

Dental Anxiety Level among Patients Visiting a Private Dental Hospital in Chennai: A Cross Sectional Study

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Abstract:

Introduction: Anxiety and fear towards dental treatment are common problems experienced by patients worldwide. Dental anxiety is a state of unpleasant feeling and it is anticipatory in nature, the intensity varies from person to person. The aim of this study is to evaluate the anxiety level among patients visiting a private dental hospital.

Materials and Methods: A total sample of 150 outpatients visiting a private dental hospital were included in the study. This cross sectional study was conducted in February 2021. A pre-tested structured questionnaire with 5 questions was distributed to assess the prevalence of anxiety among out patients. Corah's dental anxiety scale a novel method for calculation was used to test the level of anxiety among patients. The statistics were computed with the SPSS version 23.0 software. Chi square test was used for assessment. A P value <0.05 was considered statistically significant

Results: From the analysis there was a significant relationship between gender and dental anxiety, previous visits and dental anxiety. Women (52.78%) had moderate levels of dental anxiety than males (33.33%). Out of the total, 42.67% had moderate levels of dental anxiety, which indicated the prevalence of dental anxiety among the patient population. P value obtained was 0.019 and chi square value 11.780. With a p value (<0.05) the result obtained is statistically significant.

Conclusion: According to the study, there is a moderate level of dental anxiety among out patients, while severe levels are rare. Women tend to be more anxious than men. The development of dental anxiety can be minimised with pain control, behaviour management and consideration of the patient as a whole. Inclusion of behavioural science in dental curriculum in the field of dental education could improve this scenario.

Keywords; Awareness, Corah's Dental anxiety scale, Dental anxiety, Dental treatment, Novel method, Questionnaire.

Introduction;

Dental anxiety is an important component of distress in patients undergoing a treatment. Anxious patients mostly tend to delay treatment, they might even have social and physiological disabilities. (1) No matter how advanced the technology is, anxiety among patients is still widespread. Broken or cancelled appointments is mainly due to anxiety. Dental anxiety is related to age, gender and varies from person to person (2).

Identifying dentally anxious patients is crucial for management and treatment outcome. Occurrence of dental anxiety has been attributed to factors like personality characteristics, traumatic dental experience in childhood, vicarious learning from dentally anxious family members or peers, blood injury fears, pain reactivity. (3,4)

According to ((3,4) distrust of dentist contributed to 13% fear and anxiety among patients. Also anxiety from childhood prevailed in 32% patients examined. Patients with high level anxiety recall threatening stimuli more when examined about effect of pre treatment anxiety (5)

Objective assessment of dental anxiety can be done using anxiety questionnaire like Dental anxiety scale(DAS),Corah's dental anxiety scale(CDAS).(6)Little attention has been given to this issue of the age of onset dental anxiety is usually viewed as a fear originating in childhood which persists into later life.However studies that have addressed this issue did not support this point of view. (7)

Specific procedures or steps in dental treatment tend to particularly arouse anxiety. Some of the highly ranked sources of anxiety were technical procedures such as extractions,cavity preparation,or holding needles or syringes in front of the patient.(8) Our team has extensive knowledge and research experience that has translate into high quality publications (9–17),(18),(19),(20,21),(22),(23),(24–28).

Therefore the purpose of the present study is to assess the prevalence of anxiety amongst patients which will enable to reduce conflict between dentist and patient,better behaviour of patient towards dentist.Co operative working helps the dentist to give the best possible treatment to the patient.

Materials and Methods:

Study design:

A cross sectional questionnaire study was conducted in a private dental hospital in chennai,Tamil nadu.Study population consisted of the out patients visiting a private dental hospital in chennai the questionnaire was distributed to them and the responses were noted. Patients above the age of 18 and the patients willing to participate in the study were only included. Patients who are under the age of 18 and the patients who were not willing to participate in the study were excluded.

Prior to the start of the study, ethical clearance was obtained from the Institutional ethics committee, Saveetha University.The anonymity of the participants was maintained.Data collection was scheduled in Chennai in the month of February 2021. Convenience sampling was used for the study. The patients were informed about the aim of the study. Data was collected using a self-administered questionnaire.

The sample size was calculated manually approximate from 125.9-DSM qutrisch taane 2001. The sample size was approximated to 150.A questionnaire with a total of 5 questions was prepared based on Corah's dental anxiety scale.

Statistical Analysis:

Data was entered in Microsoft excel spreadsheet and analysed using SPSS software (version 23.0). Chi square test was used to assess the associations. For significance level, a p value of <0.05 was considered statistically significant.

Results;

In the present study , there were 150 participants present in the study in which 52% males and 48% females present in the study. According to the age wise distribution , 60%, 31.33% and 8.67 % were present in 18-35, 36-50 and 50 and more age groups respectively.

Among the study participants, 36.67% were from low socio-economic status, 28.67% were from middle socio-economic status , 34.67% were from high socioeconomic class. With regard to educational status, 53.33% have completed under graduation , 21.33% have completed high school and 25.33% have completed post- graduation(Table 1).

Results revealed that 26.67% had mild dental anxiety, 42.67% had moderate dental anxiety, 6.67% had high and 3.33% had severe dental anxiety(Figure 1). Results revealed that there were 20.83% females and 32.05% males had mild dental anxiety; 52.78% females and 33.33% males had high anxiety and 4.17% females and 2.56% males had severe dental anxiety(Figure 2).

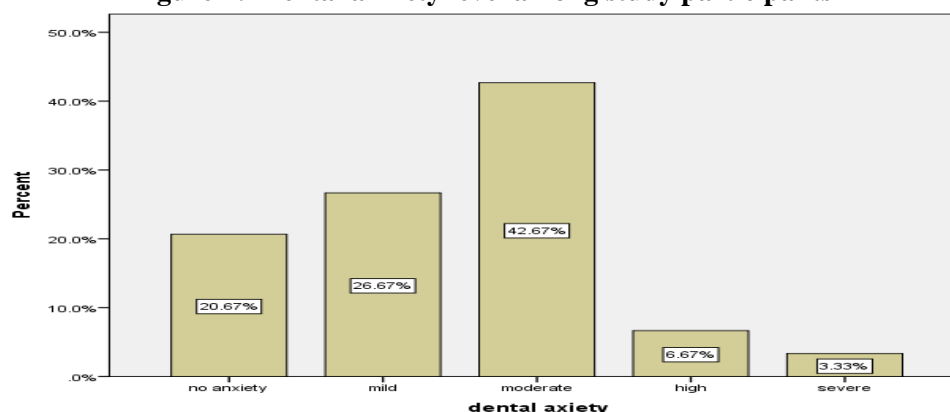
There was a peculiar finding in the study which revealed that moderate, high and severe dental anxiety was more prevalent among patients who had previous dental experience. And more prevalence was found in mild anxiety and patients with no dental anxiety did not have previous dental experience (Figure 3).There was a significant association found between gender and dental anxiety and previous dental experience and dental anxiety. ($p < 0.05$) (Table 2,3)

Table 1 : Demographic details of the study participants

Demographic details		N	Percentage
Gender	Males	78	52
	Females	72	48
Age groups	18-35	90	60
	36-50	47	31.3
	More than 50	13	8.7
Education	School	32	21.3
	UG	80	53.3
	PG	38	25.3
Socio economic status	Low	55	36.7
	Middle	43	28.7
	High	52	34.7

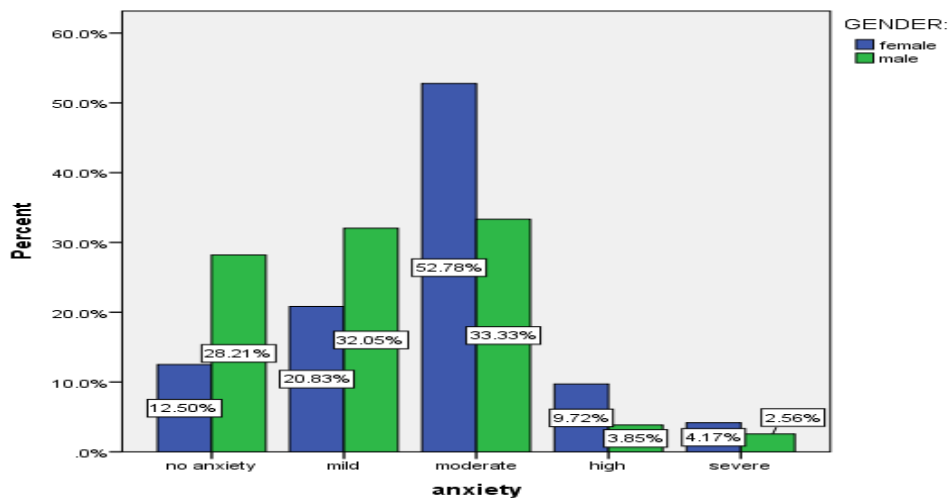
The table shows that 52% males and 48% females present in the study. Among age groups , 60%, 31.33% and 8.67 % were present in 18-35, 36-50 and 50 and more age groups respectively.

Among the study participants, 36.67% were from low class, 28.67% were from middle class , 34.67% were from high class. With regard to educational status, 53.33% have completed under graduation , 21.33% have completed high school and 25.33% have completed post- graduation.

Figure 1: Dental anxiety level among study participants

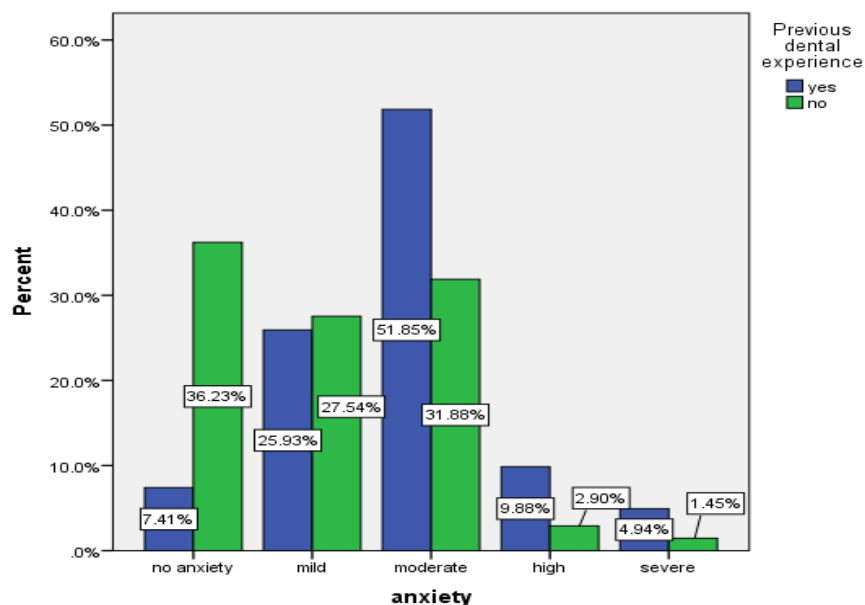
The above bar graph represents the correlation between percentage of the study population and the dental anxiety levels . X axis represents the various levels of anxiety . Y axis represents the percentage of the study population with each level . Results revealed that 26.67% had mild dental anxiety, 42.67% had moderate dental anxiety, 6.67% had high and 3.33% had severe dental anxiety.

Figure 2 : Dental anxiety level based on gender



The above bar graph represents the correlation between levels of dental anxiety and gender distribution. X axis represents the levels of dental anxiety among male and female Y axis represents the percentage of it. Blue represents female, green represents male. Results revealed that 20.83% females and 32.05% males had mild dental anxiety; 52.78% females and 33.33% males had high anxiety and 4.17% females and 2.56% males had severe dental anxiety. P value obtained was 0.019 and chi square value 11.780. With a p value (<0.05) the result obtained is statistically significant.

Figure 3 : Dental anxiety level based on previous dental experience



The above bar graph represents the correlation between levels of dental anxiety and previous dental experience. X axis represents the levels of dental anxiety of patients with and without previous dental visits. Y axis represents the percentage of it. Blue represents patients with previous dental

experience, green represents patients without previous dental experience. Results revealed that moderate, high and severe dental anxiety was more prevalent among patients who had previous dental experience. And more prevalence was found in mild anxiety and patients with no dental anxiety did not have previous dental experience. P value obtained was 0.000 and chi square value 22.580. With a p value (<0.05) the result obtained is statistically significant.

Discussion:

Dental anxiety is most prevalent among patients of dentistry, the core problem lies in deficient health care knowledge, lack of patient sensitive pedagogy to train dentists and hesitation to medical help (29). According to (30) anxiety disorder covers many symptoms such as constant fear of stimulus, avoidance of feared object which inhibits the individual's proper functioning due to exaggerated due to anxiety.

Anxiety assessment by a questionnaire provides information for the dentist and may also confer a physiological benefit on patients. (29,31) The patients once diagnosed as anxious from the results analysed, can be guided properly to gain the confidence and trust of the patients so that the dentists can also effectively treat the patient increase manifold. (32)

The present study showed that females had higher levels of anxiety than males, showing a correlation between gender and anxiety. This is similar to the research done by (33) where females (62.5%) had more dental anxiety than males.

In this study it was observed that there is no correlation between socioeconomic status and dental anxiety which was in contrast to the research done by (34), where level of education and socioeconomic status had a correlation.

The percentage of people with severe dental anxiety in this study is (3.33%) which is less than in other western countries UK (19.5%), Turkey (23.5%) (35). In this present study there is no relation between age and dental anxiety which is in contrary to research done by (36).

This study reveals that drills, injections made patients more anxious, similar to the findings of (37). In the present study education levels had nothing to do with dental anxiety which contradicts the study of (38). In this study patients with previous dental visits had more anxiety than those without it, it shows patient dentist relationship plays an important role in dental anxiety levels which is similar to the findings of. A limitation to be addressed is that, a trial based study instead of a cross sectional study with more sample size will give more precise results in future. The future scope of this study is that the prevailing level of dental anxiety could be reduced significantly if its properly addressed.

Conclusion;

It can be concluded from the present study that there is a moderate level of dental anxiety prevailing among patients, while severe levels are rare. Women tend to have more dental anxiety than men in the current study. Patients with previous dental visits have more anxiety than others without it, which shows trust in dentists, patient-dentist relationships play an important role in anxiety level management among patients. The development of dental anxiety can be minimised with pain control, behaviour management and consideration of the patient as a whole. Inclusion of behavioural science in dental curriculum in the field of dental education will improve the scenario.

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Conflict of Interest:

None to declare

Author's contribution:

Sushmitha : Involved in collecting the data, studied and analysed the results.

Dr Pradeep Kumar Rathinavelu : Topic designing, guiding and analysing the data.

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