



CODEN [USA]: IAJPBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF  
**PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3873311>Available online at: <http://www.iajps.com>

Research Article

**ANXIETY RELATED TO DENTAL TREATMENT AMONG  
PATIENTS ATTENDING THE DENTAL OPD**Dr Zobia Zaman<sup>1</sup>, Dr Anila<sup>2</sup>, Dr Farhan Sabir<sup>3</sup><sup>1</sup>Sharif Medical and Dental College, Lahore<sup>2</sup> Sir Syed College of Medical Sciences for Girls, Karachi<sup>3</sup> Nishtar Institute of Dentistry, Multan

Article Received: April 2020

Accepted: May 2020

Published: June 2020

**Abstract:**

**Objective:** Dental anxiety is an important barrier that limits patient access to productive dental treatment. The aim of this study is to assess the prevalence of anxiety in adult patients by age and sex who attended the dental OPD using the Modified Dental Anxiety Scale (MDAS).

**Study Design:** A Cross-Sectional Study.

**Place and Duration:** In the Out Patient Department of Punjab Dental Hospital, Lahore for one year duration from January 2019 to January 2020.

**Materials and methods:** The demographic data was recorded on the version of the Modified Dental Anxiety Scale (MDAS) questionnaire. The statistical analysis program (SPSS v.21) was used to enter data and analyze in the study.

**Results:** 191 patients, 106 women and 85 men were included in the study. The most disturbing factor was dental injection, and the lowest level of concern was about cleaning and polishing teeth. The results showed that women showed higher levels of anxiety than men.

**Conclusion:** Dental anxiety is a major obstacle for both the dentist and the patient. Dental fear leads to avoiding treatment and deteriorating oral health. Improving public awareness and oral health education can reduce the level of dental fear.

**Key words:** dental anxiety, fear, public dental clinics.

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Please cite this article in press Zobia Zaman et al, *Anxiety Related To Dental Treatment Among Patients Attending The Dental OPD.*, Indo Am. J. P. Sci, 2020; 07(06).

**INTRODUCTION:**

Dental anxiety or dental phobia "abnormal panic when you see a dentist for treatment" means a state of fear of something terrible happening and often associated with a sense of loss of control (Klingberg and Broberg, 2017). Fear and fear of various aspects of dental procedures is one of the problems that patients around the world often face<sup>1-3</sup>. Dental anxiety ranks fourth among common fears and ninth among intense fears. Despite innovations in the field of dental materials, technology and advanced information, a significant percentage of patients suffer from dental anxiety (Nascimento *et al*<sup>4</sup>. 2016). It is considered one of the main barriers in dental care that leads to avoidance of treatment and deterioration of oral health (Gatchel *et al*<sup>5</sup>. 1983). Patients with dental anxiety have shown that oral health is quite poor compared to other patients (Hakeberg *et al*<sup>6</sup>. 1992). Dental anxiety is a problem for both patients and dentists; complicates treatment and affects the overall success of a dental visit (Taani, 2012).

Kirova *et al*. (2015) found that 25-year-olds worry most about their dentistry. This can be attributed to the different effects of a number of psychological factors that can cause fear and anxiety of teeth in this age range (Donka, 2014; Al-Omari and Al-Omiri, 2019). Many studies report that dental anxiety is significantly higher among women; nevertheless, the clinical significance of this gender difference has been questioned (Cooper *et al*<sup>7</sup>. 1987, Corah *et al*<sup>8</sup>. 1978). Before treatment, dentists should be able to determine the patient's level of anxiety so that they can benefit from appropriate treatment options (Milgrom *et al.*, 2012). For this reason, various scales have been developed for this purpose, such as the Dental fear survey (DFS) and Corah's scale. The aim of this study is to assess the prevalence of anxiety in adult patients by age and sex who attended the dental OPD using the Modified Dental Anxiety Scale (MDAS).

**MATERIAL AND METHODS:**

This Cross-sectional study was held in the Out Patient Department of Punjab Dental Hospital, Lahore for one year duration from January 2019 to January 2020. The study population consisted of 200 healthy adult patients. Data were obtained from planned patients who reported to the clinics in the waiting room before receiving any treatment. Data

was collected using a self-administered questionnaire. The MDAS questionnaire consists of five elements that ask participants to assess the level of anxiety in response to various situations in the dental office: the second visit to the dentist scheduled for the next day, being in the waiting room of the dental clinic, has tooth extraction, dental scales and local anesthetic injection. Participants' responses were rated on a Likert 5-point scale as follows: not restless, somewhat restless, quite restless, very restless, extremely restless, 1 not restless here and 5 exceptionally restless. The study was designed according to the Fifth Scale, where the answers take numerical weights indicating the degree of response to each statement, so it will be as follows). Maximum fears) = 5, (very concerned) = 4, (very concerned), 3 = slightly concerned) = 2, (not applicable) = 1. The results range from 5 to 25 (Humphris *et al*. 1995). A value of 19 or higher indicates high dental anxiety (or tooth phobia (and a value between 13-18 means moderate levels of dental anxiety).

This response table is a simplified assessment system compared to the Corah dental scale, a measure of 4 problems with tooth anxiety. The analysis used the statistical analysis program (SPSS v.21) to enter data and analysis using statistical methods required to achieve the study objectives. The following statistical methods were used:

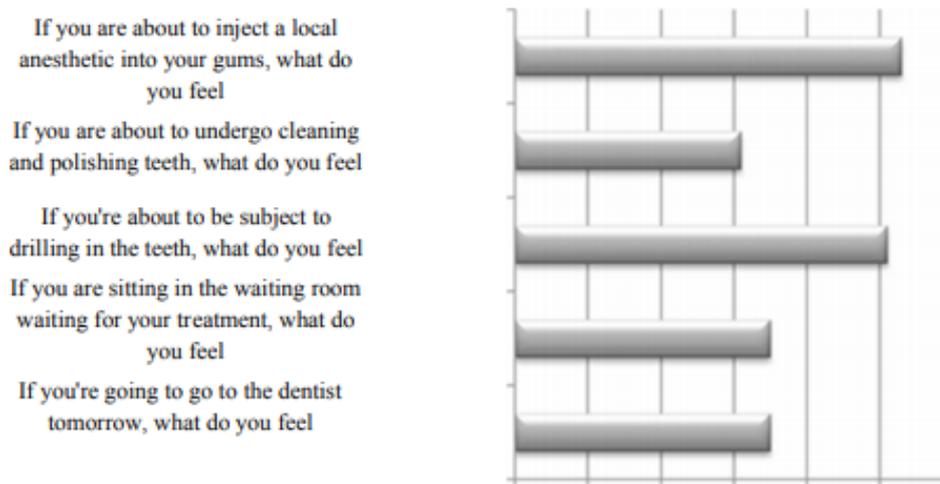
1. Frequencies & Percentages.
2. Mean.
3. Standard Deviation.
4. T-test for independent samples.
5. Analysis of Variance- ANOVA

**RESULTS:****Working population and sampling.**

The study population consisted of healthy adult dental clinic reviewers and was based on the selection of a simple random sample. Children and adults who appear physically sick or disabled are excluded from the study. In total, 191 questionnaires were completed and 200 were received with a 95.5% response rate. 50.3% of the respondents were women and 49.7% were men. This dimension is sufficient to give correct results in this regard. Regarding the age groups of the sample, the majority of the sample (44% (aged 18 to 29 years, 30%) was between 30 and 39 years old, and at least (26%) over the age of 40. The fear of dental clinics was moderate and its relative weight was 41%.

**Table 1: Level of fear of dental clinic**

	Not worried	Bit worried	Anxiety Significantly	Very worried	Concern to the maximum extent	Mean	StdDev	Rel. Weight
If you're going to go to the dentist tomorrow, what do you feel	76 (39.8)	96 (50.3)	9 (4.7)	6 (3.1)	4 (2.1)	1.77	0.844	35%
If you are sitting in the waiting room waiting for your treatment, what do you feel	86 (45.0)	77 (40.3)	18 (9.4)	8 (4.2)	2 (10)	1.76	0.867	35%
If you're about to be subject to drilling in the teeth, what do you feel	34 (17.8)	71 (37.2)	45 (23.6)	28 (14.7)	13 (6.8)	2.55	1.145	51%
If you are about to undergo cleaning and polishing teeth, what do you feel	120 (62.8)	50 (26.2)	13 (6.8)	7 (3.7)	1 (.5)	1.53	0.819	31%
If you are about to inject a local anesthetic into your gums, what do you feel	42 (22.0)	68 (35.6)	21 (11.0)	36 (18.8)	24 (12.6)	2.64	1.345	53%
Level of fear						2.05	0.731	41%

**Fig. 1: The levels of fear of dental clinics.**

As shown in Table (1), dental clinics show fear levels in various aspects (1) tooth cleaning represented the lowest level of anxiety at a relative weight of 31%, and also showed a low level of fear at a relative weight 35% when visiting a dental clinic and sitting in a waiting room. On the other hand, while the level of fear of extracting teeth is 51% relative weight, the highest level of fear is a dental injection with a relative weight of 53%.

The T-test was used to assess statistically significant differences in the level of fear of dental clinics by sex. The results show that the level of fear in women is moderate at a relative weight of 44%, while the level of fear in men is low at a relative weight of 38%, because the significance level is lower than 0.010.

**Table 2: T-test Between Male & Female**

Gender	Mean	Rel. weight	Std. Deviation	T-test	Sig
Female	2.19	44%	0.613	2.604	0.01
Male	1.92	38%	0.813		

Therefore, 5% said that there is a difference in the level of fear of dental clinics by gender table (2). On the other hand, the result of the test of variance (ANOVA) shows that the significance level for testing differences between different age groups is 0.303, which is more than 5% and therefore does not differ.

**Table 3: ANOVA-test between age Levels**

Age	Mean	Rel. weight	Std. Deviation	F-test	Sig
From 18 to 29	2.02	40%	0.697		
From 30 to 39	2.17	43%	0.757	1.204	0.302
40 and more	1.97	39%	0.752		

This is statistically significant in terms of fear of dental clinics. Table by age groups (3).

### DISCUSSION:

Among the most anxious situations, dental anxiety was classified in fifth grade (Hmud and Walsh, 2009). Anxiety before teeth leads to avoiding treatment and neglecting oral health (Raciene, 2004). According to our results, making an appointment with a dentist did not cause excessive anxiety, but it can be a mild source of anxiety. Also being in the waiting room before the agreed date was not a problem in our population. This result is Gaffar et al. (2014) discovered increased anxiety of the teeth while sitting in the waiting room. Hmud and Walsh, (2009) Gaffar et al. (2014), because waiting increases the time it takes to think about what will happen and meditate to the worst results. Participants' lack of fear over the waiting time for treatment may be due to the way clinical staff treats and protects them in the waiting room<sup>9</sup>. The anxiety index has increased significantly, including when most of our participants intend to pierce their teeth. However, the feeling of dental injection was the most important cause of anxiety. Injections and perforations are pain-related stimuli and increase the fear of teeth because this is expected (Humphris et al. 1995). Our results correspond to El-Khalifa (2015), who stated that the highest level of anxiety are injections<sup>10</sup>. In addition, El-Housseiny et al<sup>11</sup>. (2014) reported that the most feared subjects for children are injections and drilling of teeth. In addition, Humphris et al<sup>12</sup>. (1995) found that anxiety is the most common sense of tooth injection. Cleaning and polishing teeth was not a cause for concern for the majority of our population (62.8%), which is consistent with the results of Khalifa (2015).

The results of this study showed that there were statistically significant differences in the level of fear of dental clinics by sex ( $p < 0.05$ ). These findings are consistent with the results of many similar studies (Saatchi et al. 2015; Al-Khalifa 2015; Alaki et al., 2012; Armfield et al. 2006). This may be due to the fact that men are less likely to report than women, which is why women express their concerns more clearly than men (El-Khalifa, 2015). In addition, physiological conditions; panic, social phobia, stress, depression and fear are more common in women; such feelings may be associated with tooth anxiety (Saatchi et al., 2015). Contrary to our findings, El-Housseina et al. (2014) stated that

there was no significant difference in total fear results by sex. Many cross-sectional studies have shown that the incidence of dental anxiety decreases with age. Although studies have not shown a strong relationship between dental anxiety and age (Hmud and Walsh, 2009). In this study, no statistically significant difference was found between anxiety levels at dental clinics in different age groups<sup>13</sup>. This may be due to the fact that all participants who took part in our study were 18 years old, that is, their perceptions and impressions about the dental clinic were shaped and it was not easy to change with time. Alaki et al. (2012) and El-Housseiny et al. (2014) found that there was no correlation between total fear results and age. Armfield et al. (2006) found differences in the prevalence of fear in different age groups<sup>14</sup>. This study differed from the results in our study because it had a wider age range because it included a sample of 5 years and older<sup>15</sup>. People of all ages are exposed to various cultural and social events that occur at various cognitive and emotional stages, thus affecting the level of tooth anxiety.

### CONCLUSION:

This study showed that between the dentist and most participants who had the meeting, this was not a cause for excessive concern; this was reduced to a small rate in the waiting room before treatment. While the feeling of tooth injection was the most disturbing, the least interest among the participants was cleaning and polishing the teeth. There were statistically significant differences in the level of fear of dental clinics by sex. Where in the dental clinic women are more worried than men. Although there is no statistically significant difference in the level of anxiety in different age groups. Various recommendations have been proposed to reduce patient anxiety. The most important thing is to raise public awareness about oral health through childhood workshops and campaigns. The effectiveness of individual techniques for reducing anxiety in adult patients, such as entertainment attention in Saudi culture, requires further research.

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