

## PERCEIVED DENTAL ANXIETY AMONG PATIENTS ACCORDING TO DIFFERENT DENTAL PROCEDURES

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### ABSTRACT

*Human health behavior is presented in many traits. Among them fear is a strong factor that influences not only on health but also procedures and communication with health care provider.*

*The objectives were to explore dental anxiety at various levels in different dental procedures among patients visiting Dental Hospital. A cross sectional survey was conducted on 702 patients visiting general out-patient Departments at Fatima Memorial Hospital College of Dentistry. A structured, standardized and validated questionnaire was used for the purpose of data collection (Modified Dental Anxiety Scale by Corah). Informed consent was obtained from patients. Extreme anxiety level was found more in younger age and in female patients. Mean score was 13.2 (+ 4.3) which makes participant from slightly to fairly anxious while visiting any dentist for any procedure. According to ranking, extreme anxieties developed from procedures are as follows local anaesthesia is highest, tooth drill, Scaling, waiting area and next day appointment was ranked lowest respectively. It is important for dentist to focus on patient anxiety level particularly in younger and female patients. It also helps to carry out smooth dental treatment.*

**Key Words:** Dental Anxiety, Dental Phobia, Local Anesthesia.

### INTRODUCTION

Human behavior is presented in many traits. Among them fear is a strong factor that influences Health. It is a dilemma for many patients not accessing oro-dental care and become a self hindrance in health care provision. Some patients try to stay away from dental treatments, some from dentists altogether because of their intense fears.<sup>1</sup>

Any dental experience during dental visits plays a significant role and may lead to dental anxiety. From this perspective these patient need more time and attention for treatment or otherwise will mostly try to neglect dental care. Anxiety has been the matter of concern for many dentists which can be considered by probing different factors such as past bad, depressing

or uncomfortable experience, frequency, incidence, etiology, management of patient care and repute of the dentist.<sup>2-4</sup>

People in general get anxious when they visit their dentists<sup>5</sup> and they avoid dental visit to their fear towards dentists and ultimately oral health is compromised. It has been observed that a reasonable number of people when try to avoid dental check-ups and treatment resultantly caught into a self-perpetual cycle of dental anxiety. In this cycle people often ignore their routine dental clinical check-ups and try to withstand the pain or other minor issues unattended. Such people seek dental advice only at a stage when there ailment has got entered into an advance stage. This result in the accumulation of multiple minor dental issues and cannot be generally cured in a couple of visits. Longer multiple dental visits and involvement of invasive procedure are the typical consequence, in addition to the on-going poor dental hygiene.<sup>6</sup>

Dental procedures are affected if patient is anxious about dental treatment. Quality and quantity of dental procedures both are affected due to dental anxiety.<sup>7</sup> Patient delays dental treatment because of their anxiety so becomes nearly not viable to carry on conservative procedures when patient comes to dentist. That is the reason anxious patients are treated

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with medications and with development of index on sedation needs prior to their dental treatments but it fails to address individual needs.<sup>8</sup> When this fear is not in control and patient become irritable this becomes a phobia.<sup>9</sup>

The objectives of the study were to explore dental anxiety among patients visiting dental hospital, to assess different levels of dental anxiety using MCDA Scale and to compare dental anxiety level with different socio-demographic factors.

## METHODOLOGY

This is a Cross-sectional, convenient sampling based study. A response on anxiety from 702 patients was collected visiting FMH College of Medicine and Dentistry in different dental departments for various dental procedures. Inclusion criteria were based on adult patient age 18 years and above and not consuming any medication for any psychological condition. After getting a verbal consent that patients were willing to participate in the study, a self administered questionnaire was provided in the dental clinics and waiting area. Below 18 years and psychologically impaired patients were excluded in this study. The study conducted in 4 months of time.

In this study, Modified dental anxiety scale MDAS was used 2 which is based on 5 questions and each question was rated with five responses on a likert scale i.e. 1: not anxious, 2: slightly anxious, 3: fairly anxious, 4: very anxious and 5: extremely anxious. These anxiety levels determine two types of anxiety, anticipatory dental anxiety (anxiety while visiting their dentist or sitting in their waiting area) and treatment dental anxiety (anxiety during treatment like scaling, tooth drill or local anesthesia administration). Dental Anxiety scores were also given from minimum score 5 to highest 25. Minimum score 5 indicates that patient is not anxious at all. Score 25 means patient is extremely anxious in every dental procedure. Statistical significance of different socio demographics in relation to dental anxiety was evaluated with Descriptive, chi-square test, Regression Analysis using SPSS(R) Version 17.

## RESULTS

In this study 702 patients participated. Their ages were minimum 18 and maximum 81 years. Dental anxiety in this study was classified as non anxious, slightly anxious, fairly anxious, very much anxious and extremely anxious. Information was also collected regarding different dental procedures and scenarios leads to anxiety for instance anxiety leading from next day appointment, sitting in waiting room area, tooth drill, tooth scaling and local anesthesia.

Among various procedures gender based anxiety levels were obvious. Females were found to be extremely anxious (grade 5 anxiety) in majority of dental clinic based scenarios and procedures except scaling ( $p < 0.005$ ). Lesser amount of extreme anxiety was seen in 8(1.1%) older patients compared to 22(3.1%) younger patients and this value was found to be significant ( $P = 0.002$ ).

Dental Anxiety scores were calculated for every patient. Minimum was 5 score (least anxious) and maximum 25 score (extremely anxious). Mean score was found to be 13.2 ( $\pm 4.3$ ) which makes participant from slightly to fairly anxious while visiting any dentist for any procedure.

### *Next day appointment:*

Participants were slightly anxious as Mean score for this group was 1.98( $\pm 1.0$ ). There were only 4 (1.4%) Male patients (N=702) who were extremely anxious when they were supposed to visit there dentist next day as compared to female patients 26(6.4%) for the same situation.

### *Sitting in waiting area:*

Participants found themselves to be fairly anxious as Mean score for this group was 2.28( $\pm 1.1$ ) While sitting in waiting area females responded more with extreme anxiety level 32(7.9% ) as compared to males 18( 6.1%).

### *Tooth scaling:*

Participants found themselves to be fairly anxious as Mean score for this group was 2.52( $\pm 1.2$ ) While undergoing dental scaling procedures, females were extremely anxious 48 (11.8%) than males 31(10.5%). However, when it was asked about tooth scaling older patients 52 (7.4%) were found more extremely anxious than younger patients 27(3.8%).

### *Tooth drill:*

Participants found themselves to be fairly anxious as Mean score for this group was 2.93( $\pm 1.3$ ) Procedure and sound of tooth drilling makes more female patients extremely anxious 72 (17.7%) as compared to male counterparts 21(7.1%). This invasive procedure made younger patients more anxious than older patients; 58(8.3%) younger patients were extremely anxious and 35(5%) older patients with P value 0.04.

### *Local anesthesia:*

Participants found themselves to be very anxious as Mean score for this group was 3.49( $\pm 1.4$ ) Invasive Local Anesthesia procedure makes again more female patients extreme anxious 160( 39.4%) as compared to male patients 90 ( 30.4% )with P value 0.01.

## DISCUSSION

Fear of dental treatment and anxiety about dental procedures was found prevalent and statistically significant at various levels in this study. This anxiety have an impact not only on the quality of life of patients but also affect the quality of treatment performed both in terms of limiting attendance and in the nature of the dental treatment.<sup>10</sup>

In this study anxiety level was found more prevalent in females. There were 4 male patients who were extremely anxious as compared to 26 female patients when they were to visit their dentist on next day appointment. Similar results were seen in a study<sup>11</sup> where mean scores were significantly higher in females than for male respondents using same MDAS tool. Another study in UK<sup>12</sup> stated 10% of women were extremely anxious about anticipating a dental visit next day and sitting in the waiting room compared with 5% of men. Study conducted in this hospital showed similar results where females with extreme anxiety sitting in waiting area were more in number than males.

This continuous occurrence of anxiety not only effects on quality of procedure but also on pain perception. In a study at Adelaide showed that people who avoided dentist had experienced intense or sharp pain than those people who did not avoid going to dentist.<sup>13</sup> Majority of men were not anxious on anticipatory events (visiting dentist tomorrow and sitting in waiting area) while majority of women were found slightly anxious with all procedures at dental hospital, which also makes female further anxious in invasive procedures and also found statistically significant.

Therefore it is necessary to focus on a patient entering any dental clinic with anxiety. This can be controlled by using various dental anxiety reduction protocols like by sedating patient, starting with pain free treatment, comfortable dental area environment.<sup>15</sup> There is a need for a model combining the use of sedation for anxious individuals with urgent treatment need with ongoing treatment based on graded exposure to assist the individual in their dental fear.

Procedures like local anesthesia and dental injection was most anxiety provoking item as compared to scaling polishing and waiting for appointment. However, they all impact on a general anxiety score which was found 13.2 ( $\pm$  4.3) making participant from slightly to fairly anxious while visiting any dentist for various procedures. There scores are a little higher but comparable to other countries where more resources

and development is seen. Study conducted in Krakow Poland showed a mean score of 9.41( $\pm$ 3.36) 14 and in Norway, mean score for anxiety was found to be 8.7 ( $\pm$ 3.7).<sup>18</sup>

Although young and female patients are more anxious but still in one study they were found to be relatively higher in dental attendance for oral examination along with married persons, high income, high education than older and male patients.<sup>16-17</sup>

## CONCLUSION

According to this study a dentist should take under consideration individuals, particularly young patients and females for dental anxiousness as they were found most anxious. Assessment of anxiety can serve as one of the key contributive factors in oral health practitioners looking to provide additional behaviorally-oriented fear management strategies. This can also be categorized according to patient gender, education level, and history of negative dental experiences which helps patient population adherence to regular dental care. Applying Anxiety reduction protocols at various levels can be helpful.

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<b>Noor Ul Huda:</b>	Conception and design of research and acquisition of data.
<b>Qaiser Ali Baig:</b>	Supervision.
<b>Muhammad Mohsin Kamal:</b>	Acquisition and analysis of data.
<b>Tahira Khalid:</b>	Helped in methodology.