



## ASSESSMENT OF DENTAL ANXIETY AMONG PATIENTS VISITING A PRIVATE DENTAL COLLEGE HOSPITAL

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### ABSTRACT

**Aim:** The aim of this study was to estimate the prevalence, severity of dental anxiety among patients visiting Private Dental College Hospital and to create the awareness about the dental treatments among the common people who has anxiety of dental treatment. **Methods and material:** A sample of 150 adult patients (age ranging between 18 to 70years) has been taken for the research purpose and some set of questions has been asked to them. It is a self-complete questionnaire consisting of 15 questions which reveals about the patient's anxiety on dental treatments. Then the information was collected from each patient and analyzed to assess the anxiety level of the common adult patients. **Statistical analysis used:** There are a variety of dental anxiety assessment indices that can be used to assess the anxiety level. Here, Descriptive statistics, means and standard deviation are used to estimate the prevalence and severity of dental anxiety among the adult patients. **Reason:** Oral health conditions are known to affect various aspects of quality of life. Socio-dental indicators have been developed to assess the functional and psychological impacts of oral health on daily life. The results revealed that females were more apprehensive, compare to men. The dental education and health care services must be promoted to overcome the fear/anxiety factor among the common adult people. To diminishing the dental anxiety level in the patients and to create the dental awareness. The purpose of this study is to make the patients undergo for dental treatment without any anxiety or fear.

**KEYWORDS :** Dental treatment, dental anxiety, injection, expensive treatments, oral hygiene.

### INTRODUCTION:

Dental anxiety is a common problem for both dental surgeons and the patients of all ages from different social classes and it will often leads to the poor oral hygiene by the complete avoidance of dental treatment, irregular dental checkups and poor co-operation. Oral health conditions are known to affect various aspects of quality of life. Socio-dental indicators have been developed to assess the functional and psychological impacts of oral health on daily life. The behavioural factors such as improper brushing technique, family background, poor knowledge about oral health may lead to dental health problems [3]. Oral health habits are the measures which people should learn and practice regularly in order to maintain good oral health or prevent oral disease. Dental anxiety is based on several factors like family and social environment, anxiety, pain and traumatic, unpleasant experiences. Patient perceptions of behaviours and attitudes of dentists can affect dental anxiety and could influence his or her decision to access dental care. It may exert a negative impact on the therapeutic management [1][17].

Anxiety is a psychological and physiological state characterized by somatic, emotional, cognitive, and behavioural components [2]. Anxiety is considered to be a normal reaction to a stressor.

Physical effects of anxiety may include heart palpitations, muscle weakness and tension, fatigue, nausea, chest pain, shortness of breath, stomach aches, or headaches and digestive system functions are inhibited [3][4].

Usually more anxiety is observed in older population and in females. Dental Anxiety score was found to vary for those who visited a dentist for tooth removal followed by cleaning, filling and dental check up [5][6].

Proper treatment of highly anxious dental patients is an important concern in many countries. Nitrous oxide sedation by inhalation, intravenous sedation, and general anaesthesia (GA) are being used in the treatment for these patients and this type of interventions is generally considered successful methods (25). Especially treatment based on psychological methods has been more effective in reducing dental anxiety (25) (26).

We therefore undertook this study with an aim to assess the level of dental anxiety amongst the patients visiting a private dental college hospital which would provide information on the patient approach towards dental treatment [7][16].

The main purpose of this study is to make patients undergo dental treatment without any anxiety/fear.

### Anxiety management techniques:

Anxiety management techniques range from good communication and establishing rapport to the use of systematic desensitization and hypnosis. Few of the techniques needs the specialist training but many others could usefully be adopted for all dental patients. Managing the dentally fearful individuals is achievable for dental clinicians but it requires a greater level of understanding, good communication and a phased treatment approach. There is an acceptable evidence base for several non-pharmacological anxiety management practices to help augment dental practitioners providing care to anxious or fearful children and adults. Some of the methods are,

- Non pharmacological Behavioral management
- Relative analgesia-Intravenous sedation-oral sedation-general anesthesia

Other psychological approaches to managing dental anxiety are,

- Distraction
- Positive reinforcement
- Diaphragmatic or relaxation breathing
- Progressive muscle relaxation
- Guided imagery
- Cognitive restructuring
- Systematic desensitization
- Hypnosis

### Progressive muscle relaxation:

Progressive muscle relaxation is a systematic technique. The procedure has been widely, and successfully, used to manage and treat a variety of anxiety disorders. Progressive muscle relaxation procedure creating a subjective sense of calmness and ease.

### Positive reinforcement:

Particularly in relation to children, but also for adults, positive reinforcement in terms of small tangible rewards or verbal acknowledgement might provide a useful incentive for cooperation. By rewarding good behaviour we hope to teach children to behave in such a manner that allows adequate dental treatment to take place.

This can be achieved by giving stickers, small toys, balloons to children at the end of a successful appointment, facial expressions, approval by pat on the shoulder or other reinforcing touch and words.

### Negative reinforcement:

This type of behaviour management is usually used if other behaviour management techniques are unsuccessful. The technique will be

explained to and agreed by the parent prior to engaging the child. If behaviour becomes inappropriate without good reason, the parent is asked to leave the surgery, with the child being told clearly the reason why, and what behaviour will result in the parent's return. Ideally, the parent should move to a place outside the room where they can still hear, but be out of sight of the child. When appropriate behaviour is exhibited the parent is asked to return, thus reinforcing that behaviour.

**Distraction:**

This approach aims to distract the patient's attention from the dental setting to some other situation. Music, asking the patient to raise legs or wiggle toes, using distracting words and phrases are all examples of distraction techniques.

**Desensitisation:**

This technique helps individuals overcome specific fears or phobias. Within dentistry, fears are usually related to a specific procedure such as use of local anaesthetic (a needle). The desensitization technique hopes to overcome this fear by exposing the patient, gradually to each stage of the procedure. First, the patient is taught to relax, and in this state exposed to each stage of the procedure. This can mean that two visits may be spent on this before active treatment can commence.

**Hypnosis:**

Hypnosis has been defined as an interactive process that a hypnotist attempts to influence a person's perceptions, feelings, thinking and behaviour by asking them to concentrate on ideas and images. During hypnosis a person enters into a particular frame of mind characterized by focused attention. While hypnosis can be used for a large number of dental issues, its benefit for managing dental anxiety. Especially it can be used to understand why dental anxiety developed, resolve feelings about past experiences, rehearse and help desensitize future treatments, overcome embarrassment, and can be used to complement local anaesthetics.

**MATERIALS AND METHODS:**

This study was conducted among patients who has visited a private dental college hospital and a questionnaire based survey was taken. It is a self formulated questionnaire which contains 13 questions and distributed among 150 adult patients. The patients were informed about the study previously. All patients taking part in the study were invited to complete a structured questionnaire about their dental anxiety. The questionnaire was based on that explains about their anxiety towards dental treatment and dentist, awareness about oral health, financial view and others. Patients completed the questionnaires in order to assess dental anxiety and general psychopathology. The questionnaire were collected from the patients and the results were analysed based on their mentality and the data were observed for the study purpose.

**Inclusion criteria:** New patients visiting the Dental College Hospital were included 150 adult patients age ranging between 18 to 70 years Patients who came hospital between 8 am- 3 pm Patients giving voluntary informed consent For the illiterate patient questionnaire was filled by the examiner or the dental operator.

**Exclusion criteria:**

Patients below the age of 18 years and above 70 years were not considered. Uncooperative patients were excluded. Edentulous patient were not included.

**RESULT:**

The result for the study is given in the form of chart below.

Table 1



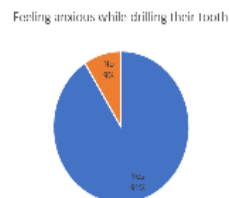
This table shows that even planning a visit to dental clinic makes 60% of patients to feel anxious. Among the patients 40% of them are not feared of visiting dental clinic.

Table 2



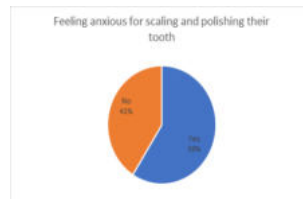
Among the patients 73% of them feels anxious for waiting outside the dental clinic and 23% of them are not afraid about that.

Table 3:



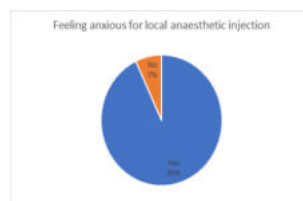
On asking the patient how they felt when they were about to have a tooth drilled, majority of the people reported feeling anxious about (91% of patients) and only 9% of patients are not afraid of drilling.

Table 4:



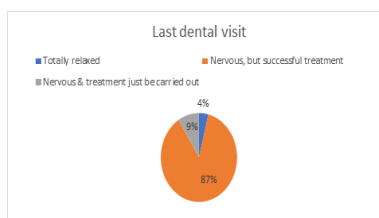
On asking the patient how they felt when they are waiting in the dental chair for doing scaling and polishing of their teeth, majority of the people reported feeling anxious i.e, 59% of patients. But 41% of patients are ready to do scaling without any fear.

Table 5:



On asking the patient how they felt when they were about to have a local anaesthetic injection in your gum, above an upper back tooth, majority of the people reported feeling anxious, that is about 93% of patients and they become so tense and fearful; only 7% patients are not feared about the local anaesthetic injection and co operates well for the treatment.

Table 6:



Most of the patients during their last dental visit are nervous, but the treatment conducted by the dentist was successful; 87% of patients are nervous, but their treatment was carried out successfully; 9% were nervous and their treatment was just carried out and not as a successful treatment and only 4% of patients are totally relaxed during the treatment.

Table 7:

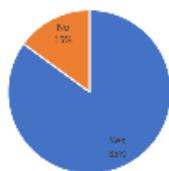
Avoiding treatment due to embarrassment about their oral hygiene:



This table shows that 77% of patients are avoiding dental treatment due to the embarrassment about their poor oral hygiene and increases the chance of getting dental diseases.

Table 8:

Avoiding treatment due to expenses



This indicates some people are avoiding dental treatment due to the high expenses. 85% of patients are not willing for the treatment only because of the high expenses. Poor people are not affordable for the dental treatments.

#### DISCUSSION:

The aim of the current study to assess the level of dental anxiety among the patients who are visiting private dental college hospital which would provide information on the patient approach towards dental treatment[8][9][10].

In spite of there is a huge improvement in the field of dental science and dental care, discontinuation of dental visits still remains a major problem. The main reason for the dental avoidance is dental anxiety. Dental fear is a common problem among the patients. Patients with high dental anxiety may delay the dental checkups or they may cancel the appointments. There should be some adequate methods and treatments should be followed to reduce or control the anxiety of the patients who are visiting the dental hospital. Various methods and techniques have been developed to study the behaviour and attitudes towards the dental care which includes facial image scale, children's fear survey schedule-dental sub-scale for children and dental fear survey.

Several studies have been conducted to estimate about the dental anxiety level of the patients who are visiting dental clinic. Oliveira et al. found an association between childhood dental experiences and dental fear among dental, psychology and mathematics undergraduates in Brazil and through that they came to a conclusion that the higher level of dental fear was probably seen in undergraduate students who had suffered negative dental experience in childhood.[19]

Similarly, Raj et al. analysed the dental fear in children during dental visit using children's fear survey schedule-dental subscale.[20] His study estimated that the dental fear decreases as the age increases. Most of the patients were fear of the injections and drilling sounds. Similar study on CFSS-DS conducted by Bajric et al. ensured its reliability and validity in children of Bosnia and Herzegovina also proved that it can be used as a psychometric instrument to assess dental fear in children.[21]

Aartman et al. also proved that dental subscale of the children's fear survey schedule can be used to assess dental anxiety in children.[22] Carter et al. in his article on pathways of fear and anxiety in dentistry said that fear and anxiety hinders the provision of routine dental treatment on a daily basis for most dental practices.[23] Similarly, Buchanan et al. did validation of a facial image scale to assess child dental anxiety status in a clinical context.[24] There are a variety of self-reported dental anxiety assessments available. These anxiety scales have been used in our questionnaire study to assess the anxiety in children.

Even though dental anxiety questionnaires have considerable potential in the routine assessment of patients in the dental practice, no study on the use of those indices in the daily dental practice have been noted. Several studies that investigated behavioral strategies for reducing patient stress during dental procedures indicated that effective anxiety-reducing treatments were used. Many pre- and post-treatment anxiety levels have been used to test various anxiety management techniques. Specialized dental anxiety clinics in the Netherlands do employ the routine use of dental anxiety assessment questionnaires, and they refer dentally anxious patients into their treatment programs.[11]

It becomes imperative to assess the dental anxiety quantitatively and qualitatively and its associated factors. Currently, the most commonly used methods are the self-reported questionnaires and rating scales[11][12].

One of the well-established methods of studying dental fear/ anxiety is the use of constructed scales in the form of questionnaires Besides questionnaires, methods such as measurement of physiological responses to clinical situations observation of clinical behaviour and projective techniques have been employed. In this survey, only questionnaires were used. Ideally, a clinical observation of the subject's behaviour might reconfirm the findings of the questionnaire results[13][14].

This study shows that even planning a visit to dental clinic makes 60% of patients to feel anxious. Among the patients 40% of them are not feared of visiting dental clinic. 73% of them feels anxious for waiting outside the dental clinic and 23% of them are not afraid about that.

This also shows that 91% of patients feels anxious when their tooth is about to drill or while drilling and only 9% of patients are not afraid of drilling. 59% of patients feels anxious for waiting in the dental chair and for doing scaling and polishing of their teeth. But 41% of patients are ready to do scaling without any fear.

About 93% of patients are anxious about the local anaesthetic injection and they become so tense and fearful; only 7% patients are not feared about the local anaesthetic injection.

Most of the patients in their last dental visit were nervous. 87% of patients are nervous, but their treatment was carried out successfully; 9% were nervous and their treatment was just carried out and not as a successful treatment and only 4% of patients are totally relaxed during the treatment

This shows that 77% of patients are avoiding dental treatment due to the embarrassment about their poor oral hygiene. And some people are avoiding dental treatment due to the high expenses. 85% of patients are not willing for the treatment only because of the high expenses.

#### Recommendation:

- Awareness programs on oral health to be planned for the parents and the school children.
- Periodical camps should be conducted in rural areas and the awareness about the dental treatments should be created among the people.
- Cost effective measures in maintaining oral hygiene to be taught to the middle and lower class families.

#### Conclusion:

The anxiety level of patients decreases with increasing levels of education. It was observed that housewives and students has the highest levels of dental anxiety when comparing with the professionals and the self-employed [31-35]. Those who had a previous unpleasant dental experience has been showed higher anxiety as well as negative dental beliefs. This study shows that previous dental exposure had an important role to play in influencing the dental anxiety and beliefs. Dental clinicians, clinical instructors and school administration may continuously provide dental education and extend programs to the community in order for them to be aware of the oral diseases that they may experience because of their anxiety[15][18].

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