

PREVALENCE OF DENTAL ANXIETY AMONG PATIENT ATTENDING OUTPATIENT DEPARTMENT IN DENTAL COLLEGE IN SOUTH INDIA

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Abstract:

Background:

Dental fear usually refers to a reaction to specific threatening stimuli occurring in situations associated with dental treatment, while dental anxiety is an excessive and unreasonable negative emotional state experienced by dental patients. Dental fear often creates problems in patient management, which in turn affects the quality of dental care. Dental anxiety is ranked fourth among common fears and ninth among intense fears. Dental anxiety is related to age, gender, educational qualification, socio economic status, culture and varies from person to person. The aim of this study is to understand the prevalence of dental anxiety among patients attending outpatient department in dental college.

Materials and methods:

The study was carried out among patients attending outpatient department in Saveetha dental college poonamalle, Chennai, India. 100 patients appointed for treatment during the month of December 2017 were included in the study, and their levels of anxiety were assessed through questionnaire. The consent of the patients were taken prior to the study. Questionnaires were given and the answers tabulated and analysis

Results:

Among moderate anxiety patients males were higher in number than female. 19 males were moderately anxious and 8 females were moderately anxious. Among high anxious patient females were higher in number. 7 males were high anxious and 10 females were high anxious. Among severe anxiety patients females were high in number than males. 2 males were severe anxious and 4 females were severe anxious.

Conclusion

Based on the results of our study we conclude that most of the patients most all the patient have dental anxiety, women are affected with more anxiety when compared to males extraction, root canal treatment, cost of dental procedures were with higher dental fears among both female and male x rays, gagging, numbness were the procedure that have low anxiety among patients. Aetiology is multifactorial hence identifying the source and level of anxiety may enable in deciding the suitable treatment.

Keywords: Anxiety, patient, dental procedures, fear, prevalence

Introduction:

Dental fear usually refers to a reaction to specific threatening stimuli occurring in situations associated with dental treatment, while dental anxiety is an excessive and unreasonable negative emotional state experienced by dental patients. Dental fear often creates problems in patient management, which in turn affects the quality of dental care. Dental anxiety is ranked fourth among common fears and ninth among intense fears. Dental anxiety is related to age, gender, educational qualification, socio economic status, culture and varies from person to person. [1,2]

Anxiety and fear towards dental treatment are common problems frequently experienced by patients worldwide. Despite the advances in technology, dental materials and increased oral health awareness, significant percentage of people are suffering from dental anxiety. Data availability regarding anxiety associated with various dental treatments and variations in different populations is scanty. If dentists are aware of the level of anxiety of their patients, they can anticipate the patient's behaviour and be better prepared to take measures to help alleviate the anxiety.[3,4]

There are different questionnaires available for assessing the dental anxiety. Multi item questionnaires are Corah's Dental anxiety scale (CDAS), Modified Dental Anxiety Scale (MDAS), Stouthard et al's Dental Anxiety Inventory, Spielberger State-Trait Anxiety Inventory, Gatchel's 10-point fear scale and Kleinknecht et al's Dental Fear Survey (DFS). Single-item questionnaires are a Seattle survey item, the Dental Anxiety Question, a Finnish single dental anxiety question, the visual analog scale and a single-item dental anxiety-and-fear question.[5,6,7,8]

Generally, the aetiology of dental fear is multifactorial. The exogenous origin of dental fear can be seen as acquisition of fear as a function of direct or vicarious experiences. These experiences might not be the causes of the fear, but they might also be responsible for the development of fear among patients who have endogenous vulnerability to anxiety disorders and multiple fears. [9]

Dental anxiety can arise due to multiple factors, such as previous negative or traumatic experience, learning from anxious family members or peers, individual personality characteristics such as neuroticism and self-consciousness, lack of understanding, exposure to frightening portrayals of dentists in the media, the coping style of the person, perception of body image, and the vulnerable position of lying back in a dental chair, pain, radiation, extraction. Anxiety can also be provoked by sensory triggers such as sights of needles and air-turbine drills, sounds of drilling and screaming, the smell of eugenol and cut dentine, and also sensations of high-frequency vibrations in the dental setting.[10,11]

Methods that can be used to reduce anxiety

- Relaxation training such as breathing, muscle relaxation
- Positive reinforcment
- Negative reinforcment
- Hypnosis
- Distraction
- Sedation
- Acupuncture
- Systemic desensitisation
- Explain the treatment using models,
- Behaviour shaping
- General anaesthesia[12,13,14]

Hence this study aims to understand the prevalence of dental anxiety among patient attending outpatient department in dental college in south India

MATERIALS AND METHODS:

PATIENT SELECTION

The study was carried out among patients attending outpatient department in Saveetha dental college poonamalle, Chennai, India. 100 patients appointed for treatment during the month of December 2017 were included in the study, and their levels of anxiety were assessed through questioner. The consent of the patients was taken prior to the study.

QUESTIONER:

Norman Corah's Dental Questionnaire [15, 16, 17]

1. If you had to go to the dentist tomorrow for a check-up, how would you feel about it?

- a. I would look forward to it as a reasonably enjoyable experience.
- b. I wouldn't care one way or the other.
- c. I would be a little uneasy about it.
- d. I would be afraid that it would be unpleasant and painful.
- e. I would be very frightened of what the dentist would do.

2. When you are waiting in the dentist's office for your turn in the chair, how do you feel?

- a. Relaxed.
- b. A little uneasy.
- c. Tense.
- d. Anxious.
- e. So anxious that I sometimes break out in a sweat or almost feel physically sick.

3. When you are in the dentist's chair waiting while the dentist gets the drill ready to begin working on your teeth, how do you feel?
- Relaxed.
 - A little uneasy.
 - Tense.
 - Anxious.
 - So anxious that I sometimes break out in a sweat or almost feel physically sick.
4. Imagine you are in the dentist's chair to have your teeth cleaned. While you are waiting and the dentist or hygienist is getting out the instruments which will be used to scrape your teeth around the gums, how do you feel?
- Relaxed.
 - A little uneasy.
 - Tense.
 - Anxious.
 - So anxious that I sometimes break out in a sweat or almost feel physically sick.

Scoring the Dental Anxiety Scale, Revised (DAS-R)

a = 1, b = 2, c = 3, d = 4, e = 5 Total possible = 20

Anxiety rating:

- 9 - 12 = moderate anxiety but have specific stressors that should be discussed and managed
- 13 - 14 = high anxiety
- 15 - 20 = severe anxiety (or phobia). May be manageable with the Dental

DENTAL CONCERNS ASSESSMENT*

Please rank your concerns or anxiety over the dental procedures listed below by ranking them on the accompanying scale. Please fill in any additional concerns.

	Level of Concern or Anxiety			
	Low	moderate	high	don't know
1. Sound or vibration of the drill	(1	2	3	4)
2. Not being numb enough	(1	2	3	4)
3. Dislike the numb feeling	(1	2	3	4)
4. Injection ("novocaine")	(1	2	3	4)
5. Probing to assess gum disease	(1	2	3	4)
6. The sound or feel of scraping during teeth cleaning	(1	2	3	4)
7. Gagging, for example during impressions of the mouth	(1	2	3	4)
8. X-rays	(1	2	3	4)
9. Rubber dam	(1	2	3	4)
10. Jaw gets tired	(1	2	3	4)
11. Cold air hurts teeth	(1	2	3	4)
12. Not enough information about procedures	(1	2	3	4)
13. Root canal treatment	(1	2	3	4)
14. Extraction	(1	2	3	4)
15. Fear of being injured	(1	2	3	4)
16. Panic attacks	(1	2	3	4)
17. Not being able to stop the dentist	(1	2	3	4)
18. Not feeling free to ask questions	(1	2	3	4)
19. Not being listened to or taken seriously	(1	2	3	4)
20. Being criticized, put down, or lectured to	(1	2	3	4)
21. Smells in the dental office	(1	2	3	4)
22. I am worried that I may need a lot of dental treatment	(1	2	3	4)
23. I am worried about the cost of the dental treatment	(1	2	3	4)
24. I am worried about the number of appointments	(1	2	3	4)
25. I am embarrassed about the condition of my mouth	(1	2	3	4)
26. I don't like feeling confined or not in control	(1	2	3	4)

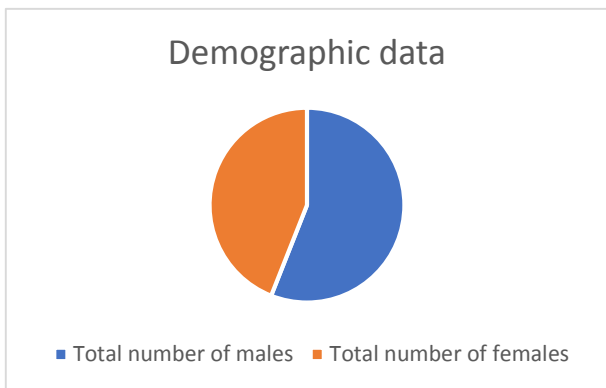
STATISTICAL ANALYSIS

All the data was collected and tabulated and mean average value was found using SPSS software.

RESULTS:

Total number of males	28
Total number of females	22

Table 1 depicts the demographic data

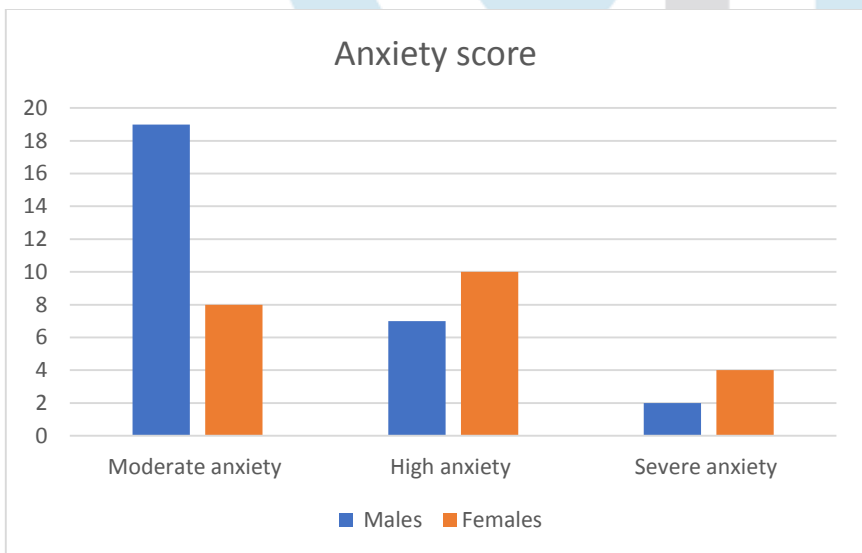


Graph 1: depicts the demographic data

50 patients were included in the study out of which 28 were male and 22 were female

Anxiety score	Males	Females
Moderate anxiety	19	8
High anxiety	7	10
Severe anxiety	2	4

Table 2: depicts the anxiety distribution among male and female



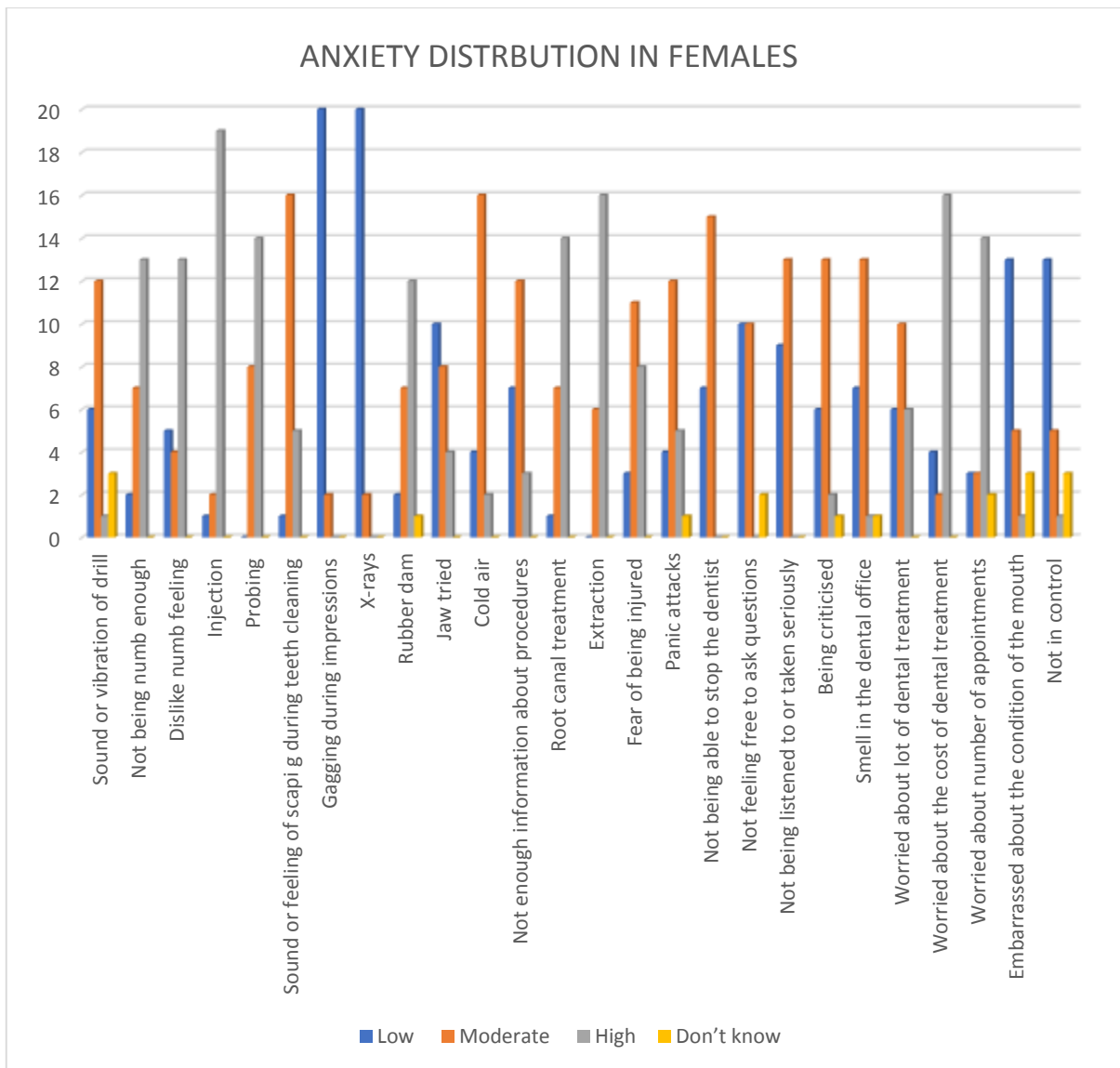
Graph 2: depicts the anxiety distribution among male and female

Among moderate anxiety patients males were higher in number than female. 19 males were moderately anxious and 8 females were moderately anxious. Among high anxious patient females were higher in number. 7 males were high anxious and 10 women were high anxious. Among severe anxiety patients females were high in number that male. 2 males were severe anxious and 4 females were severe anxious.

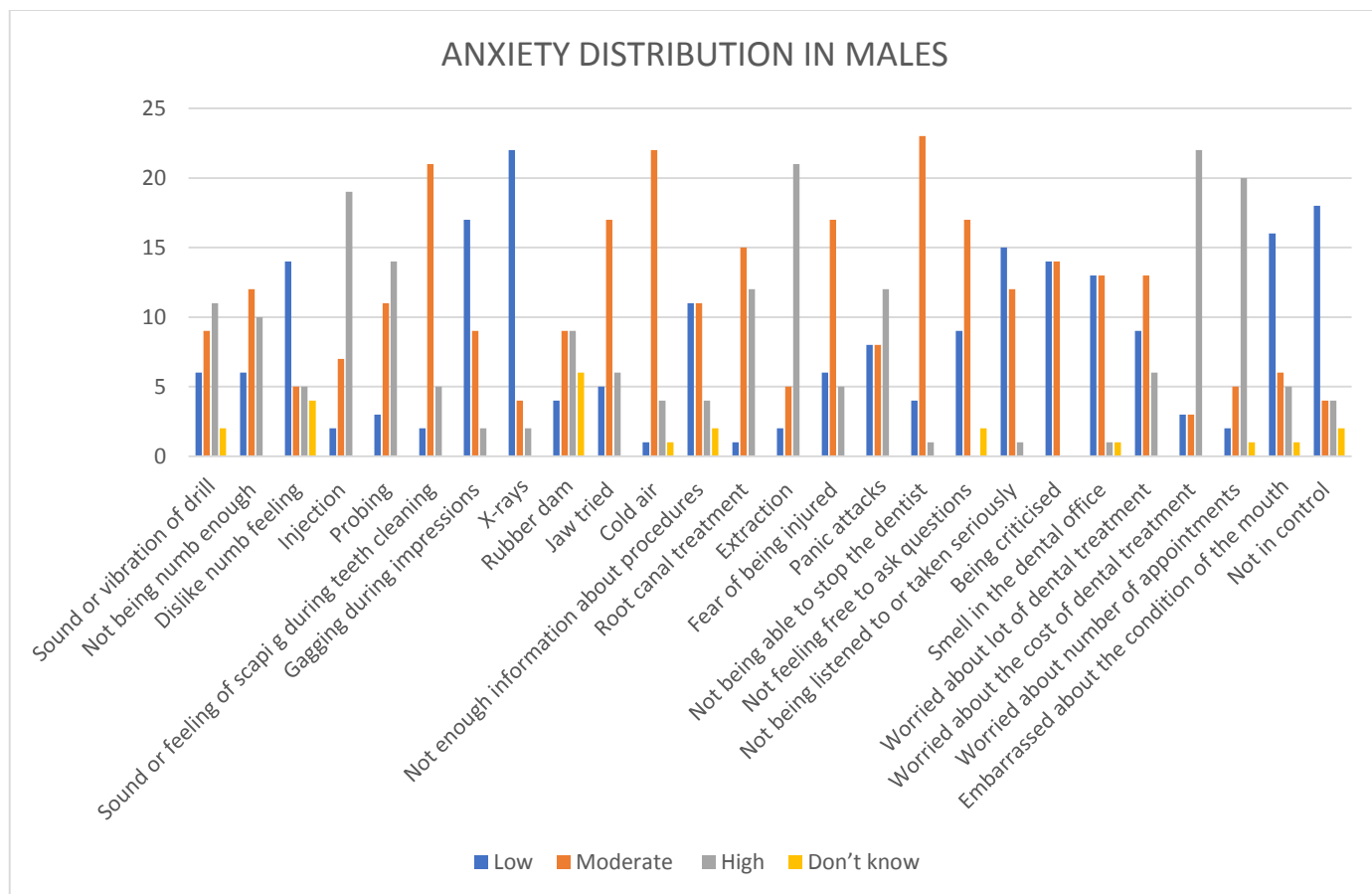
Table 3: response to the question by female and male patents

Question	Low		Moderate		High		Don't know	
	F	M	F	M	F	M	F	M
Sound or vibration of drill	6	6	12	9	1	11	3	2
Not being numb enough	2	6	7	12	13	10	0	0
Dislike numb feeling	5	14	4	5	13	5	0	4
Injection	1	2	2	7	19	19	0	0
Probing	0	3	8	11	14	14	0	0
Sound or feeling of scapi g during teeth cleaning	1	2	16	21	5	5	0	0
Gagging during impressions	20	17	2	9	0	2	0	0
X-rays	20	22	2	4	0	2	0	0
Rubber dam	2	4	7	9	12	9	1	6
Jaw tried	10	5	8	17	4	6	0	0
Cold air	4	1	16	22	2	4	0	1
Not enough information about procedures	7	11	12	11	3	4	0	2
Root canal treatment	1	1	7	15	14	12	0	0
Extraction	0	2	6	6	16	20	0	0
Fear of being injured	3	6	11	17	8	5	0	0
Panic attacks	4	8	12	8	5	12	1	0
Not being able to stop the dentist	7	4	15	23	0	1	0	0
Not feeling free to ask questions	10	9	10	17	0	0	2	2
Not being listened to or taken seriously	9	15	13	12	0	1	0	0
Being criticised	6	14	13	14	2	0	1	0
Smell in the dental office	7	13	13	13	1	1	1	1
Worried about lot of dental treatment	6	9	10	13	6	6	0	0
Worried about the cost of dental treatment	4	3	2	3	16	22	0	0
Worried about number of appointments	3	2	3	5	14	20	2	1
Embarrassed about the condition of the mouth	13	16	5	6	1	5	3	1
		18		4		4		2
Not in control	13		5		1		3	

Dental anxiety was high among female for injection followed by extraction , cost of the dental treatment . 86.3 % of the females were highly anxious for injection. 72% of the female were highly anxious for extraction and cost of dental procedures. 63 % were highly anxious for root canal treatment 72% of the females were anxious for cold air and the sound of scarping the teeth during cleaning. 68% of the females were moderately anxious for not being able to stop the dentist .59% were moderately anxious for about not being listen to , smell in the dental office and being criticised.. 90% of the female had low anxious level for x –rays and gagging during impression.



Graph 3 depicts the response of the male patient to the questioner



Graph 4: depicts the response of the female patient to the questioner

Males were high anxious injection followed by cost of the dental treatment, extraction , root canal treatment . 67% of males were high anxious for injection. 78% males were highly anxious for cost of the dental treatment and extraction. 71% were highly anxious for the number of appointments. 82%nof the males were moderately anxious for not able to stop the dentist . 78 .9% of the male patient were moderately anxious about cold air . 64% of the male patients were low anxious about not being in control.

Discussion:

The study was carried out among patients attending outpatient department in Saveetha dental college poonamalle, Chennai, India. 100 patients appointed for treatment during the month of December 2017 were included in the study, and their levels of anxiety were assessed through questioner. The consent of the patients was taken prior to the study. In the current study among moderate anxiety patients males were higher in number than female. 19 males were moderately anxious and 8 females were moderately anxious. Among high anxious patient females were higher in number.7 males were high anxious and 10 women were high anxious. Among severe anxiety patients females were high in number that male. 2 males were severe anxious and 4 females were severe anxious. These results were similar to the study done by Rasha salman, females were 58.0% anxious and males were 41.1% anxious .and study done by Devapriya, female participants and younger subjects were more anxious than men.[18,19]

In current study Males were high anxious for injection followed by cost of the dental treatment, extraction, root canal treatment. 67% of males were high anxious for injection. 78% males were highly anxious for cost of the dental treatment and extraction. 71% were highly anxious for the number of appointments. 82%nof the males were moderately anxious for not able to stop the dentist. 78 .9% of the male patient were moderately anxious about cold air. 64% of the male patients were low anxious about not being in control.

Dental anxiety was high among female for injection followed by extraction, cost of the dental treatment. 86.3 % of the females were highly anxious for injection. 72% of the female were highly anxious for extraction and cost of dental procedures. 63 % were highly anxious for root canal treatment. 72% of the females were anxious for cold air and the sound of scarping the teeth during cleaning. 68% of the females were moderately anxious for not being able to stop the dentist. 59% were moderately anxious for about not being listen to, smell in the dental office and being criticised.90% of the female had low anxious level for x –rays and gagging during impression.

These results were similar to the study done by Vijay lakshmi bolla 90% of the patients were highly anxious to extraction, root canal treatment, need lot of dental treatment , number of Appoinents, not being able to stop by the dentist . 85% of the patients were highly anxious to injection and cost of dental treatment. 80% of the patients were moderately anxious to scraping of the teeth during cleaning .75% of the people were moderately anxious for not knowing enough information about the procedure . 80% of the patients were low anxious for x rays and 60% for rubber dam.[20]

These results were also similar to the results obtained by Rasha salman. Female were high anxious that male for injection, 33% males were high anxious and 43% of female were high anxious .44% of males were high anxious for root canal treatment and 53% of female were high anxious. 34% of the males were high anxious about the cost of the dental treatment were as 29% of the females were high anxious about the cost of the dental treatment. [18]

Conclusion:

Dental fear often creates problems in patient management, which in turn affects the quality of dental care. Dental anxiety is ranked fourth among common fears and ninth among intense fears .Dental anxiety is related to age, gender, educational qualification, socio economic status, culture and varies from person to person .the aim of this study is to understand the prevalence of dental anxiety among patients attending outpatient department in dental college. Based on the results of our study we conclude that mostly all the patient have dental anxiety, women are affected with more anxiety when compared to males . women show more anxiety toward extraction, root canal treatment , and men show more anxiety toward cost of dental procedures . x-rays, gagging, numbness were the procedure that have low anxiety among patients. Aetiology is multifactorial hence sour indentifying the source and level of anxiety may enable in deciding the suitable treatment. Treatment and management for dental anxiety are relaxation training such as breathing, muscle relaxation, Positive reinforment, Negative reinforment, Hypnosis, Distraction, Sedation, Acupuncture , Systemic desensitisation, Explain the treatment using models, Behaviour shaping, General anaesthesia.

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