study, there was no significant difference between dentists and dental auxiliaries in the mean score for overall satisfaction and other satisfaction

domains except income and job security. This comes in contrast to that reported by Jain *et al.*, where Indian dental auxiliaries were significantly more satisfied than dentists.^[19] This could be due to the fact that tasks required from dental auxiliaries in Saudi Arabia differ from those required from dental auxiliaries in other countries.^[9]

No statistically significant difference in the mean scores of satisfaction in the four main domains was observed between males and females. This is contrary to what was reported earlier that female dental practitioners are generally more satisfied than males.^[7,19,22]

Future research that investigates the level of job satisfaction among the dental workforce in Saudi Arabia on a national level is needed. More specifically, future research could look into the different factors that influence the level of job satisfaction within the different groups of dental auxiliaries (dental assistants, dental hygienists, and lab technicians), as well as into different dental specialties.

CONCLUSION

This study explored the level of job satisfaction among the dental workforce practicing in NGHHA, Riyadh, Saudi Arabia. Professional and personal life, quality of services, and income and job security were all important factors for job satisfaction among the dental workforce practicing in Saudi Arabia.

The dental workforce in NGHHA, Saudi Arabia, experiences a low level of job satisfaction compared to previously surveyed populations. Income and job security had the least satisfaction, whereas the highest satisfaction was for the quality of services provided. Non-Saudis were more satisfied than Saudis with their professional and personal life, whereas Saudis were more satisfied with their income and job security and the quality of services they provide. Dentists were more satisfied than dental auxiliaries with the income they receive.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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