

Dental Fear And Anxiety In Different Gender Of Chennai Population

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Citation

S Natarajan, M Seenivasan, R Paturu, Q Arul, T Padmanabhan. *Dental Fear And Anxiety In Different Gender Of Chennai Population*. The Internet Journal of Epidemiology. 2009 Volume 9 Number 1.

Abstract

Gender differences in dental fear have been of increasing interest among clinicians and researchers and dental fear is a common obstacle to obtain dental care. People with high dental fear have poorer oral health and often suffer significant social and psychological impacts associated with their oral state. People with dental phobia may also suffer from a variety of anxiety disorder, mood disorder, personality and behavioral disorders as well as from multiple other specific fears. One measure of dental fear captures the aspect of state anxiety more while another measure emphasizes the aspect of trait anxiety. This study examines the gender differences of dental fear among the Chennai population across a broad range of relevant factors, including biological influences, temperamental factors, stress and trauma, cognitive factors, and environmental factors. Gender differences are observed with increasing consistency as the scope of analysis broadens to molar levels of functioning. Socialization processes cultivate and promote processes related to anxiety, and moderate gender differences across levels of analysis.

INTRODUCTION

Dental fear, anxiety, and phobia have consistently been reported as widespread problems that persist despite the technological advances that have made dentistry less painful and less uncomfortable. It is well documented that dental fear has a significant impact on dental care utilization behaviours (1,2,3) The consequences of dental fear on oral health outcomes have been reported in many studies. In general, dental fear is associated with the oral health status, poorer oral health related quality of life (4), and compromised psycho- social health, such as lower self esteem and lower morale (1).

Dentally anxious patients take longer to treat and often fail to keep their appointments (1) mid elder women Severely fearful patients as well as patients not seeking dental care before have significantly poorer oral status (5,6) Furthermore, acute conditions and treatments make both patient and dentist subject to more stress and significantly less satisfied with the dental care performed (7,8) McGrath and Bedi (4) reported that people with the poorest oral health related quality of life were most commonly found among those with high levels of dental anxiety. Schuller et al (9) indicated that compared with persons with low dental fear, persons with high dental fear had a higher number of decayed tooth surfaces, decayed teeth, and missing teeth but

a lower number of filled and sound teeth (10) Similarly, Hagglin et al (10) noted that high dental anxiety was associated with a high number of missing teeth.

BACKGROUND OF THE STUDY

Self-report measures of dental fear are commonly used to permit quick assessment of the degree of dental fear experienced by patients. Since there can be cultural differences in various anxiety disorders, including dental fear (11), it is important to develop measures appropriate for different cultural groups.

AIMS AND OBJECTIVES

1. To assess the degree of dental fear and anxiety among different gender of south Indian population.
2. To establish a comfortable patient –dentist relationship which helps in framing out a better treatment plan.

The assessment of anxiety is important for two reasons

1. To provide evidence based research into the psychological constraint which has been showed to predicted dental avoidance.
2. To assist the dentist in the management of anxious

patients successfully and efficiently.

MATERIALS AND METHODS

A verbal survey was undertaken of a randomized sample trial of about 550 adults aged above 18 years and that included 332 males and 218 females; After getting a verbal opinion, a written consent was also obtained from those who were willing to participate in the survey. The sample included the patients, who visited the Department of Prosthodontics and Implantology for the first time as an OP (outpatient) case to Sri Ramachandra Dental College & Hospital, Sri Ramachandra University, Chennai, South India.

This study which lasted for three months from May 2009 to August 2009 included the above mentioned sample size. Few Resident Interns were trained as interviewers and scorers for the survey by the investigator prior to data collection. The questionnaire is usually self-administered but in this survey the participants were interviewed instead. This is because the participants came from different educational levels and some may not be able to comprehend the questionnaire. The face-to-face interview was conducted in privacy to minimize biased responses. General dental fear among different gender was assessed with single five point Likert rating scale with alternatives – “1) Not at all afraid, 2) A little afraid, 3) Fair amount afraid, 4) Very much afraid, 5) Extremely afraid”

The statistical significance of the gender difference between means was evaluated with the t – test. No funds have been received for this particular study.

STATISTICAL ANALYSIS

The data was analyzed by SPSS (version 10) software using Pearson’s chi square test, a P value of <0.05 was considered to be significant. Mean scores, standard deviation and internal consistency were calculated for the total sample and for gender separately. We perform an initial m-ANOVA to analyze group difference.

RESULTS

Figure 1

Table 1: COMPARISON OF MEAN TOTAL SCORE BETWEEN GENDERS

	Gender	N	Mean ± S.D.	P-value*
Total	Male	332	17.4 ± 4.7	0.03 (Significant)
	Female	218	18.5 ± 4.9	

N - Number of samples

S.D – Standard Deviation

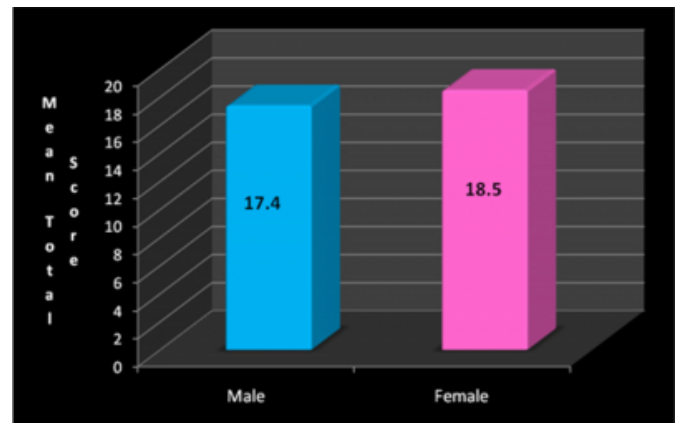
*Kruskal Wallis One Way ANOVA was used to calculate the P-value.

§ Mann-Whitney U – Test followed by Bonferroni Correction method was employed to identify the significant groups at 5% level.

Overall the mean total score value of fear for females (18.5 ± 4.9) is significantly higher than the mean value for males (17.4 ± 4.7) and Pearson chi square value is (0.03).

Figure 2

GRAPH – 1: COMPARISON OF MEAN VALUE OF DENTAL FEAR BETWEEN MALE AND FEMALE OF CHENNAI POPULATION



DISCUSSION

Dental fear is a normal protective reaction to a real threat and the feeling of fear does not remain when the threat is no longer present. Dental anxiety on the other hand is more of a subjective state of feeling that is often associated with a feeling of danger. Unlike fear, the feelings of anxiety are often felt when a stimulus or threat is not immediately present or readily identifiable. (WEINER and SHEEHAN 1984, 1988, CHAPMAN and KIRBY-TURNER 1999)

Gender differences in dental care utilization and dental fear have been frequently reported in literature. An interesting

and consistent finding from the previous studies is that females generally have more dental visits, are more likely to be regular dental attenders and have better compliance with dental appointments and better oral hygiene practices than males (12,13,14,15) despite the fact that dental fear is more prevalent and severe among females (9,16,17) It was suggested that gender difference in dental care utilization and oral health might be affected by factors other than the gender differences in dental fear (20)

Researchers such as CHAPMAN and KIRBY-TURNER (1999) suggest that there is a relationship between general and dental anxiety. It should be borne in mind that the origins of dental anxiety are numerous and complex and have been shown in other parts of the world to be associated with a, irregular attendance pattern, history of extractions, having a dentally anxious parent and is also related to memory distortions and personality types. (kiribat) Highly anxious dental patients tend to overestimate the intensity of aversive dental events even if they have never experienced the particular experience before (van wijk and Hoogstraten)

Many researchers (12,13,14,15,19) report that women have more regular dental visiting patterns and engage in more dental care seeking behaviors than men, although the prevalence and level of severity of dental fear are higher among women. Skaret et al (18) noted that the predictors of dental care use might be different for women and men, with men's behavior being more likely to be affected by their attitudes toward dental care and oral health. The results in the current paper indicate that there is a significant difference in dental fear and anxiety among the different gender of Chennai population and it is found to be slightly greater in females than in males.

In Indonesia and Argentina males report higher anxiety than females. (Tsubouchi et al, 1990). Studies that have used DAS have generally found that little gender differences in dental anxiety exist. (Scott et al, 1984, Peretz and Moshonov 1998) However lack of national data covering a wide range of age groups, differences in measurement and categorization of dental anxiety make it difficult to make direct comparisons.

A Likert scale is a psychometric scale (20) commonly used in questionnaires, and is the most widely used scale in survey research. When responding to a Likert questionnaire item, respondents specify their level of agreement to a statement. The scale is named after its inventor, psychologist Rensis Likert (21).

A Likert item is simply a statement which the respondent is asked to evaluate according to any kind of subjective or objective criteria; generally the level of agreement or disagreement is measured. Often five ordered response levels are used (22) For each question of likert scale the participants select a response from five possible options that ascend in their level of anxiety. Each question can hence have a minimum score of one and a maximum score of five. The limitation of this study is that it included comparatively a smaller sample size and these samples were also randomly selected and they were also of different age groups and educational levels.

CONCLUSION

Through this study it is revealed that it is possible to identify the dentally fearful patients either through the use of questionnaires or by taking of a psychological history at the first visit. These individuals need to be treated in ways to minimize the risk of aggravation of dental anxiety.

The fear and anxiety of an individual could affect the patient-dentist relationship and the dental treatment plan; Therefore, before starting up with the dental treatment, patients anxiety and fear levels should be assessed and a proper counseling should be given in the initial visit itself. The findings of this study can assist in understanding the extent of this problem and subsequently appropriate measures can be undertaken to overcome this obstacle in future. However this study did not focus on the major possible causes for the anxiety or the variety of different treatments and other factors that may influence anxiety.

References

1. Locker D. Psychosocial consequences of dental fear and anxiety. *Community Dent Oral Epidemiol* 2003; 31; 144-51.
2. Hagglin C, Hakeberg M, Ahlqvist M, Sullivan M, Berggren U. Factors associated with dental anxiety and attendance in middle aged and elderly women. *Community Dent Oral Epidemiol* 2000;28;451-60
3. Skaret E, Raadal M Kvale G, Berg E. Factors related to missed and cancelled dental appointments among adolescents in Norway. *Eur J Oral Sci* 2000;108;175-83.
4. McGrath C, B edi R. The association between dental anxiety and oral health related quality of life in Britain. *Community Dent Oral Epidemiol* 2004; 32; 67-72.
5. Locker D, Liddell A. Clinical Correlates of dental anxiety among older adults. *Community Dent Oral Epidemiol* 1992; 20; 372-5.
6. Hakeberg M, Berggren U, Grondahl HG. A radiographic study of dental health in adult patients with dental anxiety. *Community Dent Oral Epidemiol* 1993; 21;27-30.
7. Locker D, Liddell AM. Correlates of dental anxiety among older adults. *J Dent Res* 1991;70;198-203
8. Dixon GS, Thomson WM, Krueger E. The west coast study. Itself reported dental health and the use of dental services. *N Z Dent J*1999;95;38-43.

9. Schuller AA, Willumsen T, Holst D. Are there differences in oral health and oral health behavior between individuals with high and low dental fear?. *Community Dent Oral Epidemiol* 2003;31;116-21
10. Hagglin C, Berggren U, Hakeberg M, Ahlqvist M. Dental anxiety among middle aged and elderly women in Sweden. A study of oral state, utilization of dental services and concomitant factors. *Gerodontology* 1996; 13;25-34.
11. Good BJ, Kleinman AM: Culture and anxiety: cross-cultural evidence for the patterning of anxiety disorders. In *Anxiety and the Anxiety Disorders*. Edited by: Tuma AH, Maser J. Hillsdale NJ: Lawrence Earlbaum; 1985:297-323.
12. Manski RJ, Moeller JF, Maas WR. Dental services – an analysis of utilization over 20 years. *J Am Dent Assoc* 2001-132;655-64.
13. Manski RJ, Gold Farb MM, Dental utilization for older Americans aged 55 -75. *Gerodontology* 1996;13;49-55
14. Mac Entee MI, Stolar E, Glick N. Influence of age and gender on oral health and related behavior in an independent elderly population. *Community Dent Oral Epidemiol* 1993;21;234-9.
15. Davidson PL, Rams TE, Anderson RM. Socio behavioral determinants of oral hygiene practices among USA ethnic and age groups. *Adv Dent Res* 1997; 11; 245-53.
16. Holtzman JM, Berg RG, Mann J, Berkey DB. The relationship of age and gender to fear and anxiety in response to dental care. *Spec Care Dentist* 1997; 70;82-7.
17. Settineri S, Tati F, Fanara G. Gender differences in dental anxiety; Is the chair position important? *J Contemp Dent Pract* 2005;6:115-22.
18. Skaret E, Raadal M, Kvale G, Berg E. Gender based differences in factors related to non utilization of dental care in young Norwegians. A longitudinal study. *Eur J Oral Sci* 2003;111; 377-82.
19. Steele JG, Walls AW, Ayatollahi SM, Murray JJ. Dental attitudes and behavior among a Sample Of dentate older adults from three English Communities. *Br Dent J* 1996;180;131-6.
20. Wuensch, Karl L. (October 4, 2005). "What is a Likert Scale? and How Do You Pronounce 'Likert?'". East Carolina University. <http://core.ecu.edu/psyc/wuenschk/StatHelp/Likert.htm>. Retrieved April 30, 2009.
21. Likert, Rensis (1932). "A Technique for the Measurement of Attitudes". *Archives of Psychology* 140: 1–55.
22. Dawes, John (2008). "Do Data Characteristics Change According to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales". *International Journal of Market Research* 50 (1): 61–77.

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