

## Dental Anxiety in Fiji

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**Abstract:** Despite the technological advances in dentistry, anxiety about dental treatment and the fear of pain associated with dentistry remains globally widespread and is considered a major barrier to dental treatment. This can have detrimental consequences to people's oral health and pose a serious epidemiological challenge to oral health care professionals. Dental anxiety is well described in the Western world however there is little literature on the situation in the developing world. The purpose of the study was to evaluate the levels of dental anxiety in Fijians using Corah's Dental Anxiety Scale (DAS). 120 adults, aged 18-45 years were randomly selected from the capital city of Suva until there were 60 Indigenous and 60 IndoFijians, with 30 males and 30 females from each group responding to questions from Corah's Dental Anxiety Scale.

The average DAS for all the participants was 8.8. The average DAS for IndoFijians was 9.8 and was significantly higher than for Indigenous Fijians ie 7.8.

IndoFijians only reported less anxiety with increasing age as the Indigenous Fijians generally displayed low levels of anxiety. There was no significant difference in DAS between the genders.

A considerable proportion of IndoFijians (28%) were anxious with 13% being highly anxious. Young IndoFijian adults are more likely to possess dental anxiety and should be managed appropriately which may include behavioural and / or pharmacological therapy. This may require referral to dental specialists or involve a multidisciplinary approach to the management of these people.

**Keywords:** Dental anxiety, fear, pain, Corah's Dental Anxiety Scale (DAS) (PHD 2004 Vol 11 No 1 Pages 22 - 25)

### Introduction

Despite the technological advances in dentistry, anxiety about dental treatment and the fear of pain associated with dentistry remains globally widespread and is considered a major barrier to dental treatment.<sup>1,2,3,4,5,6</sup>

Dental fear is a normal protective reaction to a real threat and the feeling of fear does not remain when the threat is no longer present. Dental anxiety on the other hand is more of a subjective state of feelings that is often associated with a feeling of impending doom or danger. Unlike fear, the feelings of anxiety are often felt when a stimulus or threat is not immediately present or readily identifiable.<sup>6,7,8</sup>

Despite the routine use of analgesics such as local anaesthetics, the fear of painful or uncomfortable dental procedures can be a great source of anxiety to patients.<sup>9</sup>

Dental anxiety can not only be a problem for those suffering from it but also for the treating oral health care practitioner.<sup>7,9</sup> High levels of dental anxiety may make safe and successful treatment impossible and such patients may continue to avoid regular dental care for life. It can be the prime reason for missed or cancelled appointments, lead to irregular dental attendance, delay in seeking treatment or its avoidance all together.<sup>9</sup>

It has been established that dental anxiety can have detrimental consequences to people's oral health and has been associated with poor clinical oral health status ie more decayed and missing teeth. Similarly the periodontal status of dentally anxious people is reported to be poor.<sup>12</sup> Such consequences can pose a serious epidemiological challenge to oral health care professionals.<sup>11</sup>

Dental anxiety is well described in the Western world however there is little literature on the situation in the developing world.<sup>12</sup>

If oral health care workers are aware of the level of anxiety of their patients and particularly if such levels are higher in certain risk groups then the profession can be better prepared to take measures to help alleviate the anxiety. Prior to this study the level of dental anxiety in Fiji was unexplored and unknown.

The purpose of the study was to evaluate the levels of dental anxiety in Fijians using Corah's Dental Anxiety Scale (DAS).

## Methods

120 adults from the capital city of Suva were randomly selected until there were 60 Indigenous and 60 IndoFijians, with 30 males and 30 females from each group.

The age of the participants was restricted to adults from 18-45 years to reduce the number of long-term edentulous individuals whom may not remember what it is like to go to the dentist.

Prior to the commencement of the study, the study protocol was approved by the School of Oral Health Research Committee.

To determine the level of dental anxiety, the participants responded to questions from Corah's Dental Anxiety Scale.<sup>13</sup> The DAS questionnaire has been widely used and is well established for good validity and reliability.<sup>12</sup> The scale contains four questions dealing with the patient's subjective response to:

- Anticipating visit to the dental clinic
- Waiting in the dentist's office for treatment
- Waiting in the dental chair for drilling of teeth
- Waiting in the dental chair for cleaning of teeth

For each question the participants select a response from five possible options that ascend in their level of anxiety. Each question can hence have a minimum score of 1 and a maximum score of 5, with a total possible maximum score of 20 for the entire scale. The range of possible scores is between 4 (no anxiety) and 20 (maximal anxiety).

Statistical analysis was performed using SPSS v.12 software. Data was checked for equity of variance using Leven's test. Analysis of variance (ANOVA) was used to determine differences between variables and regression analysis was employed to determine the relationship between age and anxiety.

## Results

The average age of the participants was 28.2 ( $\pm 8.6$ ) years and there was no significant difference ( $P=0.35$ ) in ages between the Indigenous and IndoFijian groups. The average DAS for all the participants was 8.8. The average DAS for IndoFijians was higher than for Indigenous Fijians ie 9.8 and 7.8 respectively and the difference was significant ( $P=0.001$ ). 3 % (2 out of 60) Indigenous Fijians had a DAS of 15 or more and 13% (8 out of 60) of IndoFijians had a DAS of 15 or more.

**Table 1.**

There was no relationship between age and anxiety in Indigenous Fijians however IndoFijians reported less

anxiety with increasing age ( $r=0.36$ )

There was no significant difference in DAS between the genders ( $P=0.59$ ).

There was also no ethnicity and gender interaction ( $P=0.75$ )

**Table1. DAS for Indigenous and IndoFijians**

DAS	Indigenous Fijian (n=60)	IndoFijian (n=60)	Total (n=120)
4	5	5	10
5	9	6	15
6	11	6	17
7	6	1	7
8	5	5	10
9	8	7	15
10	8	7	15
11	1	3	4
12	4	3	7
13	1	6	7
14	0	3	3
15	2	3	5
16	0	2	2
17	0	1	1
18	0	2	2

## Discussion

Researchers such as Chapman et al suggest that there is a relationship between general fear and dental fear.<sup>6</sup> It should be borne in mind that the origins of dental anxiety are numerous and complex and have been shown in other parts of the world to be associated with a systematic, irregular attendance pattern, history of extractions, having a dentally anxious parent and is also related to memory distortions and personality types. More research however is required in this area.<sup>14</sup>

The literature shows that women have a lower tolerance to pain and generally report higher levels of anxiety. Gender differences relating to dental anxiety that have been reported may be not only numerical but also qualitative in their nature.<sup>15</sup> In Indonesia and Argentina males report higher fear than females.<sup>16</sup> Studies that have used DAS have generally found that little gender differences in dental anxiety exist as was the case in our research.<sup>17,18</sup>

Our study agrees with other studies in the finding that there is an inverse relationship with age and dental anxiety.<sup>12,19,20,21,22</sup>

The incidence of dental anxiety has been reported to vary from 12.2% in those aged 18-24 years to 1.7% among those aged 65 years and over.<sup>23</sup> Reasons dental anxiety decreases with age may be due to experiences acquired, including coping experiences or may be due to the ageing process itself characterized by a general decline in anxiety.<sup>22</sup>

DAS of 13 or 14 should make the dentist suspicious that the patient is anxious. Scores of 15 or higher almost always indicate high anxiety.<sup>13</sup>

In our study we saw a difference in ethnicity with the average DAS for IndoFijians was 9.8 and 7.8 for Indigenous Fijians. A considerable proportion of IndoFijians (28%) were anxious with 13% being highly anxious.

The DAS for Indigenous Fijians was comparable to that seen in Nigerians (7.3) and the DAS for IndoFijians was closer to that seen in Australians (9.0) and in Russians (10.0).<sup>12,24,25</sup>

In a study that examined DAS in an outpatient dental emergency clinic, it found that Puerto Ricans scored highest, Blacks lowest, and Whites in-between.<sup>26</sup>

The reasons for this ethnic distinction are unknown however low DAS scores have been attributed to poor dental awareness.<sup>12</sup>

The study did not examine any possible causes for the anxiety or the variety of different treatments that may influence the anxiety.

Young IndoFijian adults are more likely to possess dental anxiety and should be managed appropriately which may include behavioural and / or pharmacological therapy. This may require referral to dental specialists or involve a multidisciplinary approach to the management of these people.

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| If we are facing in the right direction, all we have to do is keep walking |  
| *(Ancient Buddhist expression)* |