

Dental anxiety in the municipal personnel of Biblián, Ecuador, 2018.

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Abstract: The aim of this study was to determine the degree of dental anxiety in the staff of the Municipality of Biblián, Ecuador. A cross-sectional study was carried out using the modified Corah dental anxiety scale in its Spanish version. A total of 159 employees, 72.3% men and 27.7% women, were included. The most prevalent level of dental anxiety was mild or none (37.1%), followed by moderate anxiety (35.6%), and severe anxiety or phobia (13.8%). The most prevalent degree of anxiety in men was mild or null (28.9%), and in women this was moderate at 8.8%. In relation to age, the group aged 31 to 50 years had the highest prevalence of severe dental anxiety or phobia (9.4%). The staff of the Municipality of Biblián presented a high prevalence of mild or no anxiety.

Keywords: dental anxiety, phobia, dental treatment.

INTRODUCTION

The anxiety generated by dental treatment is one of the main obstacles preventing patients from going to the dental office. Therefore, it is important to perform appropriate interventions in patients with this type of disorder (*Arrieta et al., 2013; Ríos et al., 2014*).

Anxiety is defined as a multisystemic and unpleasant emotional, individual, and subjective state, in the belief of danger or threat. It evokes physical, cognitive, emotional, and behavioral responses. All this leads to conflicting situations for the dentist at the time of care, often leading to unpleasant experiences for both the patient and the dentist (*Ledesma & Villavicencio, 2017; Ríos et al., 2014*).

At present, anxiety is considered one of the most prevalent psychiatric disorders, affecting 7.3-10.9% of the world population. More than 25% of people at some point in their lives will be diagnosed with an anxiety disorder, with numerous negative consequences in their daily functioning (*Thibaut, 2017*). Dental anxiety can be analyzed by taking into account two concepts: anxiety traits and anxiety state. The first is a characteristic of the individual's personality with different responses to threatening situations. The second is a transient or momentary condition or emotional state, presented as tension, apprehension, and increased activity of the autonomic nervous system (*Yusuf et al., 2017*).

Dental anxiety is associated with genetic, environmental, and congenital factors, unfavorable experiences, or invasive and painful treatments in childhood, among others (*Caycedo et al., 2008*). By virtue of this, there are specific instruments designed to measure the level of anxiety in patients, including the Venham scale (VPT), the Facial Image Scale (FIS), the Corah scale (CDAS) and the modified dental anxiety scale

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(MDAS) (Ledesma & Villavicencio, 2017; Caycedo et al., 2008; Eroglu et al., 2017).

The aim of this study was to determine the degree of dental anxiety in the staff of the Municipality of Biblián, Ecuador

MATERIALS AND METHODS

A cross-sectional study was conducted to determine the level of dental anxiety in 159 employees of the Municipality of Cantón Biblián. All the institutional permits were counted, both from the Catholic University of Cuenca and the Municipality of Biblián. All of the municipal staff of Biblián older than 18 years were included, and no exclusion criteria were considered.

The data were collected through individual interviews, with a questionnaire that was divided into two sections. The first section consisted of determining sociodemographic data such as age, sex, level of instruction, last dental check-up, origin, and occupation. The second section corresponded to

questions on the modified Corah dental anxiety scale to assess the degree of anxiety.

The investigation was conducted between the months of October 2017 and January 2018. The duration of the survey was 5 minutes and was carried out in different areas at work. Administrative employees were interviewed in the different municipal departments. Workers were contacted at the hours of 7:00 am, 12:00 am, 1:00 pm or 5:00 pm.

For data recording, an Excel 2016 file base was created (Microsoft Corp., USA). The descriptive analysis was carried out through the elaboration of absolute and relative frequency tables. To perform a bivariate analysis of the variables, Pearson chi-squared tests were used ($p < 0.05$).

RESULTS

In total there were 159 adults participating in the study, 72.3% men and 27.7% women. The most prevalent level of anxiety was mild or none (31.7%),

TABLE 1. Dental anxiety according to sex and age, level of instruction, origin, occupation, and date of the last dental appointment.

	Mild anxiety n (%)	Moderate anxiety n (%)	Severe anxiety n (%)	Phobia n (%)
Males	46 (28.9)	41 (25.8%)	13 (8.2%)	15 (9.4)
Females	13 (8.2)	14 (8.8)	10 (6.3)	7 (4.4)
18-30 years	11 (6.9)	12 (7.5)	6 (3.8)	5 (3.1)
31-50 years	33 (20.8)	38 (23.9)	13 (8.2)	15 (9.4)
>50 years	15 (9.4)	5 (3.1)	4 (2.5)	2 (1.3)
Primary	12 (7.5)	17 (10.7)	4 (2.5)	3 (1.9)
Secondary	17 (10.7)	14 (8.8)	11 (6.9)	9 (5.7)
Tertiary	28 (17.6)	21 (13.2)	8 (5)	10 (6.3)
None	2 (1.3)	3 (1.9)	0 (0)	0 (0)
Urban	40 (25.2)	25 (15.7)	15 (9.4)	17 (10.7)
Rural	19 (11.9)	30 (18.9)	8 (5)	5 (3.1)
Laborer	29 (18.2)	33 (20.8)	7 (4.4)	10 (6.3)
Administrative	30 (18.9)	22 (13.8)	16 (10.1)	12 (7.5)
3 months	20 (12.6)	19 (11.9)	7 (4.4)	3 (1.9)
6 months	15 (9.4)	10 (6.3)	7 (4.4)	7 (4.4)
>6 months	24 (15.1)	26 (16.4)	9 (5.7)	12 (7.5)

followed by moderate (35.6%), high (14.5%) and severe or dental phobia (13.8%).

The distribution of the levels by dental anxiety according to sex and age, level of instruction, origin, occupation, and date of the last dental appointment are shown in table 1. Statistically significant differences were found between staff of rural and urban origin ($p=0.025$), no differences were found in the rest of the variables ($p>0.05$).

DISCUSIÓN

Anxiety is one of the barriers to the viability of dental treatment, which affects the oral health of patients. By virtue of this, it is essential to know the prevalence of this condition in the dental office. The modified Corah dental anxiety scale is ideal to diagnose the state of dental anxiety, since it is a highly rigorous, reliable, brief, and easy to understand tool with adequate psychometric properties; it has previously been used in dentistry-based studies (*Wael, 2009*). The dentist should not focus solely on the rehabilitation of the stomatognathic system, but should evaluate the patient comprehensively. The psychological state should be an important factor to take into account, because if there is any alteration, this could lead to the failure of dental treatment and, most importantly, aggravate the pathology.

The dental anxiety level of the staff of the Municipality of Biblián was mostly mild or null. Some studies differ from these results, such as those by *Suryakant and Suresan (2016)*, and *Raluca et al. (2016)*, in which moderate anxiety was the most prevalent.

The age group of 31-50 years had the highest prevalence of moderate anxiety at 23.9%, similar to that reported by *Torres (2016)* where the age group with the highest percentage was the intermediate age (30 to 54 years). This may be due to unpleasant experiences experienced at some stage of life. *Helene et al. (2014)* demonstrated that the difference between MDAS scores by sex and age is not statistically significant, coinciding with the results of the present study. In this study, it was concluded that the most prevalent dental anxiety was mild or null without differences by level of education,

coinciding with a study by *Suryakant and Suresan (2016)*, and unlike a study by *Raluca et al. (2016)*.

Regarding the last dental appointment, in this study, it was observed that the most prevalent degree of anxiety was moderate for those who had undergone their last dental check-up more than one year ago. This is in agreement with the studies of *Suryakant and Suresan (2016)*, and *Maha and Mona (2014)*.

CONCLUSION

The staff of the Municipality of the Biblián presented a high prevalence of mild or no anxiety.

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