

Exploring Factors Influencing Job Satisfaction and Its Bearing on Performance among Dentists in Central India

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Abstract

Purpose: Presence of motivating factors facilitates higher job performance, whereas their absence leads to job dissatisfaction. The study was conducted with the objective of assessing the level of job satisfaction and the associated factors among dentists in Central India. **Methods:** Data was collected from 155 graduate and postgraduate faculties from the six dental schools of Bhopal city, Central India. Demographic and professional information was collected along with 10 point 'Warr-Cook-Wall' (WCW) job satisfaction scale. Chi Square test was used to compare between categorical variables. Logistic and linear regression analysis was performed to determine the factors associated with job satisfaction. **Results:** Seventy four male (47.7%) and eighty one female (52.3%) dentists participated in the study, with mean age of the study sample being 33.20 ± 6.7 years. Dentists were highly satisfied with colleagues and fellow workers and dissatisfied with income. Dentists with longer academic experience were more satisfied with income than younger dentists with less experience ($p < 0.05$). Female dentists were more dissatisfied than male counterparts ($p < 0.05$). Age, gender and qualification together explained for 49% variance associated with job satisfaction. Postgraduate faculty were 3.55 times more satisfied with income than graduate faculty ($p < 0.05$). **Conclusions:** Study confirms higher qualification and presence of motivating factors mainly good income and cordial relations with colleagues and fellow workers have greatest impact on overall job satisfaction. It highlights the issues in the dental profession needing attention and would be helpful for further improvement of the working conditions for dentists.

Keywords: Dentists, Income, Job satisfaction, Motivation, Workplace

Introduction

Life satisfaction is the way a person evaluates his or her life and one component of this could be attitude towards one's work or job. Satisfaction with work is simply how content an individual is with his or her work. According to Spector (1997), job satisfaction is simply how people feel about their jobs and different aspects of their jobs and also the extent to which people like or dislike their jobs (Ugwa et al., 2012). Analyzing job satisfaction becomes more relevant because of its reported influence on a person's physical and mental well-being and its possible effects on job-related behaviors and performance (Cranny et al., 1992).

Dentistry is a profession where dentists are subjected to a wide range of occupational factors that greatly affect their well being. Several studies have shown high prevalence of physical and psychological disorders in dental practice (Alina Puriene et al., 2007). Job satisfaction is another aspect in dentistry which needs to be dealt with as it has been linked to various aspects of patient care and health system outcomes as well as to overall performance in the profession and general life satisfaction. Consequently, job satisfaction is not a single entity but a complex interplay of tasks, roles, responsibilities, interaction, incentives and rewards (Williams, Konrad, et al., 1999 & Shugars, Hays, et al., 1991). Various elements at work – dentists' social recognition, position in society, self realization and many other customary factors of everyday life also influence job satisfaction. According to the Two-Factor Theory of job satisfaction, there are two factors playing vital roles influencing satisfaction in one's job (Buchbinder, Shanks., 2007). They may be intrinsic or extrinsic factors, the former are derived from within the individual, e.g. taking pride and feeling good about a job well-done, recognition and responsibility whereas the latter pertains to rewards given by another person like job security, favourable working conditions or good income. Absence of external-hygiene factors can create dissatisfaction or negative feelings at work. Alternatively, the presence of internal-motivational factors such as recognition contribute added value and act as a catalyst for positive feelings towards being a dentist. Experts believe this is mainly due to the fact that job satisfaction trends can affect labor market behavior and influence work productivity, work effort, employee absenteeism and staff turnover (Buchbinder, Shanks, 2007; Herzberg, et al., 1967; & Goetz, et al., 2012).

India has approximately 301 dental colleges with around 27,000 students graduating each year. As far as dentists and their availability is concerned to this huge population, the demand and supply ratio is far inadequate and insufficient (according to DCI, 2014). Therefore it is important to understand dentist's job satisfaction and how various work environmental factors influence the retention of dentists. Scanty data is available on job satisfaction level among Indian dentists and no study has been conducted in Central India till date. Hence, the present study was carried out to assess job satisfaction among dentists working in dental schools of Bhopal City, Central India and also to evaluate the influence of personal and professional characteristics on

their overall job satisfaction.

Methodology

A total of 155 dentists from six dental schools in Bhopal city, with at least 1 year of working experience, present on the days of the survey and willing to participate were included in the study. The participating dentists were dental faculty who had either completed five years graduation (Bachelor of Dental Surgery/BDS) or three years of post graduation in any of the nine specialties (Master of Dental Surgery/MDS) after BDS. Bhopal was selected as the study centre as the city has maximum number of post graduate dental schools in Central India.

A self-administered questionnaire was used to collect data from the participants. It consisted of two sections; first part collected information on demographic characteristics including age, gender and professional information including qualification (graduation/post graduation), nature of practice (academic only/ both academic & private) and years of experience (academic experience & private practice experience); second part comprised of Warr-Cook-Wall' (WCW) job satisfaction scale developed by Warr et al in 1979. A 10 point version was used to allow international comparison. Each item was rated on a 5-point Likert scale (1 = extreme dissatisfaction to 5 = extreme satisfaction). The WCW-instrument measures overall job satisfaction and satisfaction with nine aspects of work which includes four intrinsic factors namely 'amount of variety in job', 'opportunity to use abilities', 'amount of responsibility' and 'recognition for work'. Five items were treated as extrinsic factors: 'freedom of working method', 'physical working condition', 'hours of work', 'income' and 'colleagues and fellow workers'.

The study was approved by Institutional Ethics Committee (IEC code 2014PHD12). Verbal informed consent was taken from all the participants prior to the survey and consent procedure was approved by the ethics committee. The study has been conducted in full accordance with the World Medical Association Declaration of Helsinki. The researcher was personally responsible for the distribution and collection of all questionnaires and anonymity of the questionnaire was ensured. Data was analysed using SPSS (Statistical Package for the Social Sciences) version 16 (SPSS Inc., Chicago, IL, USA). Chi Square test was used to compare between categorical variables. Linear regression analysis was conducted to construct models for job satisfaction applying personal and professional characteristics. Logistic regression analysis was used to determine the contribution of various characteristics for job satisfaction. Dependent variables to be included in the regression analysis were dichotomized. Significance was assumed at ≤ 0.05 .

Results

The mean age of dentists was 33.20 ± 6.7 years. Female dentists exceeded the male dentists by 5%; post graduate faculty was 3 times more in number than the graduate faculty. More than half of the dentists (54.8%) were both employed in dental schools and had private practice. Mean academic and private practice experience were 5.78 ± 5.43 and 3.38 ± 5.63 years respectively (Table 1).

Table 2 presents percentage distribution of dentists' satisfaction level for different domains of Job Satisfaction Scale. Highest percentage of satisfaction with job was with colleagues and fellow workers domain with 26.5 % of dentists showing extreme satisfaction. Income was the aspect with which the dentists showed extreme dissatisfaction (22.6%). Bivariate analysis showed Income was significantly associated with age, gender ($p \leq 0.05$), qualification ($p \leq 0.01$) and academic experience ($p \leq 0.001$). 'Colleagues and fellow workers' and 'freedom of working method' domains were significantly associated with nature of practice and private practice experience. Overall job satisfaction was significantly associated with qualification ($p \leq 0.01$) (Table 3).

Stepwise linear regression analysis was carried out to assess the impact of the six independent variables on job satisfaction. Job satisfaction was not significantly associated with age, gender, but results became significant after stepwise inclusion of qualification and nature of practice. The R-Square indicates how much of the variance in overall job satisfaction is explained by each model. The third model with age, gender and qualification showed the highest score ($R^2 \sim 0.491$) of explained variance with significant association with dependent variable ($p < 0.05$). Fourth model with age, gender, profession, type of practice also showed significant association explaining 0.082 of the variance ($p \leq 0.05$) (Table 4).

Each item of job satisfaction was rated on a 5-point Likert scale (1 = extreme dissatisfaction to 5 = extreme satisfaction), but for the purpose of analysis, Likert scale was dichotomized by combining scores 1 and 2 (Extreme dissatisfaction and dissatisfaction) as 'not satisfied' and scores 3, 4 and 5 (Partially satisfaction, satisfaction, and Extreme satisfaction) was counted as 'satisfied'. The total scores ranged from 0-9 (Excluding overall job satisfaction domain) with mean score of 7.59 ± 2.25 for this present study. Logistic regression analysis was conducted to determine the contribution of various individual characteristics for job satisfaction. It was seen that postgraduate faculty were 3.55 times more satisfied than graduate faculty (95% CI; 1.18 to 10.66, $p < 0.05$) (Table 5).

Discussion

This was the first study inquiring about factors associated with job satisfaction among dentists of Central India. Personal information including age, gender and professional information including qualification, nature of practice and years of experience (academic & private practice) were assessed against the ten domains of job satisfaction scale.

Majority of dentists, (62.6%) were in younger age group (less than 33 years) indicating a young dental manpower and 45.2% dentists were attached only to dental schools while 54.8% of them were both academicians and into private practice. Similar findings being reported by Goetz et al (2012) and Ugwa et al (2012) among German and Nigerian dentists with mean age of 46 years and 26 to 45 years respectively. According to Luzzi, et al (2005), Australian dental practitioners above age of 25 years were stratified into public and private practice, with majority of the responders (58%) belonging to private practice and were of younger age group (25-34 years).

In the present study post graduate faculty (76.1%) were 3 times more in number than graduate faculty indicating job opportunities are better for the specialists than the dental graduates. This is in contrast to the study by Purienne et al in 2007, where only 17.4 % were post graduate faculty.

Results from the present study reflect that dentists in Central India are overall satisfied with their job. They have a high level of satisfaction with colleagues and fellow dentists (26.5%) which could be due to cordial relationships they share; a crucial aspect of job satisfaction for professionals to work as a team to realize a common goal. This domain was significantly associated with nature of practice and private practice experience. Dentists both into academic & private practice with less than six years of private practice were found to be highly satisfied with colleagues compared to those only into academic practice and having more than six years of private practice. This could be due to the fact that majority of the private practitioners belonged to younger age group and find less time away from their busy work schedules to spend with their colleagues and hence they are happy to cherish quality time with colleagues. The positive association between job satisfaction and colleagues has also been found to reduce professional burnout (Gorter, et al., 2008 & Hakanen., 2005). In a study among dentists in southern India by Rao & Mallaia in 2012, nearly 94% of the employees expressed their job satisfaction to be satisfactory to highly satisfactory. Variables like, working conditions, relationship with co-workers and the manager, internal communication were shown to be the leading cause of greater employee job satisfaction; nearly 8 out of 10 employees (78%) indicated that they were satisfied with the current relationship with the co-workers. In Nigeria, 80.1% of dentists were satisfied with their job, 17.3% were undecided and 5.2% were dissatisfied. More senior residents (82.2%) felt satisfied significantly with their jobs than junior residents (77.9%) (Ugwa et al., 2012). Pandita et al in 2015, using 28 item questionnaire reported significant gender differences in levels of satisfaction and that postgraduates were more satisfied than graduates in a study conducted in North India.

In our study, the domain 'freedom of working method' was also found to be significantly associated with nature of practice and private practice experience. Dentists who worked only in academic institutions experienced less freedom of work compared to those in private practice and among those with longer duration of private practice experienced less freedom of work compared to dentists with lesser private practice experience. This could be due to the fact that dentists in institutions need to perform treatment only related to their respective branch unlike those in private clinics where it is their own setup and he/she being the sole in charge, having full freedom to work and exercise choice in performing various treatment modalities. In a study done by Luzi et al. (2005) among Australian dentists, dissatisfaction with academic practice was attributed to key factors relating to administration interference, career path concerns and intrusions of the job into family life. In the present study 22.6% of the dentists were extremely dissatisfied with their income as the dentists feel the take-home pay in academic institution is no match compared to time and money invested. This could also be attributed to the fact that the dentists belong to one of the highly respected profession and hence they feel income is not apt for the profession. The results of bivariate analysis showed that income was significantly associated with age and dentists above 33 years of age were more satisfied with their income compared to younger dentists and those with more than 6 years of academic experience were more satisfied with income than those with lesser experience because of higher pay scale with increased experience and the fact that older dentists are also into private practice. Male and female dentists differed significantly in their satisfaction level with income, with female dentists more dissatisfied than male counterparts may be because male dentists were into private practice, enjoying double source of income. Graduate faculty were least satisfied with their income compared to postgraduate faculty as the pay scales were lesser compared postgraduate faculty. A Study done by Goetz, et al., in 2011 among German dentists showed dentists were highly satisfied with 'freedom of working method' (mean = 6.46) and 'amount of variety in job' (mostly dissatisfied with 'income' (mean = 4.99) and no associations were found regarding other individual (i.e. age and gender) and practice characteristics (i.e. mode and location of practice). In Australia, a majority of respondents (81 per cent) were satisfied with their job as a dentist. Age of the dentist was significantly associated with various dimensions of job satisfaction dimensions. Dentists aged 35-44 years and 45-54 years were less satisfied due to the demands placed on them by their dental career and

pressure associated with building and sustaining a viable practice (Luzzi, et al., 2005).

In stepwise linear regression analysis job satisfaction was not significantly associated with age, gender, but a significant association was found after stepwise inclusion of qualification and nature of practice, with qualification alone accounting for 49% of variance. Hence, qualification is the key contributor for a dentist to be satisfied with the job. Occupational stress, age and other factors accounted for 27.1% of the variation in the overall job satisfaction scale among Canadian orthodontists (Roth, et al., 2003). The facets of orthodontics with the highest degree of satisfaction were professional relations (80%), and staff (76%).

Mean overall job satisfaction was 7.59 ± 2.25 (range of 0 – 9) in our study, meaning overall job satisfaction was more than ‘being satisfied’. A survey from Lithuanian dentists found mean score of overall job satisfaction score was very high (4.06 out of 5) compared with doctors working at primary health care establishments (Alina Puriene et al., 2007). The mean job satisfaction scores among dental surgeons reported from Canada, South Korea, and California were 4.0 of 5, 3.2 out of 5 and 63 out of 100 respectively (Roth, et al., 2003; Jeong, et al., 2006 & Shugars, et al., 1991). Results of binary logistic regression analysis also showed that graduation level made the highest unique contribution to explaining the overall job satisfaction with post graduate faculty being 3.5 times more satisfied than graduate faculty, when all other factors in the model were controlled. Overall, the results were comparable favourably with a study done by Goetz et.al (2012) about job satisfaction of physicians in primary care using the WCW-instrument. Practice assistants working in primary care in Germany were mostly satisfied with their colleagues and least satisfied with their income and recognition for their work. Regression analysis showed that ‘freedom of working method’ and ‘recognition of work’, the employment status of practice assistants and the mode of practice were almost always significantly associated with each subscale (Gavartina, et al., 2013).

The present study highlights the issues in the dental profession needing attention and would be helpful for further improvement of the working conditions for dentists. How a dentist feels about himself as a professional, how he perceives dental job is critical and fundamental to the practice of dentistry. If the dentist is dissatisfied it inevitably affects his dental practice. Job satisfaction and motivation, which are the driving force to pursue and satisfy needs, work together to increase job performance and hence, healthcare organizations can focus primarily on motivating interests of existing and future staff. This would bring in a change in both doctor and patient satisfactions and thus the entire dental care system could be benefitted (Griffeth, et al., 2000).

To improve the quality of work and achieve a desired level of satisfaction among dentists the following pride system could be implemented. This includes, providing a positive working environment, reward and recognition, involve and increase employee engagement, develop the skills and potential of your workforce, evaluate and measure job satisfaction. Along with the pride system a suitable remuneration, apt for the designation and the amount of workload, must be implemented throughout the country, for dental care system in India to be placed on a pedestal.

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Table1: Percentage distribution of dentists according to personal & professional characteristics

Personal & professional characteristics	Number (N)	Percentage (%)
Age (years)		
Less than 33 years	97	62.6
More than 33years	58	37.4
Gender		
Male	74	47.7
Female	81	52.3
Professional Qualification		
B.D.S. Faculty	37	23.9
M.D.S. Faculty	118	76.1
Distribution of Dentists according to nature of practice		
Academic only	70	45.2
Both academic & private	85	54.8
Distribution of dentists according academic experience		
1-6 years experience	105	67.7
More than 6 years of experience	50	32.3
Distribution of dentists according to private practice experience		
0-4 years experience	120	77.4
More than 4 years of experience	35	22.6
Total	155	100.0

Table 2: Distribution of satisfaction levels among dentists under various domains of the job satisfaction scale

Questions	Percentage distribution on 5 point Likert Scale									
	Extreme dissatisfaction		Dissatisfaction		Partial satisfaction		Satisfaction		Extreme satisfaction	
	N	%	N	%	N	%	N	%	N	%
Physical working condition	6	3.9	16	10.3	81	52.3	35	22.6	17	11.0
Freedom of working method	8	5.2	20	12.9	57	36.8	54	34.8	16	10.3
Colleagues and fellow workers	3	1.9	7	4.5	34	21.9	70	45.2	41	26.5
Recognition for work	15	9.7	27	17.4	47	30.3	57	36.8	9	5.8
Amount of responsibility	8	5.2	14	9	61	39.4	58	37.4	14	9
Income	35	22.6	29	18.7	48	31	38	24.5	5	3.2
Opportunity to use abilities	8	5.2	42	27.1	66	42.6	35	22.6	4	2.6
Hours of work	10	6.5	32	20.6	62	40	49	31.6	2	1.3
Amount of variety in job	8	5.2	45	29	75	48.4	22	14.2	5	3.2
Overall job satisfaction	7	4.5	31	20	57	36.8	54	34.8	6	3.9

Table 3: Comparison of individual characteristics with overall Job Satisfaction

		Age	Gender	Professional qualification	Nature of practice	Academic Experience	Private Practice Experience
1	Physical working condition	0.06	0.05*	0.45	0.95	0.07	0.12
2	Freedom of working method	0.09	0.08	0.35	0.01**	0.01*	0.003**
3	Colleagues and fellow workers	0.19	0.39	0.61	0.002***	0.14	0.006**
4	Recognition for work	0.68	0.21	0.19	0.32	0.89	0.612
5	Amount of responsibility	0.15	0.38	0.39	0.99	0.18	0.229
6	Income	0.01*	0.03*	0.000***	0.20	0.008**	0.10
7	Opportunity to use abilities	0.05*	0.11	0.84	0.80	0.27	0.16
8	Hours of work	0.82	0.71	0.16	0.01**	0.21	0.16
9	Amount of variety in job	0.99	0.19	0.04*	0.61	0.60	0.77
10	Overall job satisfaction	0.11	0.15	0.002**	0.28	0.23	0.38

* p-value ≤ 0.05, ** p-value ≤ 0.01, *** p-value ≤ 0.001

Table 4: Stepwise linear regression model for job satisfaction

	R	R ²	R ² change	p-value	F value
1	0.113	0.013	-	0.16	1.99
2	0.128	0.016	0.003	0.28	1.26
3	0.226	0.51	0.491	0.04*	2.72
4	0.244	0.59	0.082	0.05*	2.36
5	0.244	0.59	0	0.10	1.88
6	0.250	0.63	0.041	0.13	1.64

* Statistical significances of difference: ≤ 0.05

1. Model 1: age
2. Model 2: age, gender
3. Model 3: age, gender, professional qualification
4. Model 4: age, gender, professional qualification, nature of practice
5. Model 5: age, gender, professional qualification, nature of practice, academic experience
6. Model 6: age, gender, professional qualification, nature of practice, academic experience, private practice experience

Table 5: Binary logistic regression analysis with job satisfaction as dependent variable

Factor	P value	Exp(B) ratio	odds	95.0% C.I. for EXP(B)	
				Lower	Upper
Age	0.93	1.00		0.82	1.22
Gender	0.59	0.75		0.26	2.15
Professional qualification	0.02*	3.55		1.18	10.66
Nature of practice	0.41	0.64		0.22	1.84
Academic experience	0.87	1.01		0.82	1.25
Private practice experience	0.27	0.93		0.83	1.05

* Statistical significances of difference: ≤ 0.05