

## Occupational Stress and Job Satisfaction in Prosthodontists working in Kingdom of Saudi Arabia

Nawaf Labban\*, Sulieman S. Al-Johany, Hanan Al-Otaibi, Sara Alfadda, Nouf Al-Shibani, Reem Al-Kattan and Sahar Faisal Albarakati

<sup>a</sup>*Nawaf Labban. BDS, MSD, P.G. Cert., PhD. Department of Prosthetic Dental Science. College of Dentistry, King Saud University, Riyadh, Saudi Arabia.*

<sup>b</sup>*Sulieman S. Al-Johany. BDS, MSD, DABP. Department of Prosthetic Dental Science. College of Dentistry, King Saud University, Riyadh, Saudi Arabia.*

<sup>c</sup>*Hanan Al-Otaibi. BDS, MSc. Department of Prosthetic Dental Science. College of Dentistry, King Saud University, Riyadh, Saudi Arabia.*

<sup>d</sup>*Sara Alfadda. BDS, MSc, PhD. Department of Prosthetic Dental Science. College of Dentistry, King Saud University, Riyadh, Saudi Arabia.*

<sup>e</sup>*Nouf Al-Shibani, BDS, MSD, PhD. Department of Periodontics and Community Dentistry. College of Dentistry, King Saud University. Riyadh, Saudi Arabia.*

<sup>f</sup>*Reem Al-Kattan BDS, MclinDent. Department of Periodontics and Community Dentistry. College of Dentistry, King Saud University. Riyadh, Saudi Arabia.*

<sup>g</sup>*Sahar Faisal Albarakati BDS, MS, Cert Ortho. Division of Orthodontics. Department of Paediatric Dentistry and Orthodontics, College of Dentistry, King Saud University.*

### ABSTRACT

The aim of the present study was to appraise the stress levels and job satisfaction among prosthodontists working in KSA among different domains. A cross sectional survey (a type of observational study design) was conducted among prosthodontists. Information regarding prosthodontists were obtained from Saudi dental society. A questionnaire along with consent form was sent through monkey survey tool. The questionnaire was distributed into 5 domains with a total of 60 questions. Out of the 200 emails sent to the prosthodontists, 117 (58.5%) of the responses were obtained. Descriptive analysis tabulation was done by using SPSS version 22. Means and standard deviation were calculated among different domains. By applying ANOVA and comparing mean score comparison between different domain. 117 participants included in the study, of whom 86 (73.5%) were females and 31 (26.5%) were male respondents. Majority of the samples taken from participants were from age 31-40 years [54 (46.2%)] and 41-50 years [41 (35.0%)]. Most of the samples 36.8% had clinical experience between 3-8 years, and majority of them 32.5% spent more than 25 hours working in clinic per week. Most of the respondents were Saudi Nationals. 42.7% dentists expressed that 'frustration with the quality of lab work' is a reason of regret choosing prosthodontics profession as a specialty. 67.4% respondents expressed that they were passionate about the profession as it's a challenging one. 50.4% participants were of the view that they will opt for 'Prosthodontics' specialty if again given the opportunity. Overall, mean scores regarding Quality of Life (QoL) & Job Satisfaction as Prosthodontist were satisfactory. The job satisfaction and stress levels among prosthodontists working in KSA was satisfactory. However, work should be done in trying to minimize work related stress by minimizing clinical commitment better preparation of technicians which will indirectly influence job satisfaction and stress levels.

**KEY WORDS:** JOB SATISFACTION, STRESS, PROSTHODONTICS, DENTISTS, SAUDI ARABIA.

**Article Information:**\*Corresponding Author: [nalabban@ksu.edu.sa](mailto:nalabban@ksu.edu.sa)

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## INTRODUCTION

Some degree of work-related stress amongst healthcare professionals promotes competition and improves the quality of health services. However, a problem may arise when work related stress is chronic and adversely effects the physical and mental state compromising quality of life (QoL). Unfortunately, dental care professionals have known to experience high stress levels and dentistry is considered to be most stressful profession with the highest suicidal rate ( Sancho and Ruiz, 2010, Pouradeli *et al.*, 2016; Dehnad *et al.*, 2016). A study in UK displayed that approximately 86% of dentists experienced high stress level at workplace (Kay and Lowe, 2008). Available recent evidence also suggests a probable reason for high stress amongst dentists

are administrative issues, management of difficult and anxious patient, income, high travelling time, demands of work, exposure to toxic substances and long working hours, ( Dehnad *et al.*, 2016 Bhat and Nyathi, 2019 ). Amongst dental specialties prosthodontists and peadodontists experienced high stress levels associated to time, staff/technicians and patient (Newton *et al.*, 2002). A recent survey on job satisfaction and stress levels among orthodontists by Alqahtani *et al.*, (2018) proclaimed orthodontists working in Kingdom of Saudi Arabia (KSA) to be content with their job with low stress levels. Similarly, a study by Hebbal and Nair, (2012) stated that prosthodontists working in Indian institutes were found to be satisfied with teaching facilities but unsatisfied with teaching incentives and rewards. The study did not measure level of

Table 1. Demographic characteristics of the surveyed sample and their relationships to the general stress score

Variable	Categories	Frequency n (%)	General Stress Score (mean+SD)	Test value (P)
Age of the respondents	< 30 years	7 (6.0)	1.34+1.68	1.848 (0.125)
	31-40 years	54 (46.2)	1.36+0.18	
	41-50 years	41 (35.0)	2.74+1.35	
	51-60 years	11 (9.4)	2.36+1.57	
	>60 years	4 (3.4)	3.20+0.53	
Gender	Male	31 (26.5)	2.57+1.43	0.295 (0.588)
	Female	86 (73.5)	3.73+1.31	
Marital Status	Single	11 (9.4)	2.63+1.33	0.279 (0.757)
	Married	103 (88.0)	3.62+1.41	
	Divorced	3 (2.6)	2.01+1.74	
Education	Cert Prosthodontics	26 (22.2)	2.94+1.29	2.307 (0.080)
	M.Sc & Cert.	44 (37.6)	2.68+1.43	
	Prosthodontic			
	Ph.D	27 (23.1)	2.99+1.03	
	Not answered	20 (17.1)	2.99+1.03	
Workplace	Government	55 (47.0)	2.49+1.58	0.778 (0.462)
	Private	38 (32.5)	2.84+1.21	
	University	24 (20.5)	2.51+1.24	

stress and stressors among prosthodontists. To our knowledge from indexed literature, there are no studies done to evaluate the level of stress and job satisfaction amongst prosthodontics working in KSA, which makes this study unique and distinctive. Therefore, the aim of the present study was to appraise the stress levels and job satisfaction among prosthodontists working in KSA among different domains.

## MATERIAL AND METHODS

A cross sectional survey (a type of observational study design) was conducted in Riyadh approved by the ethical committee of King Saud University, Riyadh KSA to evaluate level of stress among Prosthodontics. The study was in accordance to STROBE checklist for reporting cross sectional study design. The study was registered in King Saud University under ethical number (E-18-3360). The data from the respondents for this observational study were gathered in a span of three months i.e., August 2019 to October 2019. Information (email addresses) of licensed prosthodontics were obtained from the Saudi Dental Society. A link containing details of questionnaire was sent to all registered prosthodontics through survey monkey tool. A sample size of 100 participants were adequate

but, since potential dropouts, non-respondents, and drop to follow up were foreseen a sample population of 200 prosthodontics were enrolled. The size of the sample was determined based on standard deviations and means scores for subscale questionnaire stated by (Wilson et al., 1998) effect size equivalent to 33% of the mean score for each subscale, with alpha=0.05 and power=0.80. Along with the questionnaire an informed consent was also mailed to the participants. The questionnaire was distributed into 5 domains with a total of 60 questions. Some of the questions were adopted and modified from a study by (Almusined et al.,2018) A group of statisticians along with subject specialists reviewed the content, did paraphrasing and modifications of the questions. A pilot study was initially performed amongst the prosthodontist to validate the components and internal consistency of the questionnaire (Cronbach's  $\alpha=0.070$ ).

The answers were computed using a four-point Likert Scale implied as, 1 strongly disagree; 2 disagree; 3 agree; 4 strongly agree. Out of the 200 emails sent to the prosthodontists, 117 (58.5%) of the responses were obtained. To minimize bias all responses were evaluated by a single investigator. Descriptive analysis tabulation was done by using SPSS version 22 (SPSS Inc., Chicago, IL, USA).

Table 2. Professional characteristics of the surveyed sample and general stress score

Variable	Categories	Frequency n (%)	General Stress score (mean+SD)	Test value (P)
Years of experience	<3 years	15 (12.8)	2.45+1.63	6.786 (0.000)
	3-8 years	43 (36.8)	2.72+1.37	
	9-15 years	27 (23.1)	2.90+1.16	
	16-25 years	17 (14.5)	2.97+0.90	
	>25 years	15 (12.8)	2.80+1.19	
Working hours / week	<25	38 (32.5)	2.76+1.15	8.096 (0.000)
	25-35	33 (28.2)	2.68+1.52	
	36-45	26 (22.2)	2.85+1.31	
	>45	20 (17.1)	2.90+0.93	
Nationality	Non-Saudi	18 (15.4)	2.65+1.44	0.591 (0.443)
	Saudi	99 (84.6)	2.37+1.14	

Means and standard deviation were calculated among different domains. By applying ANOVA and comparing mean score comparison between demographics, professional characteristics, regrets & motivations for choosing Prosthodontic.

## RESULTS AND DISCUSSION

There were 117 participants included in the study, of whom 86 (73.5%) were females and 31 (26.5%) were male respondents. Table 1 presents the relationships between the general stress score and demographic characteristics of the study sample. Majority of the samples taken from participants were from age 31-40 years [54 (46.2%)] and 41-50 years [41 (35.0%)]. Around, 23.1% were Ph.D. while majority 37.6% were M.Sc & Cert. Prosthodontic. Most of the dentists were doing practice in government setup 47.0% then in private sector 32.5% and in universities 20.5%. Table 2 shows the interaction between the general stress score and respondents' professional characteristics. Most of the samples 36.8% had clinical experience between 3-8 years, and majority of them 32.5% spent more than 25 hours working in clinic per week. Of all examined professional characteristics, the general stress score was significantly correlated to working

hours/week and years of experience. There were 84.6% professionals who were Saudi national then 15.4% non-Saudi nationals. 42.7% dentists expressed that 'frustration with the quality of lab work' is a reason of regret choosing prosthodontics profession as a specialty. Whereas, 30.8% dentists informed that 'physical pain i.e., back pain is a source of regret to practice prosthodontics specialty. Moreover, 25.6% expressed that 'multiple and complicated steps of prosthodontics treatment' also contribute to regret in choosing prosthodontics as a profession. However, among the factors responsible for motivations behind the choice of prosthodontics as a specialty.

35% of the prosthodontists proclaimed that 'prosthodontics ensures professional growth and better job opportunities', following by 67.4% respondents expressing that they were passionate about the profession as it's a challenging one. (Table 3). Table 4 demonstrates the respondent's expression when queried about 'which specialty would they choose if times comes again'. Among 117 respondents, 50.4% participants were of the view that they will opt for 'Prosthodontics' specialty and around 18.8% participants chose 'Orthodontics' as a specialty. This was followed by 5.1% of dentists taking 'Endodontics' as

Table 3. Respondents Regrets & Motivations for choosing Prosthodontic

	Frequency	Percent
<b>What is/are the reason/s behind your regret for choosing Prosthodontics as a specialty?</b>		
Frustration with the quality of lab work.	50	42.7
Physical pain (ex. Back pain)	36	30.8
Long working hours in the clinic compared to other specialties	28	23.9
Multiple and complicated steps of Prosthodontics treatment	30	25.6
Dealing with the same patient for a long time.	20	17.1
Relatively high cost of the materials needed to prepare a Prosthodontics clinic	16	13.7
The need for collaboration with other specialties in order to prepare a case for Prosthodontics clinic	28	23.9
<b>I am satisfied with my profession as prosthodontist</b>	58	49.6
<b>What was the motivation/s behind your choice of Prosthodontics as specialty</b>		
Prosthodontics ensures professional growth and job opportunities	41	35.0
Prosthodontics is the most prestigious specialty among other dental specialties	30	25.0
I had a passion to be a Prosthodontist because it is a challenging profession	79	67.5
My family and friend influenced me to be a Prosthodontist	4	3.4
Prosthodontists earn more and are well-paid	21	17.9

a profession. Table.5 displays analysis about quality of life & job satisfaction of prosthodontist with regards to mean score  $\pm$  SD. Mean score of  $3.94 \pm 1.68$  was observed when inquired by prosthodontists that 'prosthodontics specialty was first choice', followed by 'facilities and resources in the clinics were adequate for delivery of dental care to patients' with general stress score  $3.11 \pm 1.70$ . Regarding job satisfaction, mean score was higher  $3.11 \pm 1.65$  when asked about 'support of administrative offices, secretaries and clerical staff is adequate'. Whereas  $3.05 + 1.56$  score was observed when queried from the prosthodontists about 'free utilization of potentials and capabilities' and  $3.15 + 1.54$  score was noticed when questioned about "load of paperwork and administrative duties affect professional capabilities.

The present study provides an exclusive evaluation of prosthodontists level of stress and job satisfaction working in Kingdom of Saudi Arabia (KSA). The study stands distinctive and unique as no other work have been performed on this subject before. The overall response rate in the present study was approximately (58.5%). This low response rate was in line with a study by Newton

*et al.*, (2002) who identified source of stress among different dental specialties. In authors opinion low response rate can be attributed to extensive working hours, hectic schedule and clinical commitment among prosthodontists (Makames *et al.*, 2012). In the current study responses were gathered through a survey monkey tool. The tool has an advantage of general usability, comprehensive feature set and security. Moreover, the tool minimizes the risk of biasness (Wright, 2006). Most of the prosthodontists in the present study were females. A strong evidence persist that female are more prone to stress compared to men as stress is psychological and gender co related (Pozos Radillo *et al.*, 2008). Moreover, 54 (46.2%) of the respondents fall in an age range of 31 to 40 years. A trend was observed in the present study that with increase age stress levels decline. A similar drift was displayed in a study by Bhat and Nyathi, (2019).

A possible reason for this tendency is prosthodontists between age range of 31-40 years are more committed, enthusiastic and workaholic resulting in high stress levels. Whereas, with increase age they become more stable and finically secured and relaxed correlating with decreased levels of stress. These findings were found to be in concurrent with a study by Bhat and Nyathi, (2019). Furthermore, stress levels were comparatively high in married respondents compared to singles. In authors opinion since most of the respondents in the existing study were females, they have family, children to look after and work commitment resulting in increased stress levels. Though these findings were found to be in contrast with a study by (de Wet *et al.*, 1997).

When respondents were inquired about the reasons of regret in choosing prosthodontics as specialty, 50 (42.7) claimed poor quality of lab work causes frustration. Moreover, 36 (30.8) dentists responded back pain as a source of regret. Evidence suggests back pain is the most common complaint by dentists and this trend is more prevalent in females due to lack of exercise and posture (Al-Mohrej *et al.*, 2016)(Gaowgzeh *et al.*, 2015).Moreover, it is a frequent cause to loss of work among practicing dental specialties

Table 4. Respondents when asked about which specialty would you choose if times comes again

	Frequency	Percent
If you had the chance to turn back the time, which specialty would you choose		
Dental informatics	1	0.9
Endodontics	6	5.1
Law	1	0.9
Maxilofacial Surgery	2	1.7
Not a dentist	1	0.9
Operative Dentistry	1	0.9
Oral medicine	2	1.7
Orthodontics	22	18.8
Pedodontics	1	0.9
Prosthodontics	59	50.4
Public health	2	1.7
Radiologist	1	0.9
Totally out of the medical field	1	0.9
Not willing to response	17	14.5

(Gaowgzeh *et al.*, 2015). When questioned to respondents about motivation for choosing prosthodontists 79 (67.5) claimed that its challenging profession. This trend implies mature mental capacity, eagerness and well-organized and disciplined determination. The finding was in concurrent with a study by Alqahtani *et al.*, (2018). When respondents were queried about what specialty would they choose if times comes

again 50.4% responded that they will opt for prosthodontics. This reflects that most of the prosthodontists were satisfied with the profession. Work satisfaction is of utmost important. It helps a healthcare worker to perform beyond their capabilities. This indirectly results in better care of delivery and fulfilment of societal healthcare needs (Al-Hallak *et al.*, 2018). When asked about the QoL and job satisfaction low mean scores were

Table 5. Quality of Life & Job Satisfaction as Prosthodontist

Quality of Life in Prosthodontics	Mean± SD
Prosthodontics specialty was my first Choice	3.94+1.68
My job description and responsibilities at the institution that I work at are well- defined and clear	3.50+1.58
I am satisfied with working quality of my auxiliary staff e.g. Dental Assistants, etc	3.00+1.65
I am satisfied with working quality of my Technician	2.48+1.82
Facilities and resources in the clinics are adequate for delivery of dental care to patients	3.11+1.70
My current practice situation is what I envisioned when I chose to become a Prosthodontics	2.88+1.61
I am generally satisfied with the salary/ wages and other financial benefits	3.01+1.72
I am generally satisfied with the Medical and dental treatment services provided to me as job benefits	2.97+1.76
Overall, I am satisfied with quality of life as a Prosthodontist	3.14+1.64
Job Satisfaction in Prosthodontics	
I am treated respectfully by the Head of my department	3.58+1.67
Support from administrative offices, secretaries and clerical staff is adequate	3.11+1.65
In general, I am treated respectfully by my senior colleagues	3.73+1.51
My organization supports professional development for improvement of their efficiency and quality of work	2.92+1.63
I am satisfied with working environment within the practice team because it is conducive and professional	3.18+1.55
I have adequate time for my professional development activities	3.03+1.60
I have adequate time for my personal and family life	2.75+1.56
I am satisfied with the practice management and care delivery system	2.82+1.57
I have good relations with my patient	3.87+1.52
My colleagues are courteous, and we enjoy working in a team	3.45+1.53
My work is recognized and appreciated by my colleagues and seniors	3.53+1.48
Patients are always on time and adhere to the appointment schedule	2.68+1.60
I feel no problem while communicating with staff	3.59+1.49
I feel no problem while communicating with my patients	3.38+1.68
The load of paperwork and administrative duties affect my professional capabilities	3.15+1.54
Patients' unrealistic expectations burn me out	2.93+1.64
Amount of workload is too much and killing	2.75+1.64
I face too much pressure from my seniors	2.51+1.82
I can freely utilize my potentials and capabilities	3.05+1.56
I have a liberty to choose appropriate working methods and materials	3.30+1.58
Overall, I am satisfied with my job as a Prosthodontist	3.71+1.59



observed in showing dissatisfaction with working quality of technicians ( $2.48 \pm 1.82$ ) and medical and dental treatment services as job benefits ( $2.97 \pm 1.76$ ). Moreover, inadequate time with family ( $2.75 \pm 1.56$ ), non-adherence to appointment schedule by patients ( $2.68 \pm 1.60$ ), hectic clinical hours ( $2.75 \pm 1.64$ ), and pressure by seniors adds to poor job satisfaction ( $2.51 \pm 1.82$ ). Encouraging, conducive environment by peers and seniors plays a vital role in reducing occupational stress and improving work performance. These factors contribute and plays a huge role in success and delivery of care services (Khalighi *et al.*, 2018). Non-adherence to appointment schedule as a cause of job satisfaction, stress and anxiety in dentists was also observed in a study by (Rada and Johnson-Leong, 2004). Furthermore, family support, motivation and pleasant family life reduces work related stress and burnout syndrome among dentists. But unfortunately, prosthodontist working in KSA explained that due to clinical commitments and non-flexible working hours they didn't get enough time with family.

From the results of the present study it can be determined that though stress levels among prosthodontists working in KSA were nominal. The mean and SD scores give an indication that prosthodontists were not happy with hectic commitments and demanding prosthetic work. However, overall job satisfaction among prosthodontist were satisfactory. The study has limitations based on small sample size. A qualitative design study will be more appropriate to cater the responses of prosthodontist giving better reasons of job dissatisfaction and causes of stressors. For future studies, a comparison between Saudis and Non-Saudis job satisfaction and levels of stress as prosthodontists should be also performed

## CONCLUSION

The job satisfaction and stress levels among prosthodontists working in KSA was satisfactory. However, work should be done in trying to minimize work related stress by minimizing clinical commitment better preparation of technicians which will indirectly influence job satisfaction and stress levels.

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