

Evaluation of Fear and Anxiety Associated with Instruments and Treatment among Dental Patients

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ABSTRACT

Introduction: Dental anxiety can act as hindrance to health services, thus increasing the risk of experiencing oral health diseases and progressive deterioration of untreated oral symptoms which further reinforces the fear of dental procedures. Thus, the present study was commenced to evaluate dental fear and anxiety in patients associated with instruments and treatment during dental visits.

Material and methods: The present cross-sectional study was carried among 250 patients visiting for dental treatment over a period of 6 months. The first part of questionnaire comprised of five questions whose scoring ranged from 0 to 5 according to the anxiety of the patient and were assigned score accordingly. The second part consisted of reason regarding avoidance of dental treatment which included treatment not needed, cost, fear or lack of time and evaluation of fear from various dental instruments. The obtained data was analyzed using SPSS 20.0 and chi square test was used to evaluate data statistically with $p \leq 0.05$ considered as statistically significant.

Results: The dental anxiety was found among 179 (72%) subjects. Based on the score, 21% were categorized as dentally anxious, 55% as moderately anxious and 24% were considered as highly anxious patients. The modified dental anxiety scoring criteria showed statistically significant difference among both gender regarding dental anxiety ($p \leq 0.05$). Regarding the fear and anxiety associated with dental instruments and procedures, majority of patients (89%) felt anxious of tooth extraction and 69% reported that files and reamers during root canal treatment aroused anxiety among them. 13% reported fear of dental instruments and procedures as the reasons for not visiting the dentist regularly.

Conclusion: The various dental instruments aroused various anxiety levels, men were slightly anxious whereas females were found to be more anxious about dental procedures. As the literature reports that dental anxiety should be classified along with mood disorders, thus it is also a matter of concern.

Keywords: Anxiety; Fear; Dental treatment

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MATERIAL AND METHODS

The present cross-sectional study was carried among 250 patients visiting for dental treatment over a period of 6 months. Patients with previous 2 or more dental visits were selected randomly for the study. Informed verbal consent was taken from the patients and were assured regarding the maintenance of confidentiality of their replies. Patients above 18 years of age, without any intellectual disability and who were willing to participate were enrolled for the study after taking ethical approval from the institutional ethical committee. Demographic details of the patient were taken and were given questionnaire regarding their fear and anxiety associated with their dental visits. The first part of questionnaire^{3,4} comprised of five questions whose scoring ranged from 0 to 5 according to the anxiety of the patient.

Q1: Planning a visit to dental clinic makes you feel anxious?

Q2: Does waiting at dental clinic for treatment makes you feel anxious?

Q3: Does dentist about to drill or drilling your tooth, makes you feel anxious?

Q4: Does waiting in the dental chair for scaling and polishing of your teeth makes you feel anxious?

Q5: Does dentist about to deliver a local anesthetic injection makes you feel anxious?

The answers ranged from not at all, little bit, fairly, very or extremely were from not anxious to extremely anxious with scores ranging from 1 to 5. Patients assigned score of 11 or more were regarded as dentally anxious, with range from 11 to 14 regarded as moderate anxious and with values above 15 were considered as highly anxious patients. The second part consisted of reason regarding avoidance of dental treatment which included treatment not needed, cost, fear or lack of time and evaluation of fear from various dental instruments.⁵

INTRODUCTION

Dental anxiety is a recognized hitch for both patients and dental care providers. It is a patients' reaction towards dental situation-associated stress. The presence of high levels of dental anxiety amongst dental care seekers yielded patients with negative attitudes towards dental treatment and rendered dental treatment more difficult to accomplish successfully.¹

Dental anxiety can act as hindrance to health services, thus increasing the risk of experiencing oral health diseases and progressive deterioration of untreated oral symptoms which further reinforces the fear of dental procedures. Thus, dental fear and anxiety should be a matter of concern for public health, as this problem has a high prevalence in both adult and child populations and deleterious health-related consequences.² Thus,

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Questionnaire	Felt anxious with various scores N=179
1 Planning a visit to dental clinic makes you feel anxious	36%
2 Does waiting at dental clinic for treatment makes you feel anxious	53%
3 Does dentist about to drill or drilling your tooth, makes you feel anxious?	61%
4 Does waiting in the dental chair for scaling and polishing of your teeth makes you feel anxious?	59%
5 Does dentist about to deliver a local anesthetic injection makes you feel anxious?	79%

Table-1: Percentage of respondents felt anxious with various scores of questionnaire

Dental instrument/procedure	N= 179
Dental explorer/probe	24%
Mouth mirror	3%
x-ray procedure/equipment	16%
Forceps	26%
Air-rotar/ dental handpiece	61%
Dental chair	5%
Impression taking procedure	39%
Files and reamers	68%
Tooth extraction	89%

Table-2: Percentage of fear and anxiety associated with dental instruments and procedures

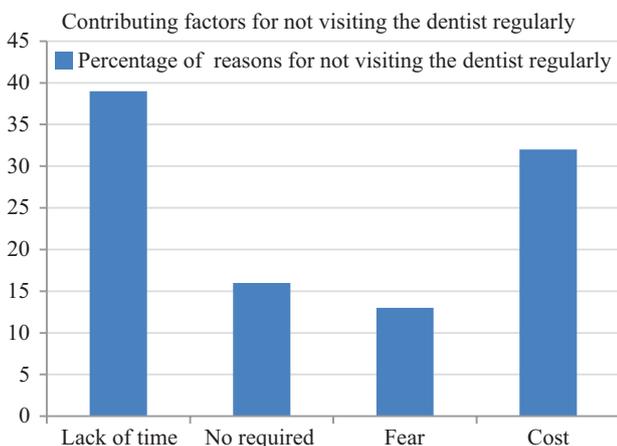


Figure-1: Contributing factors for not visiting the dentist regularly

STATISTICAL ANALYSIS

The data obtained was analyzed using SPSS 20.0 and chi square test was used to evaluate data statistically with $p \leq 0.05$ considered as statistically significant.

RESULTS

The sample consisted of total 250 patients with 88 males and 158 females with a mean age of 41.5 ± 5 years. The dental anxiety was found among 179 (72%) subjects. Based on the score, 21% were categorized as dentally anxious, 55% as moderately anxious and 24% were considered as highly anxious patients.

The first question regarding planning a dental visit, 64% reported not at all anxious. Maximum number of candidates felt anxious during receiving local anesthesia (79%) followed by tooth drilling 61%. 59% felt anxious while scaling treatment and 53% felt anxious during waiting for their turn in the waiting area of the dental clinic (table-1) The modified dental anxiety scoring criteria showed that the men were lightly bit or slightly anxious. Very and extreme anxious scores were found in women with statistically significant difference among both gender regarding dental anxiety ($p \leq 0.05$).

Regarding the fear and anxiety associated with dental instruments and procedures, majority of patients (89%) felt anxious of tooth extraction. 69% reported that files and reamers during root canal treatment aroused anxiety among them, 61% reported air-rotar or dental handpiece, 39% reported impression taking procedure aroused anxiety among them 9 (table-2).

39% of the respondents reported lack of time, 16% thought that they does not required dental treatment before, 13% reported fear of dental instruments and procedures and 32% reported cost factor as the reasons for not visiting the dentist regularly (Figure-1).

DISCUSSION

Dental care systems in developing countries, such as India, varies from those of Western, developed countries as these countries are deficient in oral health education programs. Moreover, in developing countries, parents usually take their children to the dentist for treatment of oral diseases, but rarely for prevention whereas parents usually take their children for prevention in developed countries. Moreover, some people in developing countries may only seek dental treatment when in pain. These variables may influence children's experience and perception of fear.⁶

The dental anxiety was found among 72% subjects, 13% reported fear of dental instruments and procedures as the reasons for not visiting the dentist regularly and maximum number of candidates felt anxious during receiving local anesthesia followed by tooth drilling procedure.

Saatchi M et al³ reported prevalence of dental anxiety among the respondents was 58.8% and found no correlation between education and dental anxiety whereas previous traumatic experiences were found to elevate anxiety and fear among respondents.

Leal AMA et al⁷ conducted a study to assess anxiety levels among children and found that various instruments/equipment generated different anxiety levels among the study subjects and no correlation between parents' anxiety levels and those of their children was found. Olieria MMT et al⁸ found an association between dental pain, age, family income and assessment of oral health status. The association of dental anxiety with a history of dental pain may be explained by the notion that dental fear is closely related to invasive procedures and to previous painful dental experience or previous negative experience of dental treatment. Thus, the etiology of dental anxiety in children is multifactorial, being associated with age, socioeconomic status, oral health status and dental pain experience.

Settineri S et al⁹ conducted a study to find association between dental anxiety, psychiatry and dental treatment and revealed that in case of presence of both mood disorders and dental anxiety, dental anxiety should be classified along with mood disorders

rather than anxiety disorders.

People with high dental fear are much more likely to delay or avoid dental visiting, and a number of fearful people regularly cancel or fail to show for appointments. Both children and adults with high dental fear, are difficult to treat, demands more time, and are usually present with behavioural problems which leads to a stressful and unpleasant experience for both the patient and treating dentist. Dentally anxious individuals often have poorer dental health because of their avoidant behaviours,. Especially, those patients who delays visiting dentist for a prolonged time in spite of experiencing considerable dental pain, further require more intensive and potentially traumatic treatment.¹⁰

Management of patients with dental fear is a source of considerable stress for many dentists. If patients are not managed appropriately, it is quite possible to establish what has been referred to as a vicious cycle of dental fear. This vicious cycle takes place as the patients who avoid making dental visits because of their fear, results in a worsening of problems, thus requiring more complex and complicated treatment, which then worsens the fear further and results in continued avoidance.^{11,12}

CONCLUSION

The various dental instruments aroused various anxiety levels, men were lightly bit or slightly anxious whereas females were found to be very and extreme anxious about dental procedures with statistically significant difference among both gender regarding dental anxiety.

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