

ASSESSMENT OF DENTAL ANXIETY LEVEL — A STUDY

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ABSTRACT

Anxiety is a usual human reaction encountered in various circumstances and dental treatment not have exception. It is one of the most common problem encountered in the dental practitioner and anxiety complaints are most common psychiatric disorders. Those dental patients which have high level of anxiety present a major management problem, it is imperative to assess level of dental anxiety before treatment for proper management of anxious patients.

This cross sectional study was conducted from January 2017 to June 2017 on 285 patients attending a private dental clinic of Karachi. The Convenience sampling method was used. Ethical consent was taken from every individuals of study. The self-structured close ended questionnaires were distributed to the patients in the reception area to fill in while they were waiting to meet the dentist and the questionnaire was explained to each study participants. The questionnaire was consisted of Modified Dental Anxiety Scale (MDAS). The Data was analyzed by using statistical package for social sciences (SPSS) version 20. The Chi square test was used to analyze the relationship between socio-demographic profile and dental anxiety level.

The 9.5% participants were not anxious while 7.4% were extremely anxious individuals regarding the treatment that would be done in the oral cavity. But 83.2% were anxious about the dental treatment.

The level of dental anxiety among patient's can be minimized with the control of pain, management of behavior, as well as consideration of patient as a whole.

Key Words: Dental anxiety, Modified Dental Anxiety Scale (MDAS), Dental Fear.

INTRODUCTION

Anxiety is a usual human reaction encountered in various circumstances and dental treatment not have exception. In 12th century the term for anxiety emerged and after the passage of time in 19th century the word 'anxiety' was only used as a psychopathological term. The term "Dental anxiety is defined as patient's response to stress that is specific to the dental situation".¹ It is one of the most common problem encountered in the dental practitioner and anxiety complaints are most common psychiatric disorders now a days.² Those dental patients which have high level of anxiety present a major management problem, it is imperative to assess level of dental anxiety before treatment for proper

management of anxious patients, so it is a common reason for people to avoid dental treatment.³

In United States 75% of the persons experience anxiety ranging from mild to severe and it is also believe that approximately 5% to 10% adults are so anxious about dental procedure leading to the avoidance of dental treatment, majority of such anxious patient's only visit dentist only. If they feel extreme level of pain and swelling leaving the patient with no other choice except dental treatment or management.⁴ The carelessness of dental health may lead dental decay and pain that frequently results in a visit to the dentist which increases the patient's original dental distress and in this way vicious cycle generate.⁵

Dental anxiety varies from person to person but associated with age, gender, educational level, socio economic level and customs. The significant problem is the evaluation of dental anxiety in such patients for the success of their management and these patients are mostly have a record of bad experience of dental treatment itself and experience share by their relatives, friends or other patients sit in dental waiting area. These bad experiences are miss handling of Dental pro-

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professionals or dental hygienist during dental treatment like painful treatment, frequent delay in appointments of dental hospitals and they sit on the chair, remain fidgeting, pacing, show repetitious limb movement, have shocked reaction to noise, have comprehensive muscle tension and show eye fixation.⁶

The doubtful inappropriate diagnosis of the actual dental problem and the dental anxiety may also affect patient-dentist relationship, so the management of anxious patients were measured among the most stressful situations for dentist.⁷

The commonly used scale to measure anxiety was Modified Dental Anxiety Scale (MDAS). This was a modified form of original Corah's Dental Anxiety Scale (CDAS). The most important advantages of this scale are simple and easy for use and as well as a cost-effective instrument for population-based research.⁸ The another benefits of this scale was found to be reliable and valid cross culturally, and has been translated into different languages.⁹ This scale includes a series of five questions to be presented to the study participants and they are requested to rate the level of anxiety they would feel if they were in a particular dental conditions.

Alleviating the anxiety among patient has been troubled in the dental career and at the moment, dentists have a variety of modalities. There are few research studies have been published on the prevalence of dental anxiety and the factors which are encouraging dental anxiety. Therefore the present study was undertaken in order to improve the understanding about patient's anxiety and their management.

METHODOLOGY

This cross sectional study was conducted from January 2017 to June 2017 on 285 patients attending a private dental clinic. Convenience sampling method was used for participants who were enrolled in the study. Ethical consent was taken from the study participants before the start of the study. The self-structured close ended questionnaires were distributed to the patients in the reception area to fill in while they were waiting to see the dentist and the questionnaire was explained to each study participants.

The first part of the questionnaire comprised of socio-demographic profile that includes age, gender, educational level, socio-economic status, marital status and occupation. The other part of the questionnaire consisted of Modified Dental Anxiety Scale (MDAS) was used to measure the dental anxiety level in the study participants. The Data was recorded and analyzed by using statistical package for social sciences SPSS version 20. Descriptive frequencies were calculated for socio-demographic variables and the variables of modified dental anxiety scale. Chi square test was used

to analyze the relationship between socio-demographic profile and dental anxiety scale.

Dental anxiety level measured by calculating the sum of individual score. Each item score as follows:

Not anxious = 1, slightly anxious=2, fairly anxious=3, very anxious=4, extremely anxious=5.

Total score is a sum of all five items, range 5 to 25. Those participants have a score ranges from 6 to 18 fall in a category of anxious and 19 or above cut off value indicate highly dental anxious patients.

RESULTS

Two hundred and eighty five questionnaires were distributed to the study participants and then interviewed by the dentist. The response rate was 100 per-

TABLE 1: FREQUENCY OF DENTAL ANXIETY DURING DENTAL TREATMENTS

Variables		Fre- quency	Per- cent
Treatment tomorrow	Not anxious	164	57.5%
	Slightly anxious	86	30.2%
	Fairly anxious	30	10.5%
	Very anxious	5	1.8%
Waiting Room	Not anxious	164	57.5%
	Slightly anxious	85	29.8%
	Fairly anxious	23	8.1%
	Very anxious	13	4.6%
Tooth Drilled	Not anxious	82	28.8%
	Slightly anxious	124	43.5%
	Fairly anxious	51	17.9%
	Very anxious	11	3.9%
Teeth scaled and polished	Extremely anxious	17	6.0%
	Not anxious	141	49.5%
	Slightly anxious	78	27.4%
	Fairly anxious	57	20.0%
Local Anesthetic Injection	Very anxious	9	3.2%
	Not anxious	56	19.6%
	Slightly anxious	91	31.9%
	Fairly anxious	65	22.8%
Dental anxiety	Very anxious	45	15.8%
	Extremely anxious	28	9.8%
	No	27	9.5%
	Anxious	237	83.2%
	Extremely Anxious	21	7.4%

TABLE 2: FREQUENCY OF OVERALL DENTAL ANXIETY LEVEL

Dental Anxiety	Frequency	Percent
No	27	9.5%
Anxious	237	83.2%
Extremely Anxious	21	7.4%
Total	285	100.0%

cent. There were 144 males (50.5%) and 141 females (49.5%) were participated in this study. The ages of participants were 15-48 years old and mean age was 27.93, SD was 7.523. The frequencies of those persons who had done matric was 57 (20%), intermediate was 86 (30.2%), graduate was 119 (41.8%), and post-graduate was 23 (8.1%). In this current study the frequencies of low 45 (5.8%), middle 156 (58.2%), and high socio-economic status individuals was 74 (26%). The married respondents were 168 (58.9%) in this study.

The dental anxiety level was explored in relation to socioeconomic status including low, middle and high status individuals. There were significant differences were found for the relation among anxiety level and socioeconomic status. The 29.6% belongs to low socioeconomic status were not anxious. On the other hand 52.4% anxious participants were related to middle socioeconomic category and 33.3% was extremely anxious group that fit in the category of high socioeconomic status. This result was statistically significant on Chi-Square=17.107, df =4, p=0.02. On Chi-square analysis revealed significant differences for low, middle and high socioeconomic status personnel.

DISCUSSION

Dental fear and anxiety are the worldwide problems affecting large populations of different countries. This problem of anxiety results in avoidance of dental care which leads to severe caries and periodontal diseases with severe adverse consequences to the patient's general as well as oral health. This study is the first attempt for assessment of dental anxiety among out-patient department attending a private dental hospital.

In other studies results showed that the prevalence of dental anxiety among Palestinian clients is high in comparison with other population.¹⁰ For example, only 12.6% of the participants declared that they did experience of dental anxiety and 39.5% and 19.5% of the clients reported having severe and high level of dental anxiety. These percentages are considered high in comparison to the findings of studies from other countries such as UK (3.317.4%) and Norway (4-9%).¹¹ Also, different data obtained from the current study which showed more than one third of the study population experienced severe level of anxiety, researcher found

no participants with extremely high dental anxiety¹² and another researcher reported 4.6% had a DAS score ≥ 15 (highly anxious/phobic) and 8.6% had high level of anxiety (DAS-scores of 13 or 14).¹³

A number of factors including poor oral health awareness, ignorance about dental treatment or procedures, and any unpleasant dental experience have variously been associated with dental anxiety.¹⁴

Studies have shown higher prevalence of dental anxiety in females than males, they would like to measure dental anxiety in the larger image of appropriate general anxiety levels. In the same way the dental attendance cannot be isolated from other socio-economic variables, since it is predisposed by the financial capability and willingness to pay for the dental treatments.¹⁵ Generally females had greater levels of anxiety and they were more anxious about dental procedures and this supported the results from previous studies that showed higher levels of dental anxiety among females.^{16,17} This result may be explained on the basis that women have higher levels of neuroticism than men and that anxiety is positively related with neuroticism.¹⁸ On the other hand, in the current study, the statistically significant difference between men and women was marginal and the difference in anxiety scores for both genders was minimal (Men 12.29%, Women 13.17%).

Previously conducted study shows the result that uneducated patients and patients with less or no income were more anxious.^{19,20} Nevertheless in this study dental anxiety level was explored in relation to socioeconomic status including low, middle and high status individuals. There was significant difference found for the relation among anxiety level and socioeconomic status. The 29.6% belongs to low socioeconomic status were not anxious. On the other hand 52.4% anxious participants were related to middle socioeconomic category and 33.3% was extremely anxious group that fit in the category of high socioeconomic status.

The Prevalence of Dental Fear / Anxiety Internationally Japan 20.9%, Singapore 7.8% - 20.8%, Denmark 4.2%, Iceland 4.8%, Netherlands 3.9% - 10.8%, Sweden 3.9% - 6.7%, Australia 13.7%, New Zealand 12.5% - 21.1%, United States 10% - 19%, and Canada 4.4% - 16.4%.

The management of dental anxiety may be aided through good dental health education; expected dental visits, good patient dentist relationship and suitable statement with the patients.²¹ In favor of a successful dental treatment, first visit of dental patients should be deal with more sympathetic in order to avoid anxiety and a gentle, kind, more caring professional approach should be followed and therefore keep away from their repulsion to the dental care.²²

CONCLUSION

The understanding of dental fear, encourage the identification of factors that contribute to its onset and help to produce preventive programs to reduce its occurrence. Dental anxiety can be minimized by educating the patient about dental treatment, control of pain, management of behavior, as well as consideration of patient as a whole.

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| 2 Raza Abbas Abidi: | Topic selection and acquisition of data. |
| 3 Samreen Mazhar: | Discussion write up, literature review and analysis of data. |