

The Prevalence of Anxiety and Fear in Dental Patients: A Short Study

Deepak Chaudhary, Shipra Saxena, Deviprasad Mahanta¹, Parul Yadav, Shoha H. Patel, Sarita Agarwal, Karandeep Singh Arora²

Departments of Oral and Maxillofacial Pathology and Microbiology and ¹Orthodontics and Dentofacial Orthopaedics, Daswani Dental College and Research Centre, Kota, Rajasthan, ²Department of Oral Medicine and Radiology, Bhojia Dental College and Hospital, Baddi, Himachal Pradesh, India

Abstract

Background: Dental anxiety and fear are the major complications for both patient and dental care providers. The purpose of this study was to assess the prevalence of dental anxiety and fear in patients visiting the dental institute with respect to their gender. **Materials and Methods:** In the present study, 100 patients were provided with certain questionnaire which included two sections. The first section concerning age, gender, educational level, frequency of dental visits, reasons for irregular attendance, and existence of past traumatic experience. The second section comprises modified dental anxiety scale. Data was collected and analyzed with respect to gender using the statistical analysis. **Results and Conclusion:** Anxiety-associated dental treatment is widespread in the study population. Dental anxiety was higher in women and in the patients with traumatic dental experiences.

Keywords: Anxiety, dental patients, fear, modified dental anxiety scale

Submitted: 25-Sep-2019; **Accepted:** 10-Mar-2020; **Published:** 21-May-2020

INTRODUCTION

Dental anxiety is a very common problem that can be quite unpleasant for the patient^[1] and interferes with the dental treatment.^[2] Individuals with high dental anxiety most of the time avoid treatment, delay it,^[3] or demand requests for assistance that can range from a short discussion with dental staff to general anesthesia.^[4] Additional risk factors for the development of dental fear include personality factors such as children expressing shyness or tendencies of negative emotionality.^[5,6] The amount and nature of dental anxiety varies from one individual to another. It has been recommended that with the help of psychometric measures, patient's dental anxiety can be assessed.^[7] There are numerous dental anxiety measurement scales for assessments. Most well-known adult questionnaire made to assess dental anxiety is the Corah's Dental Anxiety Scale (DAS).^[8] The DAS consists of four questions about different dental situations. Each question is scored from 1 (not anxious) to 5 (extremely anxious), and hence, the range of possible scores is 4–20. Significant anxiety is indicated for the score of 15 or more. Another popular anxiety scale is the modified DAS (MDAS),^[9,10] which consists of five questionnaires having score distributed as

one (nonanxious) and five extremely anxious. The score for each respective questionnaire is added. Cutoff is 19 or above indicates a highly dentally anxious patient, possibly dentally phobic.^[9] Dentists are not very use to analyzing individual responses to dental anxiety measures and thus do not prefer to adopt such a process. However, with practice and training, the inclusion of routine anxiety assessment may lessen the overall contact time between patient and dentist.^[11] Therefore, this study aims at assessing the level of anxiety in the study population according to gender.

MATERIALS AND METHODS

A total of 100 patients comprising 43 males and 57 female patients visiting the dental hospital were randomly selected for the study and were provided with the first section of MDAS questionnaire. The first section was concerned with age, gender, educational level, frequency of dental visits,

Address for correspondence: Dr. Karandeep Singh Arora, House No. 1078, Sector 19-B, Chandigarh (UT) - 160 019, India. E-mail: drkarandarora@yahoo.com

Access this article online

Quick Response Code:



Website:
www.ijds.in

DOI:
10.4103/IJDS.IJDS_112_19

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Chaudhary D, Saxena S, Mahanta D, Yadav P, Patel SH, Agarwal S, *et al.* The prevalence of anxiety and fear in dental patients: A short study. Indian J Dent Sci 2020;12:92-4.

reasons for irregular attendance, and existence of past traumatic experience. The second section comprises the MDAS and this section was not provided to the study group. Patients were asked to select a suitable option for each question and the form was submitted. For each questionnaire, patient scoring was added to give a total score for all five respective questions. Data were collected and analyzed with respect to gender using MDAS.

RESULTS

In the present study, male and female patients showed significant *P* value with anxiety scale [Table 1]; however, female patients showed a higher level of anxiety as compared to males in the study group having a mean anxiety score of 11.80 [Table 2].

DISCUSSION

The present study results were consistent with the study done by Neverlien in 1990, who assessed that women had significantly higher mean values on the data acquisition (DAQ) than men in all age groups, and for both genders, the mean DAQ values decreased with increasing age.^[12]

Settineri *et al.*, in 2005, studied the presence of dental anxiety in a group of 189 females and 176 males using the following scales: the DAS (divided into DAS 1 containing six items, which explores a patient's dental anxiety and DAS 2 containing 13 items, which looks at dental anxiety concerning dentist-patient relations), the self-rating depression scale (SDS), and the quality of life index (QL-Index). The results obtained showed significant differences only in relation to dental anxiety regarding the use of instruments (such as needles and handpieces) and the tilted-back position of the chair (DAS 1). There were no significant gender differences emerged between the two groups in relation to dental anxiety regarding dentist-patient relations (DAS 2), depression (SDS), and the quality of life (QL-Index).^[13]

Similarly, study by Berggren in 1992 reported women have high anxiety scores than men. The frequencies of extreme fears (6 and 7 on a 7-point scale) were high, and 92.7% of the patients reported at least one extreme fear.^[14] There are some studies which indicate that younger adults may show lower dental anxiety than their more middle-aged counterparts.^[9,15] Lehrner *et al.* reported that ambient odor of orange in a dental office reduces anxiety and improves mood in female patients.^[16]

SUMMARY AND CONCLUSION

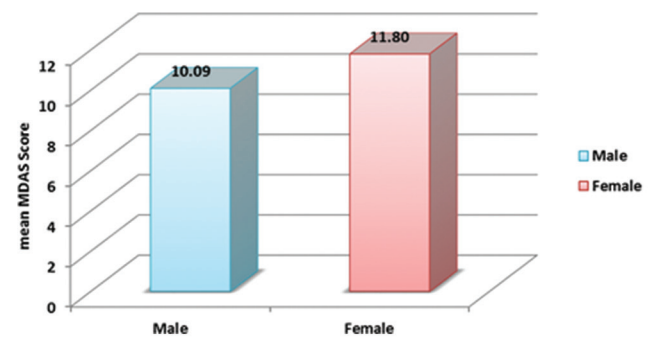
Anxiety may be described as an emotional state that is commonly present on a visit to the dentist and is more frequently associated with females than in males. The present study was carried out to assess the anxiety levels in patients with respect to gender. It showed that study patients showed significant levels of anxiety with respect to dental treatment, with females having a higher *P* value than males. The higher

Table 1: Frequency breakdown and N size for participant sample including modified dental anxiety scale mean standard deviation and percent ≥ 19

	<i>n</i> (%)	Mean	SD*	Percentage ≥ 19
Total	100 (100)	11.07	4.09	6.0
Sex				
Male	43 (43)	10.09	3.26	0.0
Female	57 (57)	11.80	4.51	6.0

**t*=2.012, *P*=0.0345 (significant). *SD: Standard deviation

Table 2: Graphical representation showing mean modified dental anxiety scale score in male and female



level of dental anxiety in females can be because of various conditions such as infrequent visits to the dentist, the long wait in the dental office, and previous traumatic procedure. This dental anxiety explains why women commonly avoid dental treatment. Certain measures such as reducing long waiting time and proper explanation of surgical procedure should be carried out by the dental office staff to reduce dental anxiety for female patients to motivate them for dental treatment and lessen dental anxiety.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Kleinknecht RA, Klepac RK, Alexander LD. Origins and characteristics of fear of dentistry. *J Am Dent Assoc* 1973;86:842-8.
2. Coldwell SE, Wilhelm FH, Milgrom P, Prall CW, Getz T, Spadafora A, *et al.* Combining alprazolam with systematic desensitization therapy for dental injection phobia. *J Anxiety Disord* 2007;21:871-87.
3. Haugejorden O, Klock KS. Avoidance of dental visits: The predictive validity of three dental anxiety scales. *Acta Odontol Scand* 2000;58:255-9.
4. Goumans C, Veerkamp JS, Aartman IH. Dental anxiety and behavioural problems: What is their influence on the treatment plan? *Eur J Paediatr Dent* 2004;5:15-8.
5. Venham LL, Gaulin-Kremer E. A self-report measure of situational anxiety for young children. *Pediatr Dent* 1979;1:91-6.
6. Klaassen M, Veerkamp J, Hoogstraten J. Predicting dental anxiety. The clinical value of anxiety questionnaires: An explorative study. *Eur J Paediatr Dent* 2003;4:171-6.

7. Dailey YM, Humphris GM, Lennon MA. The use of dental anxiety questionnaires: A survey of a group of UK dental practitioners. *Br Dent J* 2001;190:450-3.
8. Corah NL, Gale EN, Illig SJ. Assessment of a dental anxiety scale. *J Am Dent Assoc* 1978;97:816-9.
9. Humphris GM, Morrison T, Lindsay SJ. The modified dental anxiety scale: Validation and United Kingdom norms. *Community Dent Health* 1995;12:143-50.
10. Tunc EP, Firat D, Onur OD, Sar V. Reliability and validity of the modified dental anxiety scale (MDAS) in a Turkish population. *Community Dent Oral Epidemiol* 2005;33:357-62.
11. King K, Humphris G. Evidence to confirm the cut-off for screening dental phobia using the modified dental anxiety scale. *Soc Sci Dent* 2010;1:21-8.
12. Neverlien PO. Assessment of a single-item dental anxiety question. *Acta Odontol Scand* 1990;48:365-9.
13. Settineri S, Tati F, Fanara G. Gender differences in dental anxiety: Is the chair position important? *J Contemp Dent Pract* 2005;6:115-22.
14. Berggren U. General and specific fears in referred and self-referred adult patients with extreme dental anxiety. *Behav Res Ther* 1992;30:395-401.
15. Humphris GM, Dyer TA, Robinson PG. The modified dental anxiety scale: UK general public population norms in 2008 with further psychometrics and effects of age. *BMC Oral Health* 2009;9:20.
16. Lehrner J, Eckersberger C, Walla P, Pötsch G, Deecke L. Ambient odor of orange in a dental office reduces anxiety and improves mood in female patients. *Physiol Behav* 2000;71:83-6.