

Incidence of Anxiety To General Dental Treatment & Endodontic Treatment In & Around Navi Mumbai – A Psychometric Study.

Abstract

Background: Dental treatments are usually associated with anxiety, fear and apprehension in the minds of the patients. Many patients avoid or delay their dental visits because of these reasons, leading to aggravation of their dental problems. It is important to identify and analyse the patients' dental anxiety, which will improve the work quality and efficiency of the clinicians.

Aim: The current study was conducted to assess and measure the anxiety generated across age and gender prior to general dental treatment and specifically, before endodontic treatment in Navi Mumbai, India.

Method: Modified Dental anxiety Scale (MDAS) Questionnaire was given to OPD patients at Department of Conservative dentistry and Endodontics of DY Patil School of Dentistry, Navi Mumbai. Study sample of 230 adults was included. An additional question assessing patients' anxiety to endodontic treatment was included. Statistical analysis was done using Chi Square, ANOVA Test and independent t-test.

Result: A total number of 125 males and 105 females took part in the survey. Mean value of anxiety according to score comparison was 8.65 in males and 7.97 in females which was not significant. There was no difference in anxiety levels in different age groups. Females showed slightly higher anxiety than males for endodontic treatment. However, there was no significant association between age and endodontic anxiety.

Conclusion: All patients showed low level of anxiety to dental procedures. Slightly higher anxiety levels were observed prior to endodontic treatment. Gender and age did not affect anxiety levels. This issue of dental phobia needs to be addressed to make dental procedures comfortable for both patient and the clinician.

Key Words: Dental anxiety, MDAS, Survey.

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Introduction

From time immemorial individuals have dreaded a visit to the dentist. Literature is replete with dental anecdotes, adding fuel to the patients' anxiety.

According to the American Psychological Association, Anxiety is defined as "An emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure".

Dental anxiety remains a barrier to dental care for a consistent proportion of the population^[1]. The assessment of dental anxiety has encouraged the development of a variety of measures^[2]. The majority of these are self report questionnaires to be filled before initiating dental treatment. The direct approach of inviting individuals to state their own rating has merit. Some of these are Corah's dental anxiety scale (CDAS), Modified dental anxiety scale (MDAS), State trait anxiety scale (STAI), General gear fear scale, Getz dental belief survey, Dental fear survey. The most popular are CDAS, MDAS and Kleinknecht's DFS^[3].

MDAS is a self-complete questionnaire consisting of five questions. The scale invites the respondent to indicate their anxiety to five dental situations: sitting at the waiting room; having a scale and polish; a tooth drilled and a local anaesthesia injection.

The present study was conducted to analyse the anxiety generated across age and gender prior to routine dental treatment. Anxiety before endodontic treatment has never been assessed in any study till date. Hence, we decided to add an additional question pertaining to endodontic anxiety to the questionnaire.

Method

Two hundred and thirty adult patients (above 18 years of age) were given the MDAS

questionnaire at OPD of Department of Conservative dentistry and Endodontics at DY Patil School of Dentistry, Navi Mumbai. Approval was obtained from the institutional ethical committee. Only patients who gave informed consent were included. Exclusion criteria included patients suffering from anxiety disorders or undergoing psychiatric treatment. The questionnaire was handed over to the patients for completion prior to being seen by the dentist. Questions were explained to some of the patients in their regional languages for their understanding. (Table 1)

Modified Dental Anxiety Scale consists of five questions. Each question was answered by the patient indicating whether they were not anxious, slightly anxious, fairly anxious, very anxious or extremely anxious. Simple scoring pattern (1-2-3-4-5) was assigned to these categories, with a high score denoting a high anxiety response. Items were summed to derive the total score. Total scores ranged from 5-25.^[1] A score above 19 indicated a highly dentally anxious, possibly a phobic patient.

Since the MDAS Questionnaire does not include anxiety to endodontic treatment, a separate question was added to the survey form.

Statistical Analysis

The association between response and different questions was tested using chi-square test. The Independent t-test and one way Analysis of variance (ANOVA) were used to study the difference in the group based on their mean total score. P-value of 0.05 was considered statistically significant. All the statistical analysis was done on the SPSS* (version 16) statistical software package.

Result

The survey completion was average with no missing values for the MDAS questionnaire. The

survey sampling was successful in retrieving participants from all adult age group and genders. Among the 230 adults, 125 were males and 105 were females. Statistical analysis showed significant association between anxiousness and the question asked (Table 2,3).

In table 2,3 individuals' item frequencies shows that majority of men and females were not anxious. The following readings were noted:

Male

Maximum males were not anxious for visit tomorrow (68.8%), at waiting room (52.8%), and for use of drill more men were slightly anxious (41.6%) followed by not anxious (35.2%). For scaling and polishing equal numbers were slightly anxious and not anxious (42.4%). Only 4 men showed extreme anxiety out of which 1 was for use of drill and 3 for injection which amounts to (2.4%)

Female

Maximum females were not anxious for visit tomorrow (69.52%), waiting room (51.43%), use of drill (47.62%). Equal numbers of female were not anxious and slightly anxious for scaling and polishing (44.76%). Only 6 females showed extreme anxiety out of which 2 for use of drill and 4 for injection which amounts to (3.81%).

Mean value according to score comparison was 8.65 in male and 7.97 in female (Table 4). Average anxiety was 8.34 which was less anxious. There was no significant association between age and dental anxiety.

Table 5 indicated anxiety to endodontic treatment across age and gender. Mean scores indicated fair to very anxious patients. Females showed marginally higher endodontic anxiety (mean 2.89) than males (mean 2.83). All age groups showed similar level of endodontic anxiety.

Discussion



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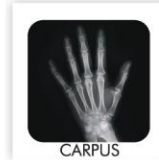
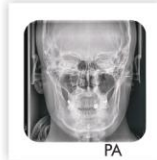
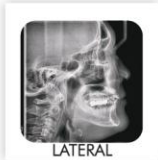


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Parameter	Description
Detector Structure	Low Noise Hybrid CMOS APS
Unique size	Size 1.5
Dimensions (in mm)	29.2 x 38.7 x 4.95
Active Area (in mm)	33 x 24
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This psychometric study assessed the dental anxiety of patients in and around Navi Mumbai across age and gender.

230 adults participated in this survey. The mean anxiety score was 8.34, which is classified as 'less anxious'. This score was lower than similar studies conducted in other Indian states^[3, 4, 5] and in some parts of the world^[6, 7]. This could be because the study was conducted in an urban milieu, with patients from a higher socio-economic strata. Also, the survey was conducted in a dental educational institute OPD, where all patients were dental patients. Posters and informative charts were displayed in the waiting halls thus clearing the patients' doubts. The patients' fears and anxiety may have been alleviated because of these factors.

Our study showed no difference in the anxiety levels between females and males. This is in agreement with studies carried out by Hawamdeh et-al, Berggren and Carlsson et-al.^[7, 8] The survey participants of both genders came from higher academic backgrounds. They had high levels of oral hygiene awareness. Both males and females were aware of the various dental treatment modalities, thus leading to similar anxiety levels. Other studies showed comparatively higher MDAS values in females

than in males^[3, 4, 9-17]

Anxiety level was also similar among different age groups. Similar results have been reported in other studies by Malvania et al and Udoye et al^[5, 18]. This could be attributed to high dental awareness in a metropolitan scenario which cuts across all age groups, thus giving similar anxiety levels. Other studies reported higher anxiety levels among younger age group^[3, 19, 20]

No other study has addressed the anxiety generated prior to endodontic treatment. An additional question was added to assess this. The results were similar to the earlier readings viz, there was no significant difference in anxiety level across gender and age for endodontic treatment. With more people preferring conservation of the tooth to extraction, endodontics is definitely becoming the popular option. However, the average anxiety score showed fairly anxious levels for endodontic treatment. Thus there is a need to increase peoples' awareness for endodontic procedures. The main reasons for endodontic anxiety are pain during and after treatment. The armamentarium, like endodontic files, irrigation needles and local anaesthesia also generate fear. In India, the term used colloquially for root canal treatment is

'removal of nerve of the tooth' which conjures extreme agony for the patient. Patients need to be reassured that their fears are unwarranted. The advent of new techniques and instruments like rotary files, crown down instrumentation, irrigation devices has greatly enhanced the quality of endodontic treatment. It has also made the procedures quicker and easier. An extensive pre-operative consultation can clear the patient's doubts and fears.

Conclusion

The findings of this study indicate that dental anxiety was low and not associated with age and gender. Endodontic anxiety was slightly higher amongst the subjects, though not associated with age or gender. These findings highlight the anxiety to endodontic procedures.

Dental clinicians, assistants and health care workers need to be sensitised to patients' anxieties. Proper pre-operative patient counselling, along with confident and sympathetic handling will go a long way in making a patient comfortable and reassured in a dental setting.

References: References are available on request at editor@healtalkht.com

Table 1:- MDAS QUESTIONNAIRE.

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

instructions for scoring (remove this section below before copying for use with patients)
 the modified Dental anxiety scale. each item scored as follows:
 Not anxious =1, slightly anxious =2, fairly anxious =3, very anxious =4, extremely anxious =5
 Total score is a sum of all five items, range 5 to 25. 5-9 less anxious, 10-18 moderately anxious, 19 or above extremely anxious or dental phobia.

Additional Question
 Q: If you were about to have an endodontic treatment, how would you feel ?
 Not Anxious slightly Anxious Fairly Anxious Very Anxious Extremely Anxious

		Visit Tomorrow		Waiting Room		Use of Drill		Scale and Polish		Injection	
		N	%	N	%	N	%	N	%	N	%
	Not anxious	86	68.80	66	52.8	44	35.2	53	42.4	52	41.6
	Slightly anxious	29	23.20	47	37.6	52	41.6	53	42.4	40	32
Male	fairly anxious	8	6.40	10	8	21	16.8	18	14.4	21	16.8
	Very anxious	2	1.60	2	1.6	7	5.6	1	0.8	9	7.2
	extremely anxious	0	0.00	0	0	1	0.8	0	0	3	2.4
	Total	125	100	125	100	125	100	125	100	125	100

Table 2:- Comparison of Response against question:(Males)

Chi square test P<0.05 ; statistically significant.



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		Visit Tomorrow		Waiting Room		Use of Drill		Scale and Polish		Injection	
		N	%	N	%	N	%	N	%	N	%
Not anxious		73	69.5	54	51.4	50	47.6	47	47.7	51	48.5
			2	3	2	6	7				
Slightly anxious		27	25.7	46	43.8	35	33.3	47	44.7	25	23.8
			1	1	3	3	6	1			
Fairly anxious		3	2.86	3	2.86	14	13.3	9	8.57	23	21.9
						3					0
Very anxious		2	1.90	2	1.90	4	3.81	2	1.90	2	1.90
Y anxious		0	0.00	0	0.00	2	1.90	0	0.00	4	3.81
Total		105	100	105	100	105	100	105	100	105	100
		5		5		5		5		5	

Table 3:- Comparison of Response against question:(Females)

P<0.05 Statistically significant

Table 4 :- Score comparison with respect to age and gender

		Score			
		N	Column N %	Mean	Standard Deviation
Age	18-29	105	45.7%	8.69	3.29
	30-39	37	16.1%	7.92	3.12
	40-49	56	24.3%	8.37	3.60
	50-59	15	6.5%	7.80	2.27
	60-69	15	6.5%	7.07	1.91
	70+	2	.9%	10.50	2.12
Gender	Male	125	54.3%	8.65	3.22
	Female	105	45.7%	7.97	3.21
	Total	230	100.0%	8.34	3.22

P>0.05 Not Significant

RCT					
		Count	Column N %	Mean	Standard Deviation
Gender	Male	125	54.3%	2.83	1.12
	Female	105	45.7%	2.89	1.97
Age group	18-29	105	45.7%	2.95	1.52
	30-39	37	16.1%	2.95	2.37
	40-49	56	24.3%	2.63	1.14
	50-59	15	6.5%	2.60	1.24
	60-69	15	6.5%	3.20	1.08
	70+	2	.9%	2.00	1.41

Table 5 :- Endodontic treatment anxiety comparison with respect to age and gender

P>0.05 Not Significant