

Evolution of Job Satisfaction of Peruvian Dentists *

Evolución de la satisfacción laboral de dentistas peruanos

Evolução da satisfação profissional dos dentistas peruanos

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ABSTRACT

Background: Job satisfaction of dentists is critical for their performance, which comprises clinical and administrative skills and activities. **Purpose:** To analyze the job satisfaction of Peruvian dentists regarding some practice-related factors. **Methods:** The influencing factors in dental job satisfaction were analyzed using a self-administered survey consisting of closed responses and validated by the authors in a sample of 515 dentists. The inferential analysis was carried out through Chi-square tests and binary logistic regression to identify influencing factors through bivariate and multivariate associations ($p < 0.05$). **Results:** 58.5 % of respondents reported being satisfied, among whom there was greater satisfaction in not having a secretary-receptionist ($p = 0.001$) and dental assistant ($p = 0.004$), with the use of an appointment system ($p = 0.001$), the charge for the consultation ($p = 0.003$), and the specialized practice of dentistry ($p = 0.007$). The binary logistic regression showed that the two factors with the greatest relationship with job satisfaction were charging for the consultation (OR = 2.01; CI: 1.12-3.59; $p = 0.01$) and specialized practice (OR = 1.83; CI: 1.13 - 2.98; $p = 0.01$). **Conclusion:** The factors most related to job satisfaction are the charge per consultation and specialized practice.

Keywords: dentist; dentistry; human resources; job satisfaction; management; offer; questionnaire; professional practice

RESUMEN

Antecedentes: La satisfacción laboral de los odontólogos es fundamental para su desempeño en la salud, en el que se combinan destrezas clínicas y administrativas. **Objetivo:** Analizar la satisfacción laboral del odontólogo peruano en relación con factores relacionados con la práctica. **Métodos:** Se analizaron los factores influyentes en la satisfacción laboral odontológica usando una encuesta autoadministrada que incluía respuestas cerradas y fue validada por los autores en una muestra de 515 dentistas. El análisis inferencial se realizó por medio de pruebas Chi cuadrado y regresión logística binaria para identificar factores de forma bivariada como multivariada ($p < 0,05$). **Resultados:** El 58,5% de los encuestados refirió estar satisfecho. En ese grupo había mayor satisfacción al no contar con secretaria-recepcionista ($p = 0,001$) o asistente dental ($p = 0,004$), al uso de un sistema de citas ($p = 0,001$), cobrar por la consulta ($p = 0,003$) y tener un práctica odontológica especializada ($p = 0,007$). La regresión logística binaria mostró que los dos factores con mayor relación con la satisfacción

laboral fueron cobrar por la consulta (OR = 2,01; IC: 1,12-3,59; p = 0,01) y la práctica especializada (OR = 1,83; IC: 1,13 - 2,98; p = 0,01). **Conclusión:** Los factores más relacionados con la satisfacción laboral fueron el cobro por la consulta y la práctica especializada.

Palabras Clave: administración; cuestionario; gestión; odontología; odontólogo; oferta; práctica profesional; recursos humanos; satisfacción laboral

RESUMO

Antecedentes: A satisfação profissional dos médicos dentistas é essencial para o seu desempenho na saúde, que combina competências clínicas e administrativas. **Objetivo:** Analisar a satisfação profissional do dentista peruano em relação a fatores relacionados à prática. **Métodos:** Fatores influentes na satisfação no trabalho odontológico foram analisados por meio de um questionário autoadministrado que incluiu respostas fechadas e foi validado pelos autores em uma amostra de 515 dentistas. A análise inferencial foi realizada por meio de testes qui quadrado e regressão logística binária para identificação dos fatores de forma bivariada e multivariada ($p < 0,05$). **Resultados:** 58,5% dos pesquisados relataram estar satisfeitos. Neste grupo houve maior satisfação em não ter secretária-recepcionista ($p = 0,001$) ou auxiliar de dentista ($p = 0,004$), utilizar sistema de agendamento ($p = 0,001$), cobrar pela consulta ($p = 0,003$) e ter um consultório odontológico especializado ($p = 0,007$). A regressão logística binária mostrou que os dois fatores com maior relação com a satisfação no trabalho foram a cobrança pela consulta (OR = 2,01; IC: 1,12-3,59; $p = 0,01$) e a prática especializada (OR = 1,83; IC: 1,13 - 2,98; $p = 0,01$). **Conclusão:** Os fatores mais relacionados à satisfação profissional foram o preço da consulta e a prática especializada.

Palavras-chave: administração; dentista; gerenciamento; odontologia; oferecer; prática profissional; questionário; recursos humanos; satisfação no trabalho

INTRODUCTION

The workforce is one of the pillars of health systems. They are essential for achieving universal health insurance and progress towards achieving the sustainable development goals (1). In this framework, the supply of professionals in dentistry is of special interest due to the high frequency of oral diseases, the high demand for oral health care services, and the impact it has on health spending worldwide (2). Combined with the above, the adequate provision of human resources in dentistry is essential to provide adequate services and improve oral health, which is essential for the general health and quality of life of people (3).

This issue is critical in Peru because the country is in the group of nations with the highest burden of oral disease (2) and allocates half of the average global health expenditure in relation to the gross domestic product (4). Regarding public health care, it is recorded that one in five outpatient consultations carried out in the Ministry of Health (MINSA) dental clinics corresponds to the care of oral pathologies (5). In the Peruvian Social Security System (ESSALUD), dental consultations correspond to 12.96% of the total number of outpatient consultations (6). For this reason, the public dental offer is related to the highest demand in the population, when compared individually with the specific use of services in other areas and medical specialties.

Peru has achieved universal health insurance coverage. Nine out of ten insured persons receive care in public sector health insurance fund management institutions (IAFAS, instituciones administradoras de fondos de aseguramiento en salud) (7). The public supply of dentists is about 6,151 professionals who work mainly in public institutions, which in Peru are MINSA and ESSALUD. There are other smaller-scale institutions, such as regional governments and the armed forces and police (5,6,8). However, they represent only 12.61% of the total number of registered professionals (9). This shows that, as in most countries worldwide, Peruvian dentists work mainly in private practice (2).

In dental clinical practice, administrative and business responsibilities are combined. Discrepancies have been described between what the population perceives regarding the dentist's work and what the dentist experiences in their particular reality. The literature shows an improvement in the perception and attitudes of dental professionals regarding their job satisfaction and motivation, which have been classified as heterogeneous and multifactorial issues (10).

Studies have identified a series of factors that influence job satisfaction and show that specialists are more satisfied than those who practice general dentistry. Among the main factors described are interpersonal relationships with coworkers and patients, and the environment and organizational climate of the dental clinic. Professional stress, income and other types of incentives, the practice management model and time management are also considered to a lesser extent (10-12). Likewise, different degrees of job satisfaction have been reported in various populations of dentists with other individual factors that influence job satisfaction both positively and negatively. There are publications that consider the age and gender of the professional, the location of the office, the availability of supplies and instruments, the possibility of personal and professional development, the number of hours of work per week, the years of professional practice, and the types of patients treated (13-16). The evaluation of the dentist's job satisfaction is a topic of special relevance in the current context, due to the changes that dental practice is experiencing with the increased influence of globalization and the maturation of the dental market.

In recent years, there has been greater regulation and monitoring by state agencies that categorize and supervise Peruvian health practices (17). They do this in order to comply with current regulations regarding the structuring of resources. In the area of human resources, this mainly involves the mandatory membership and registration of the specialty with the Peruvian Dental College (COP, Colegio Odontológico del Perú) for general and specialized practice (18). At the same time, it is necessary to assess the job satisfaction of the dentist in the context of the disruption caused by the COVID-19 pandemic, which altered the normal functioning of dental clinics that produced significant changes in care protocols, decreased the demand for dental services, and generated a financial imbalance, in addition to the reported consequences on the well-being and emotional balance of oral health professionals (19-20).

The aim of this study was to analyze the satisfaction of Peruvian dentists in private practice. Based on the above, this study is relevant, concise and of global interest, and can serve as a guide for both new and experienced dentists regarding how and how much their practice would improve by knowing their level of satisfaction.

MATERIALS AND METHODS

A cross-sectional analytical study was conducted to determine dentists' job satisfaction in relation to the work schedule and professional practice. To do so, an anonymous self-administered survey was applied, through an online form, to a sample calculated for a known population.

The estimated population was 48,000 dentists. Then, through a pilot test, the results were entered into the *fisterra.com* calculator using the sample size formula to estimate a proportion with a confidence level of 95%, a precision of 5%, and a satisfaction proportion of 59% with a loss adjustment of 15%. In this way, a sample size of 238 participants was obtained. In the end, 515 dentists participated and answered the survey between January and May 2021. Random assignment was conducted based on the COP. The questionnaire was answered anonymously, and participation was voluntary. Five questions related to the dentist's job satisfaction and other questions about different aspects of work and the organization of the dental office or clinic were included. The questionnaire, after being validated through expert judgment, was distributed by email and social networks through a link on Google Forms (https://docs.google.com/forms/d/e/1FAIpQLSdVfv14S9edCONF0mVcqmr3Tp_OfbnbI4tVM5LVx7w39EGsEA/viewform?usp=sf_link).

The guidelines of the Declaration of Helsinki were followed when considering the ethical aspects of the study, which was approved by the ethics committee of the Universidad Científica del Sur in Lima, Peru, with code 40-CIEI-Científica-2020. Each participant validated their participation by signing an informed consent. Complete confidentiality was maintained regarding the personal data of the participants.

For the statistical analysis, a database was created in SPSS v.24 (SPSS Inc., Armonk, NY, USA) for macOS, with which descriptive statistical analysis was performed using frequencies and percentages.

Likewise, inferential analysis was performed through association tests between the job satisfaction variable contained in the question, Are you satisfied with being a dentist? and other related questions using Pearson's Chi-square test ($p < 0.05$). Finally, a binary logistic regression adjustment was performed on the related questions that could explain the behavior of the answers given on the dentist's job satisfaction.

RESULTS

When analyzing the possible association between the satisfaction of being a dentist and some factors specific to the professional practice model, statistically significant relationships were found with the presence of support staff. A higher degree of satisfaction was found among dentists who do not have a secretary-receptionist ($p = 0.001$) or a dental assistant ($p = 0.004$) (Table 1).

TABLE 1
Distribution and Association between the Variables Having Secretary-Receptionist and Dental Assistant and the Satisfaction with Being a Dentist

Satisfied with Being a Dentist	Do you have a Secretary-Receptionist?			Subtotal	%	p
	No	Yes, Part-time	Yes, Full-time			
Yes	155	61	78	294	57.09	0,001*
Partially	127	31	28	186	36.12	
No	29	4	2	35	6.80	
Subtotal	311	96	108	515	100.00	
Satisfied with Being a Dentist	Do you have a Dental Assistant?			Subtotal	%	P
	No	Yes, Part-time	Yes, Full-time			
Yes	117	84	93	294	57.09	0,004*
Partially	102	48	36	186	36.12	
No	21	8	6	35	6.80	
Subtotal	240	140	135	515	100.00	

*Person's Chi-square. Source: the authors.

In addition, statistically significant relationships were found between job satisfaction and the variables of working with an appointment system ($p = 0.001$) and always charging for the consultation ($p = 0.003$). Likewise, a significant relationship was identified between the variables satisfaction of being a dentist and specialized dental practice, holding a specialist degree ($p = 0.007$) (Table 2).

TABLE 2

Distribution and Association between the Variables Working with an Appointment Scheduling System, Charging for Appointments, Nature of the Practice, and Satisfaction with Being a Dentist

Satisfied with Being a Dentist	Working with a scheduling system?			Subtotal	%	p
	No	Partially	Yes			
Yes	32	33	229	294	57.09	0,001*
Partially	27	39	120	186	36.12	
No	10	2	23	35	6.80	
Subtotal	69	74	372	515	100.00	
Satisfied with Being a Dentist	Charging for appointment?			Subtotal	%	p
	Never	Sometimes	Always			
Yes	18	138	138	294	57.09	0,003*
Partially	16	93	77	186	36.12	
No	8	19	8	35	6.80	
Subtotal	42	250	223	515	100.00	
Satisfied with Being a Dentist	Nature of professional practice			Subtotal	%	p
	General practice	Specialty practice without formal degree	Specialty practice with formal degree			
Yes	108	61	125	294	57.09	0,007*
Partially	82	34	70	186	36.12	
No	24	5	6	35	6.80	
Subtotal	214	100	201	515	100.00	

*Person's Chi-square. Source: the authors.

Finally, the binary logistic regression analysis showed that the factors most related to job satisfaction were charging for consultation (OR = 2.01; CI: 1.12-3.59; p = 0.01) and practicing a specialty of dentistry, holding a specialist degree (OR = 1.83; CI: 1.13-2.98; p = 0.01) (Table 3).

TABLE 3

Binary Logistic Regression Model of Professional Satisfaction among Peruvian Dentists Regarding Several Questions

Variables in the Equation	Standard Error	p	OR	CI 95 %	
				Lower	Upper
Do you have a private practice?	0,611	0,480	0,649	0,196	2,150
Do you work as a dentist in another public or private office?	0,395	0,888	0,946	0,436	2,052
Do you work alone in your office or with another professional?	0,252	0,736	1,089	0,664	1,784
Do you have a receptionist?	0,360	0,083	1,865	0,921	3,775
Do you have a dental assistant?	0,271	0,598	0,867	0,509	1,475
Do you use a scheduling system?	0,233	0,342	1,248	0,791	1,969
Do you charge for appointments?	0,297	0,019*	2,007	1,122	3,591
What is the nature of your professional practice?	0,246	0,014*	1,837	1,133	2,978

OR = Odds Ratio, CI = 95% Confidence Interval.

*Logit Model: all variables were included in the statistical analysis of the multivariate model, which was accepted at a significance level of p < 0.05.

Source: the authors.

DISCUSSION

The dental care offer in Peru has been increasing substantially. Its growth rate in the last three decades exceeds three times the reported world average (21). The performance of Peruvian dentists is focused on general clinical practice and in the private sector. This coincides with what is described by the International Dental Federation (2) and other reports (22). At the global level, the current proportion is one dentist for every 3900 people (22), while in Peru this ratio is almost six times higher, that is, there

is one dentist for every 666 people. However, there is heterogeneity in the population distribution of oral health professionals in the world (24). In this regard, it was reported in 2018 that 69% of the 1.6 million dentists that exist serve 27% of the world's population (25). In Peru, 50% of dentists serve 30% of the population in the department of Lima. However, the increase in dentists in other departments of the country, as well as in the cities of Arequipa, Ica, Callao, La Libertad, Cusco, and Puno. Similarly, a growing participation of female professionals of profession globally is confirmed (25,27). This coincides with the numerical majority found among dental specialists in Peru.

Regarding dentist job satisfaction, the findings of this study are consistent with those described in other research (10,11) in which a medium to high level of job satisfaction is identified with the association described between specialized dental practice and the level of satisfaction (12). In agreement with the literature (13), in this study no significant statistical associations were found between job satisfaction and individual or group practice of dentistry or working in more than one dental office.

It was also found that the degree of job satisfaction identified in the present research is lower than that described in a study carried out among Peruvian dentists 30 years ago (26), which is interesting considering the important changes that have occurred in dental practice and the supply of dental services. In this study, the same five questions were used to establish the job satisfaction of dentists. A difference of 25% was found between both studies. In addition, the Peruvian dental community has been modifying certain patterns in its professional practice, among which the increase in group practice with respect to individual professional practice, a greater presence of administrative staff and assistants in dental offices, an increase in the proportion of dentists who say they measure their income and expenses, and an extension of the working hours.

It can also be highlighted that the good organizational and financial approach identified in this study through the appointment system and the charging of the consultation, is related to the satisfaction of the dentist. However, it is necessary to investigate in future studies why there could be an inverse relationship between job satisfaction and the presence of support staff in the dental clinic.

CONCLUSIONS

Job satisfaction in this study was associated with patient care using an appointment scheduling model, and not having a dental assistant or reception staff.

RECOMMENDATIONS

For future research, it would be interesting to explore the relationship between job satisfaction and the availability of support staff and dental laboratory in the dental office.

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* Original research.

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