



## PREVALENCE OF DENTAL ANXIETY AMONG PATIENTS VISITING THE OUT PATIENT DEPARTMENT (OPD) OF A DENTAL INSTITUTION IN DARBHANGA (BIHAR) - AN ORIGINAL RESEARCH

### Dental Science

**Dr Shivani Singh**

MDS, Senior Lecturer, Department of Public Health Dentistry, Dr.B.R.Ambedkar Institute of Dental Sciences and Hospital, Patna, Bihar, India

**Dr Abhijeet Alok\***

MDS, Reader, Department of Oral Medicine and Radiology, Sarjug Dental College and Hospital, Darbhanga, Bihar, India \*Corresponding Author

### ABSTRACT

**Introduction:** Dental anxiety (DA) is a condition that causes a decrease in population addressability to the dentist with adverse consequences for long-term oral health.

**Aim and objectives:** evaluate prevalence of dental anxiety among patients visiting the Out Patient Department (OPD) of a Dental Institution in Darbhanga (Bihar). Objective was to determine the prevalence of DA on person visiting dental institute.

**Materials and Methods:** A total of 500 subjects were included in this study. All subjects were given a DA questionnaire

**Statistical Analysis:** The collected data were subsequently processed and analyzed using SPSS statistical package version 17.

**Result:** 45% of subjects were found to be slight anxious whereas 38 % were fairly anxious. No subject was found in extreme anxious category.

**Conclusion:** DA plays significant factor in regular dental treatment and dental treatment opted by patients.

### KEYWORDS

Dental anxiety, Modified Dental Anxiety Scale, Dental fear

### INTRODUCTION

Anxiety is a usual human reaction seen on various circumstances by different individuals at that time. Anxiety is a protective state of mind induced by natural environmental threats that serve to detect and avoid danger. The source of the threat may be external, such as people, places and objects, or internal, such as thoughts, beliefs or feelings. Degree and severity of anxiety differ from person to person. Dental anxiety is a term defined as patient's response to stress that he or she faces specific to dental clinic or fear of dental treatment [1]. Dental anxiety is one of the main reason for avoidance of dental treatment. It often leads to complications during various surgical procedures. Dental anxiety poses major hindrance in management protocol too [2]. A survey was done in United States to check the dental anxiety level in general population. It was found that 75 % of population experienced anxiety ranging from mild to severe. Among them 5 % to 10 % were such adults who were so anxious, that they avoided dental treatment [3]. Persons having dental anxiety generally avoid dental treatment, have low pain threshold, symptom driven treatment etc form a linked chain feeding back into the fear experience. No study has been done in this part of India, till now, so, this study was planned. The aim of this study was therefore, to evaluate prevalence of dental anxiety among patients visiting the Out Patient Department (OPD) of a Dental Institution in Darbhanga (Bihar).

### MATERIALS AND METHODS

This study was conducted in the Department of Oral Medicine and Radiology and Department of Public Health dentistry. A total of 500 subjects who visited dental OPD were included in this study. Informed consent was taken from each and every patient. An ethical clearance was obtained by ethical committee of the institute. Inclusion criteria was patients who visited dental OPD for dental treatment between age group of 15 years to 65 years. Exclusion criterias were patients who were i) uncooperative ii) suffering from any systemic disease iii) on any anti-anxiety medication and iv) those who did not give consent to participate in the study. The study was conducted to assess the level of dental anxiety by using the Modified Dental Anxiety Questionnaire. (Figure 1)

1. If you went to your Dentist for TREATMENT TOMORROW, how would you feel ?

Not Anxious  Slightly Anxious  Fairly Anxious  Very Anxious  Extremely Anxious

2. If you were sitting in the WAITING ROOM (waiting for treatment), how would you feel ?

Not Anxious  Slightly Anxious  Fairly Anxious  Very Anxious  Extremely Anxious

3. If you were about to have a TOOTH DRILLED, how would you feel ?

Not Anxious  Slightly Anxious  Fairly Anxious  Very Anxious  Extremely Anxious

4. If you were about to have your TEETH SCALED AND POLISHED, how would you feel ?

Not Anxious  Slightly Anxious  Fairly Anxious  Very Anxious  Extremely Anxious

5. If you were about to have a LOCAL ANAESTHETIC INJECTION in your gum, above an upper back tooth, how would you feel ?

Not Anxious  Slightly Anxious  Fairly Anxious  Very Anxious  Extremely Anxious

Figure 1:- Modified Dental Anxiety Questionnaire

Score of each item. Not Anxious =1, Slight Anxious = 2, Fairly Anxious =3, Very Anxious =4, Extremely Anxious =5

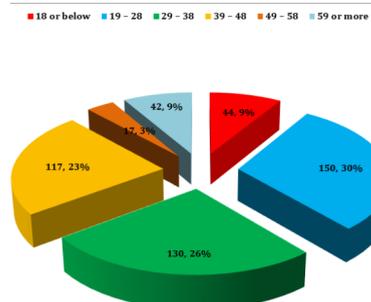
The questionnaire contained 5 questions based on a 5 point likert scale ranging from "Not Anxious" to "Extremely anxious". The range of score lied from 5 to 25. Score range of 1to 5 was considered not anxious, 5 to 10 was considered slight anxious, 11 to 15 was considered fairly anxious, 16 to 20 was considered very anxious and 21 to 25 was considered extremely anxious.

### Statistical analysis

The collected data were subsequently processed and analyzed using SPSS statistical package version 17. Chi square test was applied. A p value of less than 0.05 was considered statistically significant which was observed in our study.

### RESULTS

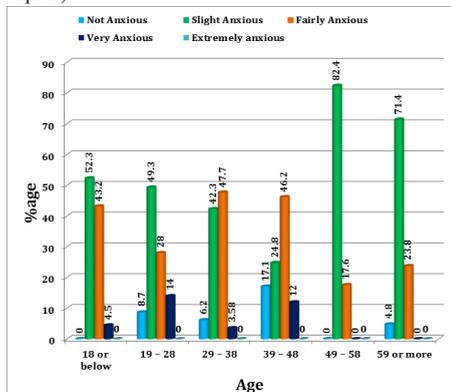
A total of 500 patients participated in this study, out of which 252 (50.4%) were male and 248 (49.6%) were female. Maximum number of subjects were in the age group of 19 years to 28 years (150, 30%), followed by age group of 29 years to 38 years (130,26%), 39 years to 48 years (117,23%). Least number of subjects was in the age group of 49 years to 58 years (17, 3%). (Graph 1)



GRAPH 1 :-AGE WISE DISTRIBUTION OF SUBJECTS

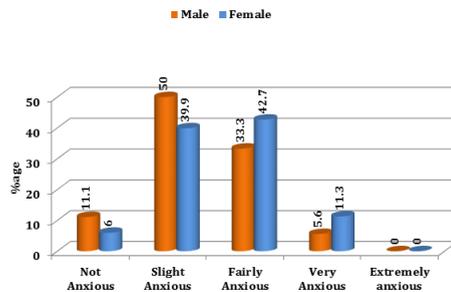
Dental anxiety scores varied across age groups. 52.3% of subjects of

age group 18 years and below were slight anxious whereas 43.2% of subjects in this age group were fairly anxious. In age group of 19 years to 28 years, 49.3% subjects were slight anxious, 28% subjects were fairly anxious, 14% of subjects were very anxious and no subjects were extremely anxious. In 29 year to 38 years age group, 47.7% of subjects were fairly anxious, 42.3% of subjects were slight anxious and 6.2% of subjects were not anxious. In 39 years to 48 years of age group, 46.2% of subjects were fairly anxious. 82.4% and 71.4% of subjects in age group of 49 years to 58 years and 59 years or more were slight anxious respectively. Very anxious and extremely anxious was not found in any subjects of age group of 49 years to 58 years and 59 years or more.(Graph 2)



GRAPH 2- ANXIETY SCORE IN EACH AGE GROUP

Genderwise distribution of DA showed that females were consistently more anxious than males.(Graph 3)



Graph 3- Percentage Wise Distribution Of Level Of Anxiety In Gender

**DISCUSSION**

DA is a common problem faced by patients of various age undergoing dental treatment in dental setting. In last few years, there has been awareness regarding teeth and gum related problems. Various dental programmes had been conducted by dental colleges and local dental organization to create awareness regarding dental management and dental related diseases. Hence, this study was conducted in Darbhanga (Bihar) to evaluate prevalence of DA.

The result of our study showed that the patients who participated in the study were having high DA. This was in accordance to study conducted by Mehta N [4]. Overall, females showed more anxiety than males in our study. This finding was in accordance with the study conducted by Marya CM and Appukkuttan D [5,6]. The reason of high female DA level may be due to either females are more sensitive or self-conscious towards their appearance or due to neuroticism which is directly related to anxiety [7]. It had been found in few studies that by increasing the education level, DA levels had reduced [8]. There are many factors which may play a role in DA. They are socio-economic status, level of educations, unfavourable past dental experience or negative attitude of family and society etc [9]. Management of DA include both pharmacological and behavioural. Dental health education measures should be undertaken to control the level of DA in such population. Person should be educated by various educational programmes at regular intervals involving majority of populations in both rural and urban region. Whenever patient comes for dental treatment, he or she should be given proper counseling and treatment protocol should be discussed in detail.

**CONCLUSION**

It was found that dental anxiety was high in the individuals who visited OPD of the institute. Main reason for such high anxiety may be due to level of different populations, gender, age, education level or past negative dental experience. Proper care of the patient should be taken before and during the treatment so that anxiety level of patient donot increases. That's why this study was done to know the level of dental anxiety in patients visiting OPD of dental institute in Darbhanga. More such studies are recommended with large sample so that the level of dental anxiety can be evaluated.

**REFERENCES**

1. Appukkuttan D, Datchnamurthy M, Deborah SP, Hirudayaraj GJ, Tadeipalli A, Victor DJ. Reliability and validity of the Tamil version of Modified Dental Anxiety Scale. J Oral Sci.2012;54(4):313-20.
2. Van Ameringen M, Mancini C, Farvolden P. The impact of anxiety disorders on educational achievement. J Anxiety Disord.2003;17(5):561-71.
3. Milgrom P, Newton JT, Boyle C, Heaton LJ, Donaldson N. The effects of dental anxiety and irregular attendance on referral for dental treatment under sedation within the National Health Service in London. Community Dent Oral Epidemiol 2010;38(5):453-59.
4. Mehta N, Arora V. Prevalence of Dental Anxiety among Patients Visiting the Out Patient Department (OPD) of a Dental Institution in Panchkula, Haryana. International Healthcare Research Journal 2017; (7):27-33.
5. Marya CM, Grover S, Jnaneshwar A, Pruthi N. Dental anxiety among patients visiting a dental institute in Faridabad, India. West Indian Med J. 2012;61(2):187-90.
6. Appukkuttan D, Subramanian S, Tadeipalli A, Damodaran LK. Dental anxiety among adults: an epidemiological study in South India. N Am J Med Sci.2015;7(1):13.
7. Newton T, Asimakopoulou K, Daly B, Scambler S, Scott S. The management of dental anxiety: time for a sense of proportion?. Br Dent J.2012;213(6):271-74.
8. Bjelland I, Krokstad S, Mykletun A, Dahl AA, Tell GS, Tambs K. Does a higher educational level protect against anxiety and depression? The HUNT study. Soc Sci Med.2008;66(6):1334-45.
9. Donaldson D. Anxiety: its management during the treatment of the adolescent dental patient. Int Dent J.1982;32(1):44-55.