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The root of the problem: evaluating demographic patterns and causes of dental anxiety

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"Downloaded from OpenBU. Boston University's institutional repository."

Abstract

Dental patients suffering from dental anxiety tend to avoid the dentist which leads to a decline in oral health and more severe health problems. Dental anxiety is not well understood due to research gaps in which underlying factors affect dental anxiety levels. It is important to understand which factors increase dental anxiety to help create a more comfortable dental office experience for patients that will enable them to receive the vital dental care they require. This study found a strong negative correlation between previous experiences with dentists and dental anxiety, a strong positive correlation between frequency of pain and dental anxiety, and significantly higher anxiety levels for patients with state-funded insurance than patients with private insurance. These results indicate that pain anticipation, negative previous experiences, and the financial burden of healthcare can increase dental anxiety, which points to a larger overall problem with access to dental care.

Introduction

About 36% of people in the U.S. have a fear of the dentist (Cleveland Clinic, 2022). Previous studies show a lack of clarity on which factors affects dental anxiety, even though they found significant differences in anxiety in a variety of demographic factors, such as dental insurance status and checkup frequency (Doerr et al, 1998). This study hopes to identify the factors or characteristics that are most related to high dental anxiety within one dental practice and hypothesized that dental anxiety levels will vary based on different demographics.

Method

Participants

Fifty patients at a dental office in Salem, MA, who differed on demographics and oral health experiences, were surveyed.

Materials

This study used an anonymous Qualtrics survey that collected demographic information and asked patients to self report their oral health experiences. The survey also included the Revised Dental Anxiety Scale (DAS-R) (Corah, 1969), which allowed me to measure patient anxiety levels. The DAS-R asks patients to rate their anxiety levels in response to four different dental office scenarios on a 5-point Likert scale.

Procedure

Patients were approached in the waiting room and asked to fill out the survey using a QR code. After indicating informed consent, the patients completed the survey in the waiting room, were compensated with a gift card to Starbucks, and were thanked and debriefed for their participation. A Total Dental Anxiety score from 1-20 was calculated for each participant.

Results

There was a strong negative correlation between total DA score and ratings of previous experiences with dentists $r(48) = -0.64, p < .001$ (see Figure 1). There was a strong positive correlation between total DA scores and how often patients experienced pain or discomfort in their teeth or mouth $r(48) = 0.75, p < 0.001$ (see Figure 2). There was a significant difference in anxiety levels between patients with private dental insurance ($M = 6.15$) and state-funded dental insurance ($M = 9.56$), $t(36) = -2.68, p = 0.011, d = -0.87$ (see Table 1).

Figure 1
Correlation of Dental Anxiety Score and Overall Previous Experience with Dentists

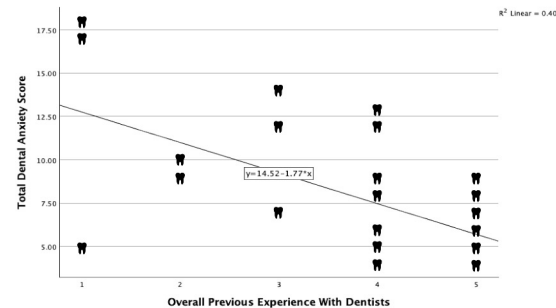


Figure 2
Correlation of Total Dental Anxiety Score and Frequency of Pain and Discomfort

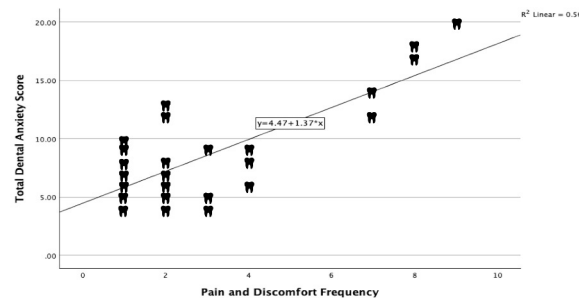


Table 1
Means and Standard Deviations of DA Scores by Dental Insurance Type

Dental Insurance Type	Mean DA Score (SD)
Private	6.15 (2.32)
Not Private	9.56 (5.12)

Note. There were 38 participants in this question.

Discussion

The negative correlation between total DA score and previous experience with dentists found may indicate that having a negative experience with a dentist can lead to the development of anxiety for future appointments. The positive correlation between total DA score and how often patients experience pain or discomfort may indicate that increased issues with oral health and anticipation of further pain can lead to higher anxiety about getting a diagnosis and what that could mean for one's physical and financial health. This is further supported by the significant difference in anxiety levels between patients with private insurance and patients with state-funded insurance. State insurance typically provides lower percentages of coverage on more serious procedures than private insurance, leading to higher out-of-pocket costs.

Applications/Implications

Based on the results of this study, it is like that dental anxiety is connected to experiential and financial factors. The lack of significant differences in anxiety levels between demographics like race, gender, and age may indicate that any person can experience dental anxiety regardless of their demographics. These results point to the need for improvement in the way that some dentists treat their patients in order to decrease the likelihood that someone will have a negative experience leading to them developing dental anxiety. Furthermore, financial factors seem to play a big role in the development of dental anxiety. Access to affordable care is an ongoing issue in the healthcare system in the U.S., and the results of this study only serve to support that increasing access and decreasing the costs of care can increase the likelihood of patients seeking out vital healthcare.

References

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