

Prevalence of dental anxiety among patients visiting dental college hospital: A cross-sectional questionnaire-based survey

¹H.Firdus Fareen, ²Dr.Dinesh Prabhu

¹Undergraduate Student, ²Senior Lecturer
Department of Oral and Maxillofacial surgery,
Saveetha Dental College, Saveetha University, Chennai, India

Abstract: Dental anxiety refers to patient's response towards stresses associated with dental procedures, in which the stimulus is vague, anonymous, or not present at the moment. When the anxiety become severe and it leads to an irrational fear towards the dentist. So this leads to total avoidance of the dentist to complete the dental procedure. It can also called as dental phobia. The present study aims to assess the prevalence of dental anxiety among the out patients (OP) visiting dental college hospital in the age of 18-60 years to study about the state of mind about their attitude toward the dentist during dental procedures. A cross-sectional survey was conducted among the OP patients of Dental College hospital. The study consisted of 100 random participants of the age group of 18-60 years. A structured custom-made questionnaire composed of ten questions was designed to assess the anxiety levels of dental patients. The results of study shows that females (72%) were more anxious when compared to males. Extraction have been cited as distress and anxiety inciting procedures (48%). This survey has revealed that age, gender and procedure along with visit frequency has a direct effect on the patient's state of mind and anxiety. Hence, the dentist has to take the necessary accomplishment to overcome anxious during these procedures.

Keywords: Dental anxiety Vague, Extraction, Anxiety inciting procedures.

INTRODUCTION:

Dental anxiety is characterized by a physical and/or emotional response to a perceived threat. This threat does not always have to be physically present, as the mere idea of an uncomfortable situation can provoke feelings of uneasiness and apprehension.(1,2) In the dental office setting, this perceived threat could be a painful injection or procedure, the discomfort of keeping one's mouth open for an extended period of time, or a lengthy and costly treatment plan.(3)

Dental fear and anxiety are both widespread problems in patients visiting the dentist. Dentally anxious individuals frequently experience negative thoughts, feelings and fears, the fright response, sleep disturbances, and impaired social functioning in work and personal life. Such individuals often avoid dental treatment and suffer detrimental effects to their oral health (Berggren & Meynert, 1984; Richard & Lauterbach, 2007). In terms of high dental anxiety, previous research has shown the prevalence to range anywhere from 10 to 20% in adult populations. The role of previous dental experiences has been one of the major factors to explain dental anxiety. Such experiences have been linked to increased perception of pain and negative cognitions regarding dental treatment (De Jongh, Adair, & Meijerink Anderson, 2005). Moreover, this group of authors confirmed individuals with high dental anxiety (HDA) reported significantly more traumatic past dental experiences.

Dental anxiety is a major complication for both patient and dentist. This apprehension leads patients to postpone or cancel dental visits or avoid treatment entirely.(7,8) It is confirmed that anxious patients have more decayed, missing and less filled teeth in comparison to nonanxious patients.(9) Their poorer oral health status can have negative effect on their social life.[8,9] Furthermore, treating anxious patients might take more time; it is hard to manage them during the procedure and they are often unsatisfied with their treatment.(7) Anxiety can effect patient/dentist relationship and result in misdiagnosis.(10) Dentists claim that such patients are important sources of stress that can compromise their practice.(11)

The present study is aimed to assess the prevalence of dental anxiety among the outpatient (OP) patients visiting dental College hospital with the age of 18-45 years and study about their state of mind in the dental chair, their attitude toward the dentist during dental procedures.

MATERIALS AND METHODS:

A cross-sectional survey was conducted among the OP patients of dental college hospital. The study consisted of 100 random participants of the age group of 18-70 years. All the participants were informed about the confidentiality of their answers. Patients aged 18-70 years, were included in the study. Patients who refused to give informed consent and those who were undergoing psychiatric therapy or were suffering from generalised anxiety disorders were excluded from the study. A self administered questionnaire based on the Modified Dental Anxiety Scale which includes age, gender, frequency of dental visits, reasons for irregular attendance, existence of past traumatic experiences, self-perceived oral health status and postponement of dental treatment due to dental anxiety and was distributed among all the participants. The data from the participants were collected, statistically analyzed, and results were obtained.

RESULTS:

The study revealed that dental anxiety has a wide prevalence rate encompassing all individuals. Females (72%) exhibit a greater degree of anxiety when compared to males (28%). On comparing the state of mind before the dental visit, it was observed that

majority of the patients (67%) were anxious and fearful before the dental visit, with 21% of the study population to be calm and relaxed. About 11% were neutral, and only 1% were happy and cheerful before their visit to the dentist.

Moreover, On analysis of the exact cause of dental fear and the procedure that induces anxiety, it was found that while Information from others (46%) were cited as the most common reason for the initial start of dental fear followed by previous bad dental experience (32%), Unknown (19%) Un-emathetic dentist (3%). Pain (41%) was the most significant fear inducer followed by injection (32%), sound of drill and suction (24%) and sight of blood/ doctor's operatory (3%) in patients. Extraction was found to be the procedure that created the most anxiety (48%) followed by the root canal treatment (24%), filling (23%) and scaling (5%).

DISCUSSION:

An increasingly perceived problem encountered by the dental practitioner, in his practice, is the anxiety of the patient population regarding the dental procedure. Dental treatment still remains as one of the most anxious visits despite awareness among both the dentists and the patient in building trusting relationships. The fear of dental treatment determines the frequency of treatment availed and has a long-term implication in maintaining oral health.(12) The fear in an individual visiting a dentist is universal and can be seen in both children and adults. Studies report an increased prevalence of anxiety among the female gender and a general reduction in anxiety as age advances(13) which is in accordance with the results of the present study.

Dental anxiety has been found to have a profound impact on daily living, influencing sleep, and social behavior patterns of the individual (14) with dental fear being implicated as its forerunner. This forms a vicious cycle of fear and anxiety and has been validated in many studies.(15) Dental fear results in a delayed dental visit which further compounds the dental problem leading to symptom-driven treatment culminating in further fear of dental treatment. Out of the 100 patients, Females (72%) exhibit a greater degree of anxiety when compared to males (28%). This is in contrast to the distribution of sample population in studies by Aström et al.(16) and van Wijk et al.(17) where the males constituted the majority of the sample size. and is similar to the study where the anxiety levels were more in females (65.2%) when compared to males (63.4%). The increased anxiety levels experienced by the fairer sex in this study correspond with other studies.(18) A general readiness in the case of females to vent out and acknowledge their feelings also has been implicated as an important reason in the perceived difference of anxiety levels.

Around (67%) patients claimed to be anxious and fearful. This could be attributed to a combination of emotional and social factors. An increased frequency of dental visits (greater than three visits) seems to decrease the anxiety levels among patients. This is in agreement with many study results which reported an increased anxiousness among patients who have had no previous dental experience when compared to patients with regular or frequent dental attendance.(19-20) The reason could be information from others (46%) were cited as the most common reason for the initial start of dental fear. Pain (41%) was the most significant fear inducer followed by injection (32%). The procedure of extraction (48%) has been cited as the most traumatic or anxiety increasing procedure in this study which is similar to results got by Rodríguez Vázquez et al. (21)

CONCLUSION:

In conclusion, the prevalence of dental anxiety was found to be 72% among females,. Anesthetic injection, dental surgical procedures, and extractions were the most terrifying dental procedures. Pain was the major complaint. The need for health education and pain management were the highly rated recommendations by the participants. There is an urgent need to investigate factors behind these longstanding figures of dental anxiety. Personality factors pertaining to both the dentist and the patient can still be an area for future research. The nature of dental anxiety itself as part of other psychological traits or exogenous factors should be analyzed.

REFERENCES:

- 1.Jaakkola S, Rautava P, Alanen P, Aromaa M, Pienihäkkinen K, Räihä H, et al. Dental fear: One single clinical question for measurement. *Open Dent J.* 2009;3:161–6.
2. Humphris GM, Dyer TA, Robinson PG. The modified dental anxiety scale: UK general public population norms in 2008 with further psychometrics and effects of age. *BMC Oral Health.* 2009;9:20.
3. Angela M. White, RDH, MS; Lori Giblin, RDH, MS; Linda D. Boyd, RDH, RD, EdD. The Prevalence of Dental Anxiety in Dental Practice Settings. *The Journal of Dental hygiene* Vol. 91.
4. Berggren, U., & Meynert, G. (1984). Dental fear and avoidance: Causes, symptoms, and consequences. *Journal of the American Dental Association*, 109(2), 247-251.
5. Richard, D., & Lauterbach, D. (2007). *Handbook of Exposure Therapies*: Academic Press.
6. De Jongh, A., Adair, P., & Meijerink-Anderson, M. (2005). Clinical management of dental anxiety: what works for whom? *International Dental Journal* 55(2), 73-80.
7. Quteish Taani DS. Dental anxiety and regularity of dental attendance in younger adults. *J Oral Rehabil.* 2002;29:604–8.
8. Erten H, Akarşlan ZZ, Bodrumlu E. Dental fear and anxiety levels of patients attending a dental clinic. *Quintessence Int.* 2006;37:304–10.
9. Esa R, Savithri V, Humphris G, Freeman R. The relationship between dental anxiety and dental decay experience in antenatal mothers. *Eur J Oral Sci.*
10. Cohen LA, Snyder TL, LaBelle AD. Correlates of dental anxiety in a university population. *J Public Health Dent.* 1982;42:228–35.
11. Masoud Saatchi, Mansoureh Abtahi, and Elham Sadaat Binandeh. The prevalence of dental anxiety and fear in patients referred to Isfahan Dental School, Iran. *Dent Res J (Isfahan).* 2015 May-Jun; 12(3): 248–253.
12. Saatchi M, Abtahi M, Mohammadi G, Mirdamadi M, Binandeh ES. The prevalence of dental anxiety and fear in patients referred to Isfahan Dental School, Iran. *Dent Res J (Isfahan)* 2015;12:248-53.

13. Folayan MO, Idehen EE, Ojo OO. The modulating effect of culture on the expression of dental anxiety in children: A literature review. *Int J Paediatr Dent* 2004;14:241-5.
14. Cohen SM, Fiske J, Newton JT. The impact of dental anxiety on daily living. *Br Dent J* 2000;189:385-90.
15. Armfield JM, Stewart JF, Spencer AJ. The vicious cycle of dental fear: Exploring the interplay between oral health, service utilization and dental fear. *BMC Oral Health* 2007;7:1.
16. Astrøm AN, Skaret E, Haugejorden O. Dental anxiety and dental attendance among 25-year-olds in Norway: Time trends from 1997 to 2007. *BMC Oral Health* 2011;11:10.
17. van Wijk A, Lindeboom JA, de Jongh A, Tuk JG, Hoogstraten J. Pain related to mandibular block injections and its relationship with anxiety and previous experiences with dental anesthetics. *Oral Surg Oral Med Oral Pathol Oral Radiol* 2012;114 5 Suppl:S114-9.
18. Fuentes D, Gorenstein C, Hu LW. Dental anxiety and trait anxiety: An investigation of their relationship. *Br Dent J* 2009;206:E17.
19. Sohn W, Ismail AI. Regular dental visits and dental anxiety in an adult dentate population. *J Am Dent Assoc* 2005;136:58-66.
20. Ekanayake L, Dharmawardena D. Dental anxiety in patients seeking care at the University Dental Hospital in Sri Lanka. *Community Dent Health* 2003;20:112-6.
21. Rodríguez Vázquez LM, Rubiños López E, Varela Centelles A, Blanco Otero AI, Varela Otero F, Varela Centelles P. Stress amongst primary dental care patients. *Med Oral Patol Oral Cir Bucal* 2008;13:E253-6.

