

# Anxiety Levels in Dental Patients

1. Hasan Mehdi 2. M. Mohsin Girach 3. Muhammed Junaid Lakhani

1. Assoc. Prof. of Oral Maxillofacial Surgery, FJM&DC, Karachi 2. Prof. of Oral Maxillofacial Surgery, JM&DC, Karachi 3. Assoc. Prof. of Oral Maxillofacial Surgery, JM&DC, Karachi

## ABSTRACT

**Objective:** The aims of the study were to describe the level of dental anxiety in a representative sample population.

**Study Design:** Experimental study

**Place and Duration of Study:** This study was conducted at the Fatima Jinnah Dental College, Karachi. The study was conducted 1<sup>st</sup> to 31<sup>st</sup> of March 2013

**Material and Methods:** All patients coming to the dental OPD for different dental procedures during the month of March 2013 were included in the study. Study sample comprised of 213 patients 135 Females and 78 Males. The age of the patients ranged from 5 to 75 years. The study sample was divided into three groups: 1) 5-24 years 2) 25-39 years and 3) 40-75 years According to the performed dental procedures the sample was divided into two groups; 1) undergoing invasive procedures 2) undergoing non-invasive procedures Measurement of anxiety levels were recorded on the proforma using Norman Corah's anxiety scale data was entered on Microsoft Excel work sheet and was analyzed using SPSS 14.

**Results:** The results of this study showed women having higher DAS values as compared to men both in educated and non-educated strata regardless of the nature of the procedure being performed invasive or non-invasive. In the study 40% males and 25.5% females were relaxed when asked for their anxiety levels when visiting for a dental checkup and considered it as an enjoyable experience. 49.1% Males and 47.3% Females were relaxed waiting in the dental office. When asked regarding the noise of a drill 3.6% Males and 8.2% Females felt very anxious. For question relating to tooth cleaning and instrument preparation 5.9% Males and 8.2% Females were very anxious.

**Conclusion:** This study has shown that educated individuals in both the genders have more anxiety as compared to uneducated individuals. Government funding should be directed towards awareness programs for population regarding dental treatments. Training of dental practitioners in patient counseling should be emphasized in the management of anxious patient.

**Key Words:** Anxiety level, Dental treatment

## INTRODUCTION

Anxiety related to dental treatment is very common and it is potentially distressing, both for the patient and for the dental practitioners. Anxiety can be defined as a feeling of worry, nervousness, or unease about something with an uncertain outcome<sup>1</sup>. Anxiety is one of the biggest factors in the avoidance of dental care.<sup>2,3</sup>

Dental anxiety is associated with a number of different factors like; pain, discomfort or previous bad experience during dental treatment. Patient's anxiety makes it harder to provide treatment, treatments becomes more time consuming and can also affect the quality of dental care. Understanding the behavior of an anxious patient will aid to improve patient care. The intensity of dental anxiety is different among certain groups in the population.<sup>4</sup> Neverlien in his study has shown that younger people, people with low income or low socioeconomic status, and people with lower levels of education tend to have more severe dental anxiety than people who are elderly, more affluent, or better educated.<sup>5</sup>

Only a few studies concerning dental anxiety are published in Pakistan. This study is done at the Fatima Jinnah Dental College, Karachi. Measurement of

anxiety levels were recorded on the proforma using Norman Corah's anxiety scale<sup>6,7</sup> data was entered on Microsoft Excel work sheet and was analyzed using SPSS 14.

## MATERIALS AND METHODS

This study was conducted at the Fatima Jinnah Dental College, Karachi. All patients coming to the dental OPD for different dental procedures during the month of March 2013 were included in the study. Study sample comprised of 213 patients 135 Females and 78 Males.

The age of the patients ranged from 5 to 75 years. The study sample was divided into three groups:

- 1) 5-24 years
- 2) 25-39 years and
- 3) 40-75 years

According to the performed dental procedures the sample was divided into two groups;

**Group 1:** undergoing invasive procedures like simple extraction, impaction, fillings and root canal treatment

**Group 2:** undergoing non-invasive procedures like consultation, scaling, polishing and orthodontic treatment.

Dental anxiety was estimated using the Corah's Dental

Anxiety Scale (DAS). (Table 1) This scale measures reactions to four different dental treatment situations:

- 1) before attending the dental surgery;
- 2) waiting in the dental operatory;
- 3) sitting in the dental chair; and
- 4) undergoing treatment.

Each question has five pre-structured answers evaluated on a scale from one to five;

a = 1, b = 2, c = 3, d = 4, e = 5. The maximum possible total can be 20

**Table No.1: Norman Corah's Dental Questionnaire**

<b>1. If you had to go to the dentist tomorrow for a check-up, how would you feel about it?</b>
a. I would look forward to it as a reasonably enjoyable experience.
b. I wouldn't care one way or the other.
c. I would be a little uneasy about it.
d. I would be afraid that it would be unpleasant and painful.
e. I would be very frightened of what the dentist would do.
<b>2. When you are waiting in the dentist's office for your turn in the chair, how do you feel?</b>
a. Relaxed.
b. A little uneasy.
c. Tense.
d. Anxious.
e. So anxious that I sometimes break out in a sweat or almost feel physically sick.
<b>3. When you are in the dentist's chair waiting while the dentist gets the drill ready to begin working on your teeth, how do you feel?</b>
a. Relaxed.
b. A little uneasy.
c. Tense.
d. Anxious.
e. So anxious that I sometimes break out in a sweat or almost feel physically sick.
<b>4. Imagine you are in the dentist's chair to have your teeth cleaned. While you are waiting and the dentist or hygienist is getting out the instruments which will be used to scrape your teeth around the gums, how do you feel?</b>
a. Relaxed.
b. A little uneasy.
c. Tense.
d. Anxious.
e. So anxious that I sometimes break out in a sweat or almost feel physically sick.
<b>SCORING THE DENTAL ANXIETY SCALE (DAS)</b>
a = 1, b = 2, c = 3, d = 4, e = 5      Total possible = 20
Anxiety rating:
5 - 8 = mild anxiety
9 - 12 = moderate anxiety but have specific stressors that should be discussed and managed
13 - 14 = high anxiety
15 - 20 = severe anxiety (or phobia). May be manageable with the Dental Concerns Assessment but might require the help of a mental health therapist.

Anxiety was rated as;

5 - 8 = mild anxiety

9 - 12 = moderate anxiety

13 - 14 = high anxiety and

15 - 20 = severe anxiety (or phobia).

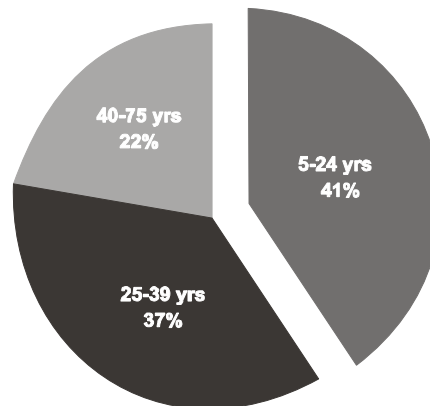
Data was entered on Microsoft Excel work sheet and was analyzed using SPSS 14

## RESULTS

A total of 213 patients completed the questionnaire regarding their anxiety level and were included as a part of this study. The study group was **41%** of the patients belonged to age group of 5-24 years, **37%** of the patients belonged to age group of 25-39 years, **22%** of the patients belonged to age group of 40-75 years According to Corah's questionnaire:

1. Relating to a visit for a dental checkup 40% Males and 25.5% Females were looking to it as an enjoyable experience.
2. Question relating to waiting in the dental office approx. 49.1% Males and 47.3% Females were relaxed.
3. Question regarding the noise of a drill 36.4% Males and 30.9% Females were relaxed while 36.4% Males and 27.3% Males Females felt a little uneasy and approx. 3.6% Males and 8.2% Females felt very anxious.
4. Question relating to tooth cleaning and instrument preparation 27.3% Males and 26.4% Females were relaxed, 34.5% Males and 28.2% Females felt a little uneasy, 20% Males and 25.5% Females were tense and 5.5% Males and 8.2% Females were very anxious.

Population undergoing invasive procedures including extraction, impaction removal, fillings and root canal treatment comprised of 83 individuals (approx. 50% population). In educated strata 30 Males and 78 Females had Mild anxiety levels followed by 15 Males and 30 Females with Moderate anxiety levels, 6 Males and 15 Females with High anxiety levels and 3 Male and Females with Severe anxiety levels. In uneducated strata 3 Male and 9 Females with Mild anxiety levels followed by 12 Males and 33 Females with Moderate anxiety levels 3 Female with Severe anxiety levels.



**Figure No. 1: Age group distribution**

Population undergoing non-invasive procedures including routine consultation, scaling and orthodontic treatment in educated strata 54 Males and 63 Females had Mild anxiety levels followed by 15 Males and 42 Females with Moderate anxiety levels, 9 Males and 15

Females with High anxiety levels and 6 Males and 18 Females with Severe anxiety levels. In uneducated strata 6 Males and Mild anxiety levels followed by 6 Males and 6 Females with Moderate anxiety levels and 6 Females with Severe anxiety levels.

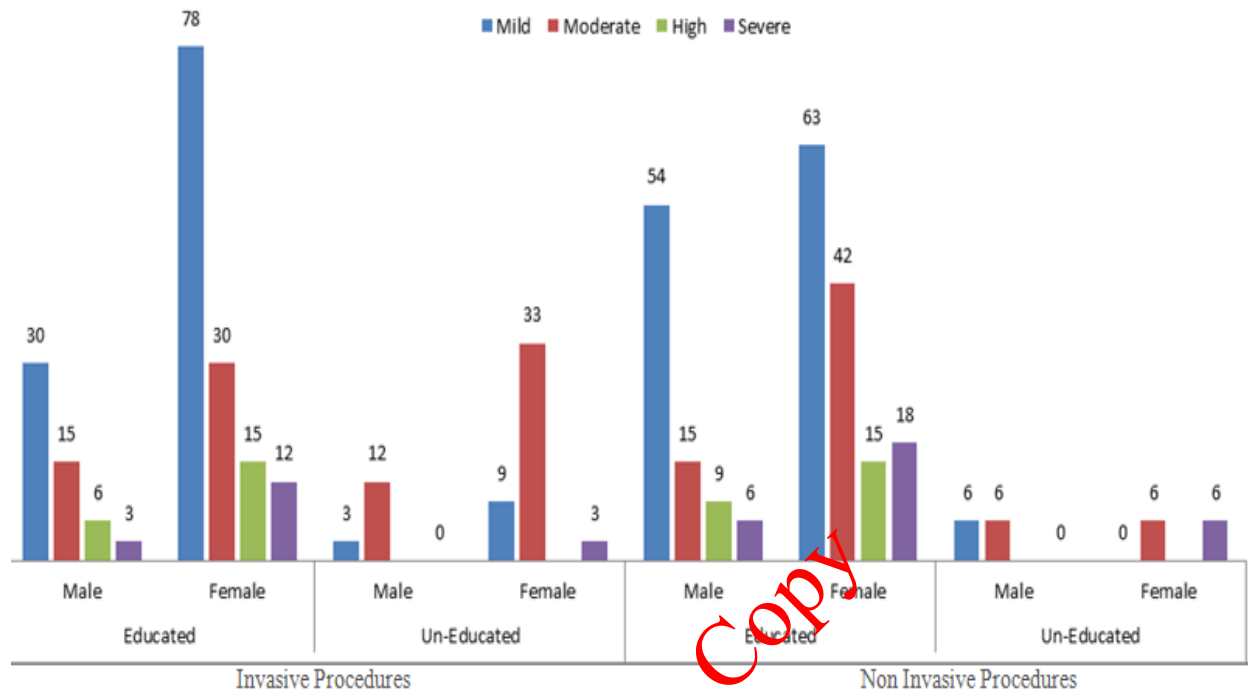


Figure No.2: Distribution of revised DAS in population group

**DISCUSSION**

Research on human responses to pain stimulus has generally found that women report higher levels of anxiety and exhibit less tolerance to pain at a given stimulus as compared to men.<sup>8</sup> The results of this study also showed similar results women showing higher DAS values as compared to men both in educated and non-educated strata regardless of the nature of the procedure being performed invasive or non-invasive. (Fig. 1 & 2) These results are most likely due to real differences in anxiety levels between genders or a greater readiness among females to acknowledge feelings of anxiety to perhaps both factors acting in combination. Stabholz also had similar finding in his study.<sup>9</sup>

In our study 40% males and 25.5% females were relaxed when asked for their anxiety levels when visiting for a dental checkup and considered it as an enjoyable experience. 49.1% Males and 47.3% Females were relaxed waiting in the dental office. When asked regarding the noise of a drill 3.6% Males and 8.2% Females felt very anxious. For question relating to tooth cleaning and instrument preparation 5.5% Males and 8.2% Females were very anxious. Similar findings were shown in the study conducted in Nigeria.<sup>10,11</sup> This study showed significantly higher anxiety levels in both the genders undergoing invasive procedure as compared to

non-invasive procedures. The level of education also had an effect on anxiety levels<sup>12</sup> this study has shown that educated individuals in both the genders have more anxiety as compared to uneducated individuals. Perhaps this may be because of the increase in awareness related to experience and education.

**CONCLUSION**

There is a high prevalence of fear and anxiety in female population in respect of dental procedures. Invasive procedures create more anxiety as compared to non-invasive procedures. Government funding should be directed towards awareness programs for population regarding dental treatments. Training of dental practitioners in patient counseling should be emphasized in the management of anxious patient.

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**Address for Corresponding Author:****Dr. M. Junaid Lakhani**

Associate Professor of Oral Maxillofacial Surgery,  
Jinnah Medical and Dental College, Karachi  
22-23 Shaheed-e-Millat Road, Karachi  
Cell No.:0300-8222287

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