An assessment of job satisfaction: A cross-sectional study among orthodontists of Saudi Arabia

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Abstract:

AIM OF THE STUDY: The main objective of the present study was to investigate the level of job satisfaction among professional orthodontists in relation to some significant intrinsic and extrinsic factors that generally affect their performance.

MATERIALS AND METHODS: A cross-sectional study was conducted among orthodontists working in the Kingdom of Saudi Arabia using an online survey questionnaire through Survey Monkey. A total of 161 responses were received; among those, 57.8% of the respondents were Saudi and 42.2% were non-Saudi.

RESULTS: On an overall satisfaction basis, a majority of orthodontists (80.7%) were satisfied with orthodontics as their profession irrespective of their gender. Only 4.4% showed dissatisfaction, whereas the remaining 14.9% were moderately satisfied with orthodontics as a profession. In-depth analysis revealed that a majority of the respondents (56.2%) showed reservations over having ample time for their family life. 52.8% of the respondents strongly agreed that they are assigned significant paperwork. Likewise, 66.5% of the orthodontists showed moderate to dissatisfaction over time adherence by the patients.

CONCLUSION: The findings of the present investigations depicted a higher level of passion and commitment among the male and female respondents for the profession in spite of the fact that they do not have adequate time for their personal life. The working efficiency of orthodontists may be significantly enhanced by sparing them from too much paperwork and ensuring that their patients appear on time.

Keywords: Adherence to appointment time, job satisfaction, orthodontist, quality of life, working environment

Introduction

Dentistry is one of the most prestigious and rewarding professions among the medical sciences. Advancement in this profession depends upon several occupational factors that contribute toward a successful dental practice. The significant factors influencing dental practice include the knowledge and attitudes of the practitioners, facilities and equipment, working environment, patient satisfaction, personal development opportunities, and characteristics of the healthcare system. All these factors directly and indirectly influence the job satisfaction of the dentists as well as of the auxiliary staff. Thus, by measuring the job satisfaction of dental practitioners, one can easily predict the quality of the dental practice and credibility of the healthcare delivery system of any dental institution. Job satisfaction ensures the loyalty and commitment of the practitioners to their organization and leads to organizational excellence. Practitioners

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with lower job satisfaction generally exhibit a lack of dedication and are likely to quit their jobs, resulting in the poor performance of their organization.\(^9\) Measurement of job satisfaction is significant in the field of dentistry because it involves a one-to-one relationship between dentists and their patients; thus, a number of other factors such as tolerance level, psychological stability, patients’ attitude, professional working environment, cooperation level and competency of the auxiliary staff, perception of income, and professional time also influence job satisfaction of the dentists.\(^{10}\) Studies have revealed that lowered job satisfaction among healthcare workers is directly linked to increased stress level as well as burnout\(^{11,12}\) and negatively affects patients’ level of satisfaction\(^{13}\) as well as their trust in the dental care delivery system. That is why health organizations regularly conduct job satisfaction surveys and attribute significant importance to the results to identify areas for further improvement. As far as dentistry is concerned, job satisfaction surveys have mostly been conducted among general practitioners. Very few studies have employed job satisfaction surveys of different specialties within the dental field. However, the literature reveals that there are just two to three studies wherein surveys were conducted among orthodontists.\(^{10,14}\)

Job satisfaction studies among orthodontists are very important because most of their patients are children and teenagers who need highly focused orthodontic treatment to resolve their bite problems, speech impediments, protruding teeth, crowded front teeth, and ability to chew and digest foods properly, besides improving their facial symmetry and aesthetics. That is why the American Association of Orthodontists suggests that children should be examined and evaluated at the age of 7 to detect problems at an early age.\(^{15}\) The orthodontic treatment of children differentiates orthodontists from other specialties because the field generally involves long-term interaction with children, which requires special psychological treatment by orthodontists, wherein they must first eliminate children’s fear of pain and dental treatment procedures and to prepare them for the orthodontic treatment procedures, including the use of a computer-controlled local anesthetic delivery system.\(^{16}\) The literature reveals that approximately 75% of patients with disability need orthodontic treatment to achieve optimal oral function, occlusal relationship, and esthetic appearance.\(^{17-19}\) Job satisfaction studies of orthodontics, therefore, require additional survey questions such as the age of the orthodontist, stress factors, length of experience in orthodontic practice, academic qualifications, convenient office location, staff compatibility, and advancement opportunities.\(^{20}\) These questions are in addition to those used in the most widely reported Dental Satisfaction Surveys,\(^{21-25}\) wherein more than 60 items have been used for the assessment of job satisfaction. Studying job satisfaction is important because of its reported influence on a person’s physical and mental well-being and its possible effects on job-related behaviors and performance.\(^{10}\) If the working conditions of orthodontists are improved, it is likely that both their quality of life and performance level will significantly improve.

Keeping in view the vital role of orthodontists in the dental healthcare delivery system, the present investigation was conducted to evaluate overall job satisfaction among orthodontists working in the Kingdom of Saudi Arabia (KSA). The results of the present investigation will not only highlight significant intrinsic and extrinsic factors that influence the performance of orthodontists but also help in improving overall performance in the field of orthodontics.

### Materials and Methods

A formal approval of the research proposal was sought from the College of Dentistry Research Center (CDRC) with registration number IR 0159 for the execution and ethical approval of the study.

**Survey instrument development**

A systematic review of literature on job satisfaction among orthodontists and general practitioners was done, and the questions used in the previous studies were considered and selected for inclusion in the present investigation.\(^{18-8,10,17-21-25}\) The authors met with senior orthodontists from the Pediatric Dentistry and Orthodontics Department of the College of Dentistry, King Saud University and asked them to rate the selected questions on a scale of 1–10 using the Aiken V index. The questions scoring 70% weight by the orthodontists were selected for inclusion in the job satisfaction survey.\(^{20}\) The final job satisfaction survey comprised 20 questions, including significant intrinsic and extrinsic factors such as the age of the orthodontist, length of experience, academic qualifications, compatibility of supporting staff, patient relations, respect, delivery of care, professional relations, staff, professional environment, perception of income, professional time, practice management, personal time, etc. The survey form was made online using Survey Monkey instrument. A five-point Likert scale was employed to measure responses under five categories: “strongly disagree,” “disagree,” “fair,” “agree,” and “strongly agree,” which were later coded as 1, 2, 3, 4, and 5, respectively. The Saudi Orthodontist Society was asked to email the survey link to all the orthodontists registered with the Society in the Kingdom.

### Study population and the response rate

All orthodontists registered with the Saudi Orthodontist Society having work experience in the Kingdom were
considered the population of the study. The Survey Monkey link was forwarded to all respondents through their emails. Out of 1200 valid emails, responses were received from 161 orthodontists for a response rate of 13.4%, including 57.8% Saudi and 42.2% non-Saudi orthodontists.

**Statistical analysis**
The responses were decoded in accordance with the five-point Likert scale. Responses under “strongly disagree” were coded as 1, whereas those under “strongly agree” were coded as 5 and so on, respectively. The coded data were then subjected to descriptive analysis using the Statistical Package for the Social Sciences software version 21 (SPSS Inc., Chicago, IL, USA). Means, standard deviations, percentages, and t-tests were also employed to determine significant differences among the responses.

**Results**
The results of the present investigation revealed highly significant differences among responses to different questions at the $P < 0.05$ level of probability. Out of the total population (1200) of this study, 161 male and female orthodontists responded to the survey for a percentage of 13.4%.

**Sociodemographic characteristics, academic, and professional qualifications**
The distribution of the respondents over demographic factors showed that 57.8% (93) of the respondents were Saudi national, whereas 42.2% (68) were non-Saudis. Gender analysis indicated that 107 respondents (66.5%) were males, whereas 54 (33.5%) were female orthodontists.

Regarding age, 22 respondents (13.7%) were below 30 years of age, whereas 139 respondents were above 30 years of age (86.3%) [Table 1].

Table 2 lists academic qualifications of the respondents; 89 (55.3%) were Saudi Board Qualified, 39 (24.2%) had an MSc qualification, and 33 (20.5%) had other qualifications, such as an MDS, PhD, and so on.

The results further revealed that, out of the total respondents, 71 (44.1%) completed their residency program within the KSA, whereas the remaining...
90 (55.9%) respondents completed their residency in other countries. Table 2 also shows that a majority of the respondents, 84 (52.2%) completed >5 years in a residency program, whereas 77 respondents spent <5 years in a residency training program.

Information about length of work experience and pace of work is given in Table 3, which indicates that a majority of the orthodontists fall in a group with 3–8 years of professional experience, followed by 41 respondents who possessed <3 years’ experience, 30 respondents with 9–15 years of experience, and 27 in the very experienced group with 16–25 years of professional experience. It is also evident from Table 3 that out of the total 161 respondents, 90 (55.9%) orthodontists were engaged in private practice, followed by 50 respondents (31.1%) employed by the Ministry of Health and 21 (6.2%) employed in other organizations.

Motivation behind my choice of orthodontics as my specialty
As is evident from Table 4, a majority of the respondents, 71 (28.63%), reported “professional growth” as the main reason for choosing orthodontics as their profession. This was followed by “challenging profession,” “financial gains,” “prestigious specialty,” and “family influence.”

Respondents’ satisfaction with the orthodontics profession
The results presented in Table 5 revealed that a huge majority of the respondents, 142 (88.2%), stated that orthodontics as a specialty was their first choice. This was further obvious from the fact that 80.7% of the respondents were satisfied with their job as orthodontists. However, 60.9% of the respondents were not satisfied with the income from their orthodontic practice; likewise, 56.2% of the respondents did not have adequate time for their families.

Respondents’ satisfaction with the workplace environment
Regarding the satisfaction of the respondents about their orthodontics practice and workplace environment, 83.2% of the respondents stated that their responsibilities are well defined. 80.7% of the respondents affirmed that their practice is recognized and appreciated by professional colleagues. Likewise, 72.7% of the respondents agreed that their professional colleagues are kind and enjoy working

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**Table 3: Respondents’ work experience and related information**

| Work Experience       | Frequency | Percent | Valid percent | Cumulative percent | Significance |
|-----------------------|-----------|---------|---------------|--------------------|--------------|
| Total length of experience |           |         |               |                    | <0.001       |
| 16-25 years           | 27        | 16.8    | 16.8          | 16.8               |              |
| 3-8 years             | 63        | 39.1    | 39.1          | 55.9               |              |
| 9-15 years            | 30        | 18.6    | 18.6          | 74.5               |              |
| <3 years              | 41        | 25.5    | 25.5          | 100.0              |              |
| Where do you work?    |           |         |               |                    | <0.001       |
| Private practice      | 90        | 55.9    | 55.9          | 55.9               |              |
| Ministry of Health    | 50        | 31.1    | 31.1          | 87.0               |              |
| Other                 | 21        | 6.2     | 6.2           | 93.2               |              |

**Table 4: Respondents’ motivation for choosing orthodontics**

| Reason for choosing orthodontics | Frequency | Percent | Valid percent | Cumulative percent | Significance |
|----------------------------------|-----------|---------|---------------|--------------------|--------------|
| Professional growth              | 71        | 28.63   | 28.63         | 28.63              | <0.001       |
| Prestigious specialty            | 46        | 18.55   | 18.55         | 47.18              | <0.001       |
| Challenging profession           | 65        | 26.20   | 26.20         | 73.38              | <0.001       |
| Family influence                 | 15        | 6.05    | 6.05          | 79.44              | <0.001       |
| Financial gains                  | 51        | 20.56   | 20.56         | 100.0              | <0.001       |

**Table 5: Satisfaction factors related to the orthodontic profession**

| Satisfaction factor                                      | Strongly agree | Fair | Strongly disagree | Significance |
|----------------------------------------------------------|----------------|------|-------------------|--------------|
| Orthodontic specialty was my first choice                | 88.2%          | 8.1% | 3.7%              | <0.001       |
| I am generally satisfied with my income related to my orthodontic practice | 60.9%          | 26.1%| 13%               | <0.001       |
| Adequate time for personal and family life               | 43.8%          | 23%  | 33.2%             | <0.001       |
| Medical and dental treatment services provided to me as an orthodontist | 67%            | 23.6%| 9.4%              | <0.001       |
| Overall, I am satisfied with my job as an orthodontist   | 80.7%          | 14.9%| 4.4%              | <0.001       |
as team, though 52.8% of the respondents asserted that their professional capabilities are hampered by paperwork and administrative duties assigned to them [Table 6].

Respondents’ satisfaction related to resources, facilities, and staff
The results presented in Table 7 show that 68.7% of the respondents were satisfied with the adequacy of the resources and facilities provided to them for the delivery of orthodontics treatment to their patients. This was followed by their satisfaction with the work quality of dental assistants and dental technicians.

Respondents’ satisfaction with their relationship with their patients
Analysis of the results presented in Table 8 indicated that 85.1% of the orthodontists were of the view that prolonged orthodontic treatment is considered a major problem by their patients. Although 65.8% of the respondents were satisfied with the attitude and respect given to them by patients, 66.5% of the respondents agreed that their patients were never on time and did not adhere to the appointment schedule. Likewise, 62.1% of the respondents agreed that the retention phase of the orthodontic treatment was a cause of stress to them. In contrast, significant number of their patients had unrealistic expectations regarding the outcome of their orthodontic treatment.

Discussion
Job satisfaction is an indication of a person’s attitude toward his profession. This study was undertaken to measure professional satisfaction among orthodontists working in Saudi Arabia. In this cross-sectional study, a customized questionnaire was used to assess the professional satisfaction of the respondents. A total of 161 orthodontists out of a population of 1200 working orthodontists responded to the survey for a response rate of 13.4%. The low response rate may be attributed to their busy schedule in clinical settings, class workload, and other official engagements. The findings are consistent

Table 6: Respondents’ satisfaction with the workplace environment

| Satisfaction factor                                                   | Strongly agree + agree | Fair | Strongly disagree + disagree | Significance |
|---------------------------------------------------------------------|------------------------|------|-----------------------------|-------------|
| I am satisfied with the working environment within the practice team in my workplace | 68.9%                  | 24.8%| 6.3%                        | <0.001      |
| Professional colleagues in my workplace are kind and enjoy working as a team | 72.7%                  | 25.5%| 1.8%                        | <0.001      |
| My orthodontic practice is recognized and appreciated by professional colleagues in my workplace | 80.7%                  | 14.9%| 4.4%                        | <0.001      |
| I feel no communication problem with staff                          | 68.3%                  | 27%  | 3.7%                        | <0.001      |
| Significant paperwork and administrative duties assigned to me affect my professional capabilities | 52.8%                  | 34.2%| 13%                         | <0.001      |
| Job description and responsibilities are well defined                | 83.2%                  | 14.9%| 1.9%                        | <0.001      |
| My workplace supports my professional development to improve the efficiency and quality of work | 62.1%                  | 29.2%| 8.7%                        | <0.001      |

Table 7: Respondents’ satisfaction with staff and facilities

| Satisfaction factor                                                   | Strongly agree + agree | Fair | Strongly disagree + disagree | Significance |
|---------------------------------------------------------------------|------------------------|------|-----------------------------|-------------|
| Facilities and resources in my workplace are adequate for delivery of orthodontic care to patients | 68.7%                  | 23.6%| 7.7%                        | <0.001      |
| Work quality of auxiliary staff, e.g., dental assistants, technicians | 62.7%                  | 27.3%| 10%                         | <0.001      |

Table 8: Respondents’ satisfaction about their relationship with patients

| Satisfaction factor                                                   | Strongly agree + agree | Fair | Strongly disagree + disagree | Significance |
|---------------------------------------------------------------------|------------------------|------|-----------------------------|-------------|
| Prolonged orthodontic treatment is considered a major problem by the patients | 85.1%                  | 12.4%| 3.5%                        | <0.001      |
| Retention phase of the orthodontic treatment often stresses me after treating the patients | 62.1%                  | 27.9%| 10%                         | <0.001      |
| I feel no communication problem with my patients                     | 63.9%                  | 29.8%| 6.3%                        | <0.001      |
| Patients are always on time and adhere to the appointment schedule   | 33.5%                  | 31.7%| 34.8%                       | <0.001      |
| Significant numbers of my patients have unrealistic expectations regarding the outcome of orthodontic treatment | 60.9%                  | 26%  | 13.1%                       | <0.001      |
| I am satisfied by the patients’ attitude and the respect given to me | 65.8%                  | 26.7%| 7.5%                        | <0.001      |
with those of Al-Jewair et al.,[27] who also reported a 13.9% response rate while studying retention practices and factors affecting retainer choice among orthodontists in Saudi Arabia. Martins et al.[28] received the same percentage of responses while studying the attitudes of Brazilian orthodontists toward the diagnosis and management of migraine. Walter et al.[29] reported an extremely low response rate of 7.6%. All these findings prove that orthodontists are generally the busiest professionals in the dental healthcare community. Their tight schedules generally prohibit them from responding to electronic or manual surveys. The main strength of our study is that there has been little research on job satisfaction in Saudi Arabia. This is the first research on satisfaction among orthodontists in the Kingdom.

The survey questionnaires were comprehensive and varied. The questions were related to many factors, including patient relations, overall quality of life, respect, delivery of care, professional relations, staff, professional environment, perception of income, professional time, practice management, personal time, and so on. In addition, the survey was conducted online using a Survey Monkey link, which makes the results more accurate than a manual survey. The survey was not confined to one area of the KSA; it was emailed to and completed by orthodontists working in different regions of the Kingdom. However, our sample may not be 100% representative of the entire population of Saudi orthodontists because of the lack of completed survey forms; i.e., we had 161 (13.4%) respondents compared to a Canadian[27] sample of 319 respondents (51.2%). The results of the present investigation focused on satisfaction levels among orthodontists in relation to supporting staff and facilities, income, professional relations, professional time, and overall professional satisfaction.

The categorization of the overall job satisfaction scale revealed that approximately 80.7% of the orthodontists are satisfied with their profession. This percentage of overall satisfaction is very close to the level of job satisfaction reported in a Canadian study.[30] The higher level of overall job satisfaction might be attributed to the fact that 88.2% of the respondents had chosen orthodontics as their first choice. The findings are in agreement with those of Sam,[31] who reported that 85.1% of the undergraduate students in his study decided to choose orthodontics as their professional career before graduation. Gallagher and Resmi Nairn[32] from the King’s College London Dental Institute also reported orthodontics as the most popular career choice among dental specialties equivalent to restorative dentistry. Analysis of the motivational factors behind the choice of this discipline presented in Table 4 indicated that “professional growth” was considered the top motivational factor by many respondents, 71 (28.63%), followed by “challenging profession” by 65 (26.2%) respondents. The findings are in contradiction to those of previous studies conducted by Al-Hamlan et al.[33] in the KSA as well as by Keith in the USA,[34] and UK,[35] wherein “prestige” and a “challenging nature” were considered the top motives for the choice of orthodontics as a future career.[36] The findings therefore reflect a mature and advanced attitude of respondents in choosing their career path because professional growth as a factor is advanced as compared to the prestige and challenging nature of the job. Financial gain as a motivating factor was ranked third, as 51 (20.56%) respondents correlated their choice of specialty with this factor, which shows that the study respondents preferred professional development over financial gain, which is contrary to the earlier findings wherein 66% of dental residents in the USA cited financial benefits as the top reason for choosing the orthodontic specialty for their future career.[37]

However, despite all this satisfaction with their chosen career, respondents in the present investigation revealed that they did not have adequate time for their family life. Table 5 indicates that 56.2% of the respondents were dissatisfied about adequacy of time for their family life. The results are in conformity with those of a study conducted in New Zealand by Soma et al.,[38] wherein it was reported that orthodontists generally feel regret for not spending adequate time with their children and families because of work pressure. He concluded that, while performing their role as orthodontists, several practitioners must compromise on other important roles such as that of a father, spouse, or caretaker in family life. Female orthodontists have been reported to be more affected than their male counterparts. Although the respondents were satisfied with the workplace environment, including well-defined job descriptions, appreciation by seniors, cooperation by colleagues, and communication with staff, yet 52% of the respondents were of the view that administrative duties and paperwork assigned to them hampers their performance and professional capabilities. The findings are in agreement with those of Robert and Charmine, who reported office management as highly stressful factors for dentists.[39] Likewise, 66.5% of the respondents opined that their patients generally do not adhere to the appointment schedule. Late arrival of patients had already been reported as a source of stress by orthodontists in earlier studies conducted worldwide.[30,35,40] Similarly, other factors mentioned above also affected the job satisfaction of the respondents. Our findings are in line with those of Roth et al.,[41] who reported that high job satisfaction is directly related to occupational stress. It is, therefore, suggested that an investigation be carried out to explore the relationship between job satisfaction and the occupational stress of orthodontists working in the KSA, as well as comparing the results of the orthodontic specialty with different dental specialties.
Conclusion

The findings of the present investigation indicated that orthodontics is a field where professionals have passion and ambitions for their professional growth and development. Furthermore, orthodontists rank this field as highly prestigious as well as high paying. At the same time, they feel that their profession engages them to an extent that they do not find ample time for their personal and family life. The main concerns of the orthodontists revealed in this investigation include too much paperwork as well as patients’ poor adherence to their appointment times. It is, therefore, concluded that the working efficiency of orthodontists may be further improved by addressing these points. We hope that the present findings will help policymakers to take appropriate measures to improve the working conditions of orthodontists, which will definitely result in improved care for the patients.

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Conflicts of interest

There are no conflicts of interest.

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