



DENTAL FEAR ASSESSMENT AMONG PATIENTS: A SURVEY STUDY OF A GROUP OF INDIAN DENTAL PATIENTS

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ABSTRACT

Aim: The aim of this study is to better understand the dental fear and anxiety which is a major cause of irregular dental visit. Thus helping dentist all over to identify the stimuli and provide necessary care to the individual. **Method:** A survey was used to collect data from 100 individuals undergoing dental treatment in an Indian subpopulation via the means of electronic mail and social media. **Result:** The results revealed that the most fear provoking stimuli were the instruments used and the drilling machine (airotar) used by dentist. **Conclusion:** Once identified, dentist can use various methods to eliminate that fear by explaining, slowly and gradually introducing the instruments until the fear is eliminated.

KEYWORDS: Dental fear, anxiety, survey study.

INTRODUCTION

Fear can be defined as an unpleasant feeling induced by perceived danger or threat that causes changes in metabolism or organ function and ultimately a change in behaviour.^[1] Dental fear is the fear of dentistry or receiving dental care by a health care professional.^[2] This fear could be attributed to a past unpleasant dental experience or by witnessing the response of another individual in the same situation. In either case, a person's behaviour changes towards the treatment.^[2] Moreover, dental fear or fear of dental treatment is not limited to a state or country, and is not restricted by age, sex, caste or religion.^[2] Some individuals are so fearful of the treatment that they would avoid the dental treatment at all cost and visit the dentist only when there is an emergency, for eg; a tooth ache or an abscess.^[3] The treatment to such emergency is often extensive and invasive, thereby further developing the dental fear.^[3]

It is known that people with increased anxiety have fewer restored teeth as well as avoid going for a dental check-up and hence suffer from overall oral health, ultimately leading to social inhibition.^[4] Treating such patients is difficult for the dentist and takes more time.^[4] Such cases are also hard to manage during dental check-ups which may lead to misdiagnosis by the dentist.^[5] It is also known that such patients are not generally satisfied with their dental care.^[6] This leads to the development of stress to the dentist and other health care professional which ultimately results in compromised work.

Social media now a days are major factor in contributing dental fear especially in children. In many instances

when a child watches cartoons the dental treatment is always unpleasant. Hence, it may be used to threaten children as well. Other movies like The Dentist and its sequel may contribute in anxiety in adults as well.

The purpose of this study was to evaluate dental fear in existing patients who have undergone dental treatment with the assistance of a dental survey in an Indian subpopulation.

MATERIAL AND METHOD USED

This study was conducted using a survey (see Table 1) which was disseminated via social media and electronic mail, in return to which, we received 100 responses. The survey which was created, included 10 questions with multiple choice answers from 1 to 5 where, 1 was a representative of being least anxious and 5 of being very afraid. All individual's taking this survey were informed about the confidentiality of their responses. They were also informed about the purpose of study being conducted. People with dental experience where reached for this survey. Participants with age 18 and above were included. The possible answers could be in range from 1-5. The summation of the value of the possible answer could range from minimum 10 to maximum 50. The evaluation of the result was done electronically using the interphase provided by the common survey software conducting site available on internet.

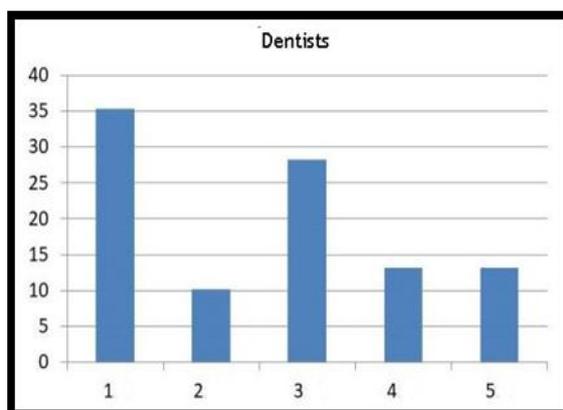
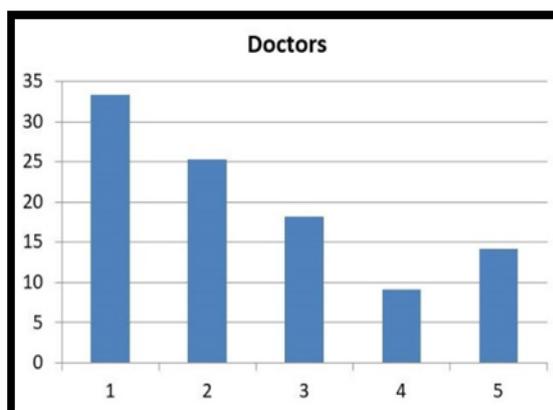
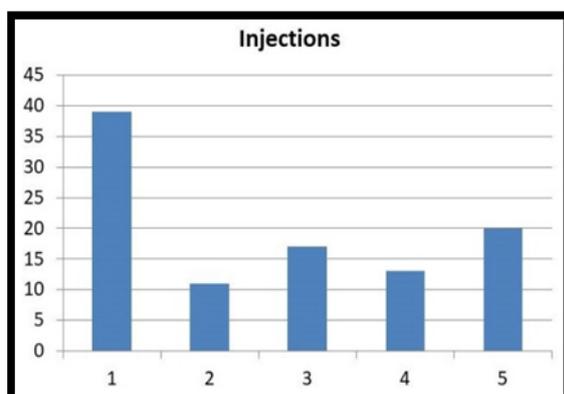
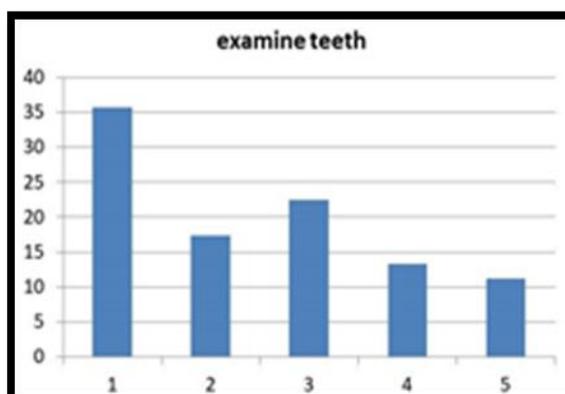
Table 1: Survey questionnaire.

No.	ENTITY	SCORE				
1.	Fear of dentist	1	2	3	4	5
2.	Fear of doctors	1	2	3	4	5
3.	Fear of injections	1	2	3	4	5
4.	To have somebody examine your teeth	1	2	3	4	5
5.	Dentist drilling with instruments	1	2	3	4	5
6.	Having someone to put instrument in your mouth	1	2	3	4	5
7.	Choking	1	2	3	4	5
8.	Having to go to hospital	1	2	3	4	5
9.	People in white uniform	1	2	3	4	5
10.	Having someone else touch you	1	2	3	4	5

RESULT

The survey collected from 100 individuals showed that there was rise in overall prevalence of dental anxiety but severe anxiety/ phobia was quite low. The survey used to measure the anxiety was CSFF-DS table (Children's fear survey schedule — dental subscale).^[7] This was a modified variety of CSFF-DS table using specific questions that provoked the fear in an individual. The response was scored on the basis of Likert's 5 point scale where 1 was least anxious and 5 was very fearful. The cumulative responses are given in the following graphs (see figures 1-10). All the data in the graphs are a representative of the total percentages of responses received. The most fearful experience, when evaluated

overall, in descending order was the dentist drilling, instrument used in mouth, choking, hospital or clinic, injection, having a stranger touch or examine, doctors and people in white uniform and the least fear expressed was that of the dentist.

**Figure 1: Fear of dentists.****Figure 2: Fear of Doctors.****Figure 3: Fear of Injections.****Figure 4: Fear of having the teeth examined.**

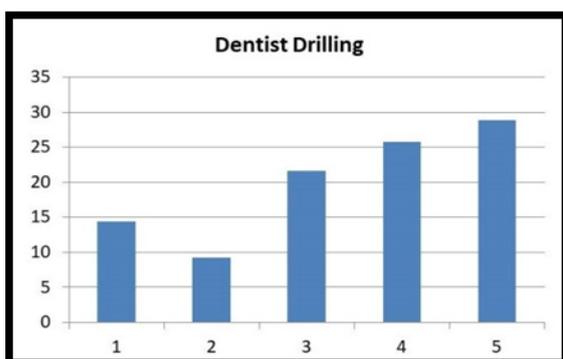


Figure 5: Fear of the dentist drill.

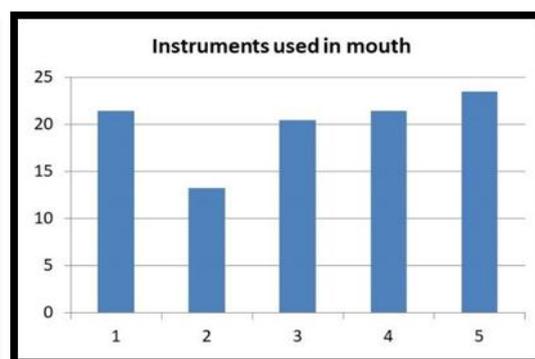


Figure 6: Fear of the dental instruments.

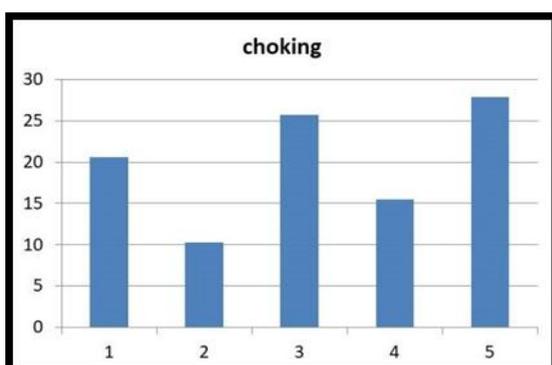


Figure 7: Fear of choking

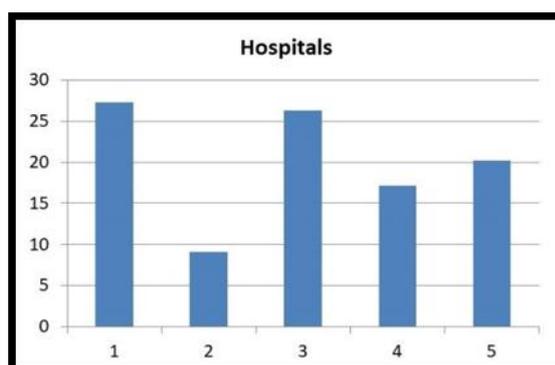


Figure 8: Fear of hospitals

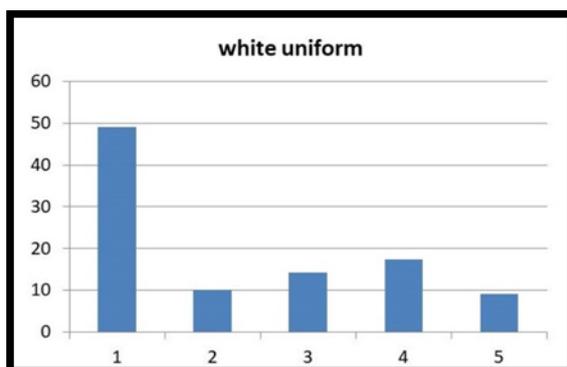


Figure 9: Fear of the white uniform.

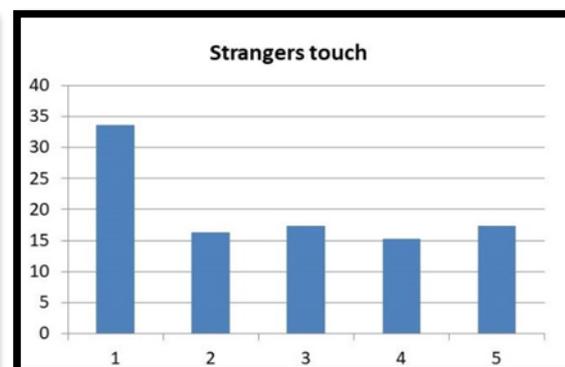


Figure 10: Fear of a stranger's touch.

DISCUSSION

To the best of our knowledge, this is the first study in literature to be conducted in an Indian subpopulation. The input of the data and patient responses has helped us understand various causes of fear among the dental patients. In our study, the most common fear common among the various entities was the perceived notion of pain by receiving dental treatment from a professional. Furthermore, we employed the CSFF-DS scale in adults to determine the anxiety levels, since it was a universal and convenient scale to use. It is seen to begin in childhood and responses to fear varies between children and adults because children are often unable to process the unknown and are often threaten by parents and contact with the environment.

A number of measurement techniques have been used to note dental behaviour management problems such as behaviour rating, psychological scale and psychometric technique.^[3,8-10] Most commonly used techniques are: (i) observation of behaviour by dentist or other personals during dental treatment (behavioural ratings)^[11] and (ii) reports of anxiety made by the child him/herself or by the accompanying parent (most often the mother) using psychometric scales.^[10] The most feared item recorded in our study by the CFSS-DS scale was the dentist drilling, injection and choking.^[7]

In our study, the individuals reported the greatest fear to the dentist's drill. Karibe *et al.*, in a study presented at the 2013 Society for Neuroscience meeting, divided the patients into two groups (low fear and high fear) based on a survey, and monitored the participants in a functional

magnetic resonance imaging machine (fMRI) while playing them a series of sounds, including screeching dental drills and rasping suction tools. He reported that people in the low-fear group were not overly anxious about going to the dentist as compared to the high fear group. He further mentioned that when the patients heard dental sounds, parts of the brain called the left and right superior temporal gyri responded more than when they heard neutral sounds, suggesting that dental sounds triggered more activity in the primary auditory areas of the brain, thus concluding that individuals were afraid of the sounds from the dental drill and not of the drill itself.

Alatram *et al.*^[12], in his study, reported that 13% of the individuals experienced fear to dental instruments. In our study, the second and third most common fear experienced was that of the use of dental instruments in the mouth along with choking. Patients need to be educated regarding rubber dams, since it can help alleviate their fear of choking on dental instruments.

Several individuals in our study reported a fear of injections. The fear of pain attributed to injection of anesthetic agents can be attributed as an obstacle towards providing appropriate dental care. Often, patients are also fearful of the accompanying injury with the use of injections as well as the risk of disease transmission.^[13-15] Clinicians are often recommended to follow safe injection practices as measures to perform injections optimally for patients, health care personnel, and others.^[13,16,17] Although there have been no recent study reported transmission of infections in dentistry resulting from unsafe injection practices, numerous outbreaks have been reported in other health care settings. The least fear expressed, was that towards dentists and doctors or individuals in a white uniform, which could be interpreted that most individuals weren't afraid of the healthcare professionals but only harbored a fear towards the procedures involved in dental treatment.

There can be many ways to sort out these fears. Educating the individuals early on about the dental visit as a part of dental care can be an effective way.^[18-20] The school education system can incorporate dental education as part of the school curriculum. Parents can be effectively trained in healthy practices by including oral care as a book chapter in parenting books. Schools can also be directed towards distributing pamphlets to parents and encouraging them to take their children to the dentists on a regular basis.^[21] Knowing that procrastination will only make problem bigger as it is in case of any disciplined life. Work place, community halls and city centre can conduct dentist camp every few months to provide with dental check-up for grownups thus addressing any specific issues early in life. This practice will make dental visit for the patient less stressful and thus assist the dentist in providing the best health care.

The limitations in our study involved the low number of participants, which could have been improved by means of distribution of print questionnaires in comparison to online surveys, as well as a follow up of the individuals who received the online survey link. Further studies could involve more participants along with procurement of the oral cavity findings along with its correlation.

CONCLUSION

The results of this study show that the most feared items among the study population were injections, choking, the sight, sounds, and act of the dentist drilling, doctors, being touched by a stranger, and having their teeth cleaned. Having to open the mouth and having somebody look at them were the least fear-provoking items among the dental patients.

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