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Fear and anxiety in dental treatments and psychological interventions

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Abstract:

About 11 to 20% of the population has phobia of the dentists. The main aim of this study is to identify the factors associated with fear of dentist. Methods: The study included 98 subjects who regularly attending a private practice dentists located in Seville during 13 months. A cross-sectional clinical study was carried out involving the administration of anxiety scales , a sociodemographic questionnaire and Dental fear was measured using the questionare of dental fear (CMD) and using the question: 'How afraid are you of visiting a dentist? **Results**: We applied a factor analysis and we extrated four dimensión from the questionare of dental fear: health care, attitud of dentist , negligence and organization. Only attitud of dentist (OR=2.4(IC95% 1.1-5.4); p=0.02), negligence (OR=5.3(IC95% 2.0- 13.1); p=0.0001) and anxiety (OR=1.3(IC95% 1.3-1.7); p=0.01) showed assocaction with dental fear. **Conclusions**: the anxiety, negligence and attitud of dentists dimesniosn was associted with fear of dentist.

Keywords. Anxiety, fear of dentist.

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Introduction

Fear of dental treatment and the dentist's chair is a component that is frequently present in stomatology (Milgrom et al., 1985). For years, fear and anxiety have been a recognized source of problems for the normal practice of our profession (Aguilera et al., 2002; Heitkemper et al., 1993; Marquez-Rodriguez, 2001; Milgrom et al., 1985; Navarro and Ramirez 2002).

According to many authors, fear mainly depends on the professional's readiness and ability to condition patients with a positive attitude towards dental treatment, though it can also be conditioned by family and social influences. In any case, the individual's perception of the pain plays an important role in dental fear (Diaz and Cruz, 2004).

Some studies show a much more significant reduction of the anxiety in the treatment of patients whose dentists were aware of their dental anxiety scores before treatment (Dailey et al., 2002; Fernandez and Roales-Nieto, 2000; Shoben and Borland 1954). Therefore, self-reported dental anxiety scales can provide valuable information for dentists who are interested in assessing and reducing anxiety levels among their patients.

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Objectives

The first objective of this study was to describe the dental fears expressed by the patients who go to the dentist. In order to do so, secondary objectives included identifying the components or components that are part of the concept of dental fear; and identifying which components distinguish the groups with high dental fear from those with no fear of the dentist.

Method

All subjects who visited a private dental practice in Spain between December 2011 and January 2012 were included in the study.

The dependent variable was being afraid of the dentist. Fear was measured using the simple question included on the questionnaire by Pohjola et al. (2011): How afraid are you of visiting a dentist? 1) Not at all; 2) A little; 3) A lot. The questionnaire was dichotomized in order to divide the statistical analysis in two: low fear (no fear/a little fear) and high fear (those who answered "a lot" on the questionnaire). The following independent variables were considered: age, sex and the dental fear survey by Navarro and Ramírez (1996). This questionnaire consists of 20 items with Likert-type responses from 0 to 5 and it was administered in order to assess dental fear. Anxiety and depression were assessed using the Hospital Anxiety and Depression Scale (*HADS*, Zigmond y Snaith, 1983).

Results

A total of 98 subjects who regularly visited a private practice in Seville were included in the study. In terms of gender, 59 (60%) were women and the average age was 37.5 with a standard deviation of 12.6 years. In terms of regular visits to the dentist, 50% (49 subjects) visited the dentist regularly, while 44% (43 subjects) only went to the dentist when something was bothering them and 6% (6 subjects) never went. In relation to the fear associated with the dental visit, 81% (n=79) reported low fear; 45% (44 subjects) had "no" fear of the dentist; and 36% (n=35) had some fear. In terms of the high group, 19 subjects (19%) reported a lot of fear associated with dental visits. The score on the HADS anxiety subscale was 3.1 (standard deviation 2.4) and on the depression subscale, 7.3 (standard deviation 3.2).

In the component analysis of the dental questionnaire, eigenvalues of over 1.5 were retained and subject to varimax rotation. Four components were extracted: the dentist attitude component (variance of 15.7%); the negligence/oversight component (variance of 13.8%) and the organization component (variance of 13.2%).

In the multivariable analysis, the three components that had been high in their relationship to the dental fear variable were introduced (negligence component, dentist attitude component, HADS-A). The age and gender variables were also included. The variables that were independently associated in cases of dental fear were: HADS-A (OR=1.3(1.0-1.7); P<0.01), negligence (OR=5.3(2.0-13.7);P<0.0001) and the dentist component attitude (OR=2.4(1.1-5.4);P<0.0001).

Discussion and conclusions

The main finding of this study can be summarized as follows: anxiety, the negligence component and the attitude component are independently associated when a high fear of the dentist is perceived.

Márquez–Rodríguez et al. (2004) did a component analysis in order to extract the dental fear survey components. The results were similar to those obtained in our study: four components that explained 65% of the variance were extracted. The extracted components were: component 1) humane treatment of the client; component 2) professional malpractice; component 2) aspects inherent to the treatment and component 4) unprofessional aspects. It is important to note that the study by Márquez-Rodríguez et al. (2004) was on users of public healthcare. However, the components were similar to those obtained in this study, which leads us to conclude that the fears and concerns of users of public and private healthcare are similar.

In our work, dental fear was associated with high anxiety scores. This indicates that fear of visiting the dentist could be encompassed within phobias. Therefore, we could deduce that interventions that have proven effective in the treatment of specific phobias could also be used for patients with dental fear (Hmud and Walsh, 2009). In a study by Moore et al., the authors found that patients attributed the origin of their anxiety to these negative contacts with the dentist (Moore et al., 1993).

In conclusion, three independently associated components were identified when experiencing dental fear: the attitude of the dentist, fear of negligence/oversight and anxiety. These components can be modified with simple interventions.

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