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Dental Phobia Among Patients Undergoing Different Dental Treatments

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ABSTRACT

Objective: To assess phobia amongst patients pertaining to different aspects of dental treatment from waiting for their appointments to undergoing different dental procedures such as scaling, restoration and major dental surgery.

Methodology: Descriptive cross-sectional study was conducted at School Of Dentistry, Islamabad from Oct 2021- Dec 2021. Questionnaires were distributed amongst a sample of 200 consented patients and the data was assessed using Modified Dental Anxiety Scale. Descriptive analysis was performed. Frequencies and cross tab calculations were carried out using SPSS version 17.

Results: The results showed that patients have high levels of anxiety upon getting a local anesthesia around 62% followed by moderate anxiety levels while waiting for their turn (55%) and undergoing scaling (40%). Patients reported with little or no anxiety when asked about having an appointment the next day. Females reported as being more anxious when compared to males.

A significant proportion of people who wish to receive dental treatment have some degree of dental anxiety.

Conclusion: Dental anxiety is more significant among females. There are multiple elements of the dental practice which can be modified to enable all patients to experience treatment more comfortably, whereas for those with moderate or severe levels of anxiety, more structured psychological and pharmacological interventions are required.

Key Words: Dental Phobia, Anxiety, Dental Treatment, Modified Dental Anxiety Scale.

Introduction

Dental anxiety and fear are common and potentially problematic, both for the patient and for the dental team in managing such patients. Furthermore, dental fear still presents a major barrier in the uptake of dental treatment. Dental fear[1] (also called dental phobia, odontophobia, dentophobia, dentist phobia, and dental anxiety) is the fear of dentistry and of receiving dental care. The increased prevalence of phobia amongst patients is due to lack of knowledge pertaining to the procedures being carried out, which is worsened by the stern attitude of many practitioners unfortunately. Owing to this negativity many patients resort to dental treatment only in case of emergencies such as a severe toothache or trauma, avoiding general dental checkups, if at all.

Dental phobia could arise from multiple causes[2] varying from direct experiences of the patient[3] or influenced indirectly by vicarious learning, mass media, stimulus generalization and lastly, the perceived lack of control. In this research we take as a key premise the view that all patients may have some level of anxiety about their treatment. On the basis of this we propose that it is essential to the clinical management of the patient that the dental team assesses the patient's level of anxiety and intervenes proportionately[4]. Patients with low levels of dental anxiety may require only low level interventions involving enhancing the environment and reducing the degree of uncertainty involved in treatment. Those patients with moderate levels of dental anxiety may require more intensive interventions, such as the provision of information on coping strategies. Finally, for the phobic dental patient, the complementary use of pharmacological and psychological approaches (most notably cognitive behavioral therapy)[5]. It is therefore prudent for the practitioner to play an active role in helping patients to come to terms with their fear/anxiety.

Methodology

A descriptive cross-sectional study was carried out at School Of Dentistry for 200 patients visiting OPD over a period of 3 months. Patients having undergone different dental procedures including restoration, scaling and extractions. -Patients not undergone any dental treatment
-Patients with generalized anxiety disorder (GAD).

-Drug history of anxiolytics or antipsychotics
-Syndromic patients

Questionnaires were handed out to the patients after their consent was taken. Questionnaire consisted of demographic details followed by the MDAS (Modified Dental Anxiety Scale)[6] 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 the waiting area) and treatment dental anxiety (anxiety during treatment like scaling, tooth drill or local anesthesia administration). Dental Anxiety scores were given from minimum score 5 to highest 25. Total score is a sum of all five items, ranging from 5 to 25, with minimum score 5 indicating that patient is not anxious at all. Cut off is 19 or above which indicates a highly dentally anxious patient, possibly dentally phobic.

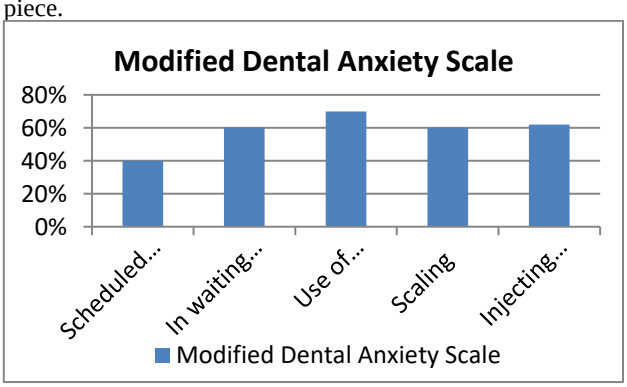
Data was analyzed using SPSS version 17 and t-test was applied to know significance. Corah's anxiety scale with grading system

Results

Out of 200 patients,82 (41%) were male and 118 (59%) were female. Mean age of the participants was 23 years (S.D ± 6.0). Majority of patients were either less than or equal to 25 years of age (n=103, by 51.5%) and as far as education is concerned majority of patients in this study were graduates (67%).

The first question was related to patient's dental anxiety levels when he/she has a scheduled dental appointment the next day. Majority of the participants (n=20, 40%) responded being non-anxious and that they would look forward to it as a reasonably enjoyable experience. The second question pertained to how a patient would feel while he/she is waiting for his/her turn in the dental office. Majority of the participants (n=80, 60%) responded with feeling moderately anxious as to how the experience of dental treatment would be.

The third question was related to patient's anxiety level regarding the use of dental hand piece. Majority of the participants (n = 60, 70%) replied that they would be quite anxious and showed high concerns with the sound of hand piece.



The fourth question was related to patient's anxiety concerns while getting their scaling done. Majority of patients (n=40, 60%) responded that they would feel fairly anxious about getting their teeth cleaned.

Last question addressed patient's anxiety levels upon getting a local anesthesia. Of the respondents (n=88, 62%) replied that they would feel extremely anxious about it. Results are summarized in Figure 1.

Discussion

The results of this study affirmed that phobia is, in fact a common issue faced by our population. 70% of patients admitted moderate anxiety levels before undergoing simple extraction and 50% had concerns with scaling as well. Despite the various technological advances and advent of MID (minimal invasive dentistry), anxiety associated with dental treatment in general, was widespread in the study population.

Lack of education[7] played a significant role, as patients with a good background education and well socio economic status showed low levels of anxiety and were far more cooperative.

Previous dental experience played a key role in determining dental anxiety of the patients; those with fairly good experiences demonstrated mild to no anxiety before any procedure.

Females tend to be more anxious pertaining to the treatment when compared to males owing to their ability to express their feelings o f fear. Confinement or lack of personal space were raised to be the main concerns by such patients.

There was no correlation in anxiety levels shown by both younger and older patients.

Recommendations: The levels of anxiety shown during sitting in waiting area[8] and chair before having dental treatment demonstrate the need for well-trained supporting staff to be aware of the anxious patients and manage accordingly. And because a little distraction goes a long way, iPods for patients' listening pleasure, big-screen televisions and iPads should be common items in the modern dentist's office and so should be a calming décor such as fresh flowers, miniature waterfalls, and bright, inviting wall colors[14]. In addition, a welcome drink offered to patients in the waiting room could also help alleviate their anxiety.

Many people who suffer from dental fear may be successfully treated with a combination of "look, see, do" and gentle dentistry. People fear what they don't understand and they also, logically, dislike pain. If someone has had one or more painful past experiences in a dental office, then their fear is completely rational and they should be treated supportively. Dentists must greet patient in a welcoming demeanor and establish rapport, take a detailed history and help make patient comfortable before commencing with the treatment.

Scheduled appointments can minimize anxiety levels as compared to waiting/walk-in patients commencing treatment.

Use of high speed ceramic cartridge hand pieces result in less noise and vibration perceived by patient resulting in less anxiety

Use of Piezoelectric scalers over magnetostrictive ones improve control and produce less heat and vibration owing to greater patient comfort during treatment.

Anxiety of getting anesthetic injection can be addressed by using shorter needles, carefully loading anesthesia in hindsight and using topical anesthesia prior to injecting local anesthetic.

Other methods of minimizing pain control during administering local anesthetic are summarized in Table 1[9].

Table 1 Methods to minimise pain of LA administration

THE PATIENT
1. Reassurance, distraction
2. Topical anaesthesia prior to infiltration
THE LA AGENT
3. Warming – 37–42°C
4. Buffering – 8.4% Sodium Bicarbonate (1 ml/9 ml LA)
THE INJECTION TECHNIQUE
5. Fine (27–30 gauge) and long (>1 inch) needles
6. Slow injection
7. Use smallest volume of solution necessary
8. Infiltrate through wound edges
9. Inject from 'looser' subdermal to 'tighter' dermal
10. Block individual nerves

LA, local anaesthetic.

Non-graphic photographs taken pre-operatively, intra-operatively and post-operatively can explain the procedure to the patient. Pharmacologic management may include an anxiolytic, intravenously and/or using Nitrous Oxide (laughing) gas[10], esp for pediatric patients undergoing extensive treatment.

More specialized behavioral treatments include teaching individuals relaxation techniques, such as breathing and progressive muscle relaxation as cognitive restructuring. One example of a behavioral technique is systemic desensitization[11].

Newer methods include use of Virtual Reality Exposure Therapy (VRET) to systematically confront patients with their fear of provoking objects and situations such as dental fear within a well-controlled, computer generated virtual environment, until fear extinction occurs[20].

Conclusion

A significant proportion of people who wish to receive dental treatment have some degree of dental anxiety. Dental anxiety is more significant among females.

There are multiple elements of the dental practice which can be modified to enable all patients to experience treatment more comfortably, whereas for those with moderate or severe levels of anxiety, more structured psychological and pharmacological interventions are required.

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