

# Dental Phobia Among Patients – A Hospital Based Cross Sectional Study

A. Vinita Mary<sup>1</sup>, R. Kesavan<sup>2</sup>, Aliya Misreen<sup>3</sup>, Ameer Sirhan<sup>4</sup>, Divya Ravichandran<sup>5</sup>

<sup>1</sup>Professor, Department of Public Health and Dentistry, Thai Moogambigai Dental College & Hospital, Chennai, India

<sup>2</sup>Associate Professor, Department of Public Health and Dentistry, Thai Moogambigai Dental College & Hospital, Chennai, India

<sup>3,4,5</sup>Junior Resident,, Department of Public Health and Dentistry, Thai Moogambigai Dental College & Hospital, Chennai, India

**Abstract: Aim:** The purpose of this study was to determine the prevalence of dental phobia among patients.

**Materials and methods:** A hospital based cross sectional study was conducted among 100 dental patients. In that study, 54 male patients and 46 female patients were evaluated. A self-explanatory and unbiased questionnaire comprising of 20 questions was handed to them.

**Result:** The results obtained after the survey revealed that about 14% of the patients had severe anxiety and majority of the patients' stated fear of pain as a reason for their dental phobia. About 48% of the patients' desired counselling by the dentist to overcome the fear.

**Conclusion:** The results of this study concluded that dental phobia was a concern among dental patients and care should be taken with regard to its etiology, causes, signs and symptoms and treatment.

**Keywords:** Dental phobia, dental anxiety, fear, pain, counselling

## 1. Introduction

Dental phobia, also known as odontophobia is defined as an unpleasant mental, emotional or physiological sensation derived from a particular stimulus in the dental office [1]. It is also a feeling of discomfort and embarrassment which causes the patient to refrain from seeking dental treatment even if it involves tolerating pain and aggravation of the existing condition [2]. There are physical manifestations of dental phobia and the etiology of dental phobia may date back to traumatic childhood experiences in the dental office. It has been established that most adults fear dental treatment and about 15% suffer from a serious anxiety or phobia of the dentist and dental treatment [3].

It is important to identify and measure the severity of dental phobia in patients [4]. This can be achieved by the dentist in the first dental visit. One of the best way to assess dental phobia in a patient is the use of a questionnaire. Corah's Dental Anxiety Scale (CDAS), Modified Dental Anxiety Scale (MDAS) and Dental Fear Survey (DFS) are some of the commonly used questionnaires [5] for evaluating dental anxiety. The present

survey was conducted among patients to determine the prevalence of dental phobia, its signs and symptoms, causes and preferred treatment modalities. It was noted that engaging the patients in a survey before the appointment helped the dentist as well as the patient to achieve a stress free appointment.

## 2. Materials and methods

A hospital based cross sectional study was conducted among dental patients visiting a private dental college in Chennai between July and September 2019. A questionnaire consisting of 20 questions was drafted to determine the prevalence of dental phobia among dental patients. The questionnaire was circulated to the outpatients during their dental visit.

The survey was conducted among conveniently selected 100 patients who visited the hospital for complaints like pain, swelling, decayed teeth and mal aligned teeth. The participants of the survey were selected based on their chief complaint. Patients who voluntarily visited the hospital for a regular dental check-up were eliminated from the survey. First part of the questionnaire consisted of demographic details of the subject like age, occupation and socioeconomic status. The participants were briefed about the study and informed consent was obtained from them. Those who denied to participate were excluded from the study.

## 3. Results

The survey was conducted among 100 patients at a private dental college in Chennai. There were 54 male patients and 46 female patients. About 48% of the participants of the survey were aged 15-30 years and 39% of the participants were aged 30-45 years. A small fraction of the participants were above the age of 45 years. The results of the survey are elaborated in Table 1.

Table 1  
Distribution of study subjects based on the extent of their dental phobia

S.No.	Question	Options	Frequency	Percentage
1.	Is this your first dental visit?	Yes No	40 60	40% 60%
2.	How many dental appointments have you had in your lifetime?	1-5 More than 5 First dental visit	52 32 16	52% 32% 16%
3.	How do you tackle oral health problems?	Home Remedies Visit Dentists Solutions online	21 71 8	21% 71% 8%
4.	What is your state of mind before dental visit	Cheerful and happy Calm and relaxed Neutral Anxious	8 35 38 19	8% 35% 38% 19%
5.	How would you grade your level of dental anxiety?	No Anxiety Mild Moderate Severe	24 39 23 14	24% 39% 23% 14%
6.	What is the reason for your fear of dental treatment?	Injection Pain Sight of blood Sound of drill or suction I don't fear dental treatment Doctor's operatory	24 36 10 7 21 2	24% 36% 10% 7% 21% 2%
7.	How did the fear start?	Childhood Experience Unempathetic dentist Information from others Unknown I don't fear dental treatment	33 12 21 15 19	33% 12% 21% 15% 19%
8.	How do you prefer the Dentists?	Based on gender preference Based on experience Based on qualification Based on review from others	2 50 26 22	2% 50% 26% 22%
9.	Do you have any physical manifestation of fear during dental treatment?	Tremors Light-headedness Sweating/nausea Palpitations No physical manifestations	11 18 6 8 57	11% 18% 6% 8% 57%
10.	What time of the day do you prefer to undergo treatment?	Morning Noon Evenings Doesn't matter	70 5 7 18	70% 5% 7% 18%
11.	Does the duration of treatment bother you?	Yes No Depends on the treatment Doesn't matter	49 26 18 7	49% 26% 18% 7%
12.	What aggravates your fear before treatment?	Negative review Ambience of the clinic Extended hours of waiting Behavior of dental assistant No aggravating factors	14 15 24 15 32	14% 15% 24% 15% 32%
13.	What relieves your fear before/during/after treatment?	Reassurance by the doctor Adequate explanation of the procedure Ambience of the clinic Presence of a known person Do not fear treatment	32 13 11 16 28	32% 13% 11% 16% 28%
14.	When do you feel your fear is at peak?	Previous night At the waiting During treatment After the procedure Never	22 31 23 0 24	22% 31% 23% 0% 24%
15.	How do you feel in the waiting room?	Not anxious at all Slightly anxious Moderately anxious Fairly anxious Extremely anxious	21 36 22 8 13	21% 36% 22% 8% 13%

16.	Which dental procedure causes most anxiety?	Scaling Filling Extraction Any other None	8 25 38 5 24	8% 25% 38% 5% 24%
17.	Why are you afraid of dentists/dental procedures/dental visits?	Fear of losing control Fear of being judged Fear of unknown Condition of the mouth I do not fear dentists	22 8 19 16 35	22% 8% 19% 16% 35%
18.	How would you prefer to control anxiety?	Counselling by a doctor Medication Conscious sedation/General Anesthesia Meditation and alternative relaxation techniques Do not have anxiety	43 25 4 11 27	43% 25% 4% 11% 27%
19.	Do you have any mental health problem?	Yes No I don't know	9 82 9	9% 82% 9%
20.	Do you think you often have more number of appointments due to your anxiety?	Yes No Maybe	24 53 23	24% 53% 23%

The results of the survey revealed that at least 14% of the patients participating in the survey had dental phobia and about 29% of the patients avoided visiting the dentist. Fear of pain was stated as a reason for dental phobia by 36% of the patients where as 14% of the patients feared injections. The etiology of the phobia was found to be a negative childhood experience for 33% of the patients. About 50% of the patients preferred to see a dentist with more years of experience. The common physical manifestations of dental phobia observed in the study population were tremors (11%), light-headedness (18%), sweating and nausea (6%) and palpitation (8%). About 38% of the patients feared extraction the most. On an average about 43% of the patients with dental anxiety and dental phobia preferred to be counselled by the doctor to overcome the phobia.

#### 4. Discussion

This hospital based study was conducted in a private dental college among 100 out patients during their regular dental visits. According to the results, out of 100 patients who participated in the study, 38% of the patients visited the dental office for the first time. Most patients with dental phobia and anxiety often prolonged their dental visit despite suffering from pain or other dental disabilities. Therefore, it was necessary to know if it was their first dental visit and also the purpose of their visit. About 52% of the patients had gone for only 1-5 dental appointments altogether. The fear of the dentist, operatory, injection, pain and other factors played a major role in the patient's will to seek dental treatment. About 71% of the patients preferred visiting the dentist where as 21% of the patients resorted to home remedies. About 19% of the patients had opted anxiety as their state of mind before their dental visit. Most patients with dental phobia and dental anxiety often presented with physical signs and symptoms before the dental visit and the treatment [1]. It was estimated that 14% of the patients graded their level of dental anxiety as severe. It is important to treat these patients with utmost care and modify treatment modalities according to their needs.

Around 36% of patients stated that the reason for their fear of the dentists was fear of pain. It is conventional of the patients to associate pain with dental medicine and treatment. Other factors like the sound of the drill, tooth extraction, doctor's operatory, sight of blood and injections also play a major role in inducing fear [4]. It was noted that about 33% of the patients stated that the fear began after their childhood experience with the dentist. Apart from bad childhood experience in the dental office, other factors like unempathetic dentist and misinformation from others leads to build up of the fear in the minds of the patients. As a result of which about 50% patients preferred going to a dentist with more years of experience. Tremors, light-headedness, sweating, nausea and palpitations were some of the commonly manifested signs of dental phobia [5]. About 11% of the patients complained of tremors and 18% of the patients complained of light-headedness. It was noted that 70% of the patients preferred having morning appointments and 49% of the patients stated that the duration of the treatment caused anxiety. It was noted that the fear was aggravated due to increased hours of waiting, ambience of the operatory and behavior of the dental assistants. About 24% patients said that waiting for long hours aggravated the fear whereas 15% of the patients stated that their fear was aggravated by the behavior of the dental assistants and the ambience of the dental office. Some panic symptoms of dental phobia are aggravated with certain dental procedures and turn of events at the dental clinic. These signs can most commonly be relieved by adopting one of the prescribed methods of treating dental phobia [6]. For 32% of the patients, reassurance by dentist helped in relieving the anxiety whereas 13% patients preferred to get a detailed explanation of the procedure and 16% patients preferred having a known person to alleviate the fear. These are a few measures that can be adopted in the dental office to reduce the anxiety of the patients in general and treat patients with dental phobia [7]. Around 31% of the patients stated that the fear was at peak in the waiting room and 23% patients stated that the fear was at peak during the treatment and 22% patients stated that it was at peak during the night before the appointment. About 38% of the

patients opted for extraction of the tooth as the most anxiety-inducing and feared dental procedure. Since extraction involves administration of local anesthesia with a syringe and sight of blood, it is most feared by the patients. Injection and sight of blood are aggravating factors in phobic patients [8]. Most patients with dental phobia and dental anxiety attribute the phobia to fear associated with losing control of self and fear of judgement of the oral cavity as well as fear of the unknown [9]. About 22% of the patients fear losing control where as 19% patients fear unknown people, procedures and instruments. Counselling by the dentist, psychotherapy, treatment under general anesthesia and nitrous oxide and sedation with dormicum are few treatment modalities that help in reducing dental phobia. Most cases of dental phobia can be treated by counselling and about 43% of the patients preferred it [10].

### 5. Conclusion

The results of the study suggest that about 14% of patients who participated in the study suffer from severe dental anxiety which could be attributed as dental phobia. Indulging the patients in a survey before their dental appointment is an effective method of evaluating the status of dental phobia in patients. The etiology of dental phobia among most patients is a negative childhood experience. Patients with severe anxiety often present with tremors, palpitations, sweating and nausea. Factors like pain, site of blood, site of injection, sounds of drills and machines are aggravating factors. It is important to treat the phobia before addressing the chief complaint in order to achieve

a stress free appointment for the patient as well as the dentist. Majority of the patients prefer counselling by the dentist and psychotherapy to overcome their fear of dentists and dental procedures. Conscious sedation, general anesthesia and sedation with dormicum are some other alternatives to treat patients with dental phobia.

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