



RESEARCH ARTICLE

THE PREVALENCE AND CAUSES OF DENTAL FEAR AMONG HEALTH SECTOR EMPLOYEES AND PUBLIC SECTORS DENTAL CLINIC VISITORS AT AL-THGAR GENERAL HOSPITAL IN JEDDAH, K.S.A

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ABSTRACT

Background: Dental Fear is a serious issue that negatively affect oral health. Early detection of the causes of fear is essential to solve this issue. **Objective:** This study aims to evaluate the prevalence and various causes of Dental Fear among Saudi health sector employees, including dentists and other health specialties and public sectors dental clinic visitors at Althgar general hospital in Jeddah , K.S.A **Methods:** This study was a cross-sectional questionnaire survey, based on a structured questionnaire that was developed by the authors. The sample size was estimated with a confidence level of 95%; a sample size of 200 was estimated. The inclusion criteria included participants ≥ 18 years old, who lived in Jeddah, Saudi Arabia, both males and females. Those who were under the age of 18 years, non-residents of Jeddah, Saudi Arabia were excluded. Written informed consent was obtained from each participant. If a patient could not read and sign the consent form, we defined him as illiterate and was excluded from the study. **Results:** Age is not a significant factor in increasing the prevalence of dental fear. However, there is a statistically very significant difference between males and females regarding dental fear (p-value 0.0000017). As female have fear from dental clinic visit more than male. The percentage of fear is more in the public group of dental clinic visitors than medical group. The most common cause of dental fear during the dental appointment is dental needle. Which was reflected as a complaint of increased heart palpitation. **Conclusion:** Health awareness and education play a key role in which they motivate people to seek dental services and preserve their oral condition in a health appearance.

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INTRODUCTION

Irrational fear from dentists in excessive and pathological condition known as dental phobia (DF), which can develop at any age. ⁽¹⁾ Dentophobia is also known as dental fear. It is a common phobia that is widely prevalent among the patient and considered a major problem in its management. ⁽⁶⁾ It has been recognized as a public health problem in many countries. ⁽⁷⁾ Dental Fear is very common; they found that about 10% to 20% of the adult population in the western industrialized region report high DF. ⁽³⁾ One study reports that more than 80% of the population in the United States fear dental treatment and 20% avoids the dentist due to severe dental fear. ⁽²⁾ In a cross-sectional study they evaluated dental phobia among pregnant women in Dhahran, Khobar, and Dammam in Saudi Arabia, the prevalence of dental phobia has been estimated to be high. ⁽⁴⁾ Another study estimated the level of dental fear among the Saudi population to be 36.4%. ⁽⁵⁾ Dental Fear has many causes such as, past dental experiences, pain, influence of

family members, personality, dental providers techniques, behaviour of provider, environmental factors (such as clinic atmosphere and the sight of blood), dental Injection and the sound of dental drills. ⁽⁴⁾ So, it is complex and multifactorial. ⁽¹⁾ Odontophobia has a negative effect on oral health, because most of patients avoid visiting the dentist even with severe gingival disease. ⁽¹⁾ So, early detection of the cause of fear can solve this problem. ⁽¹⁾ Education can influence attitudes toward dental treatment and lead to more positive behaviour toward treatment ⁽⁸⁾. Currently, there are no data on the levels and causes of dental fear among Saudi health sector employees, including dentists and other health specialties and public sector dental clinic patients at governmental hospital in Jeddah , K.S.A. Therefore, this study aims to evaluate the prevalence and various causes of odontophobia among Saudi health sector employees, including dentists and other health specialties and public sector dental clinic visitors at Althgar general hospital in Jeddah , K.S.A

MATERIAL AND METHODS

This study was a cross-sectional questionnaire survey based on a structured questionnaire that was developed by authors. The questionnaire was pre-tested on a pilot group of 10 participants and was adjusted. The participants included in the pilot study were excluded from the study. The targeted population was among Saudi health sector employees, including dentists and other health specialties and public sector dental clinic visitors at Althgar general hospital in Jeddah. The sample size was estimated with a confidence level of 95%; a sample size of 200 was estimated. The inclusion criteria included participants of ≥ 18 years old, participants who lived in Jeddah, Saudi Arabia, both males and females. Those who were < 18 years old, or/and non-residents of Jeddah, Saudi Arabia were excluded. Informed consent was signed by all participants. If a patient could not read and sign the consent form, they will be defined as ineligible and not included in the study. The questionnaires were translated from English to Arabic to be easily understandable by all participants and distributed among the study population using electronic surveys via google forms; participants were notified about the purpose of data collection, and anonymity of the survey. The questionnaire included two sections. Section A Included Three demographic questions including (Age, gender and Occupation). Section B included nine questions with multiple choice answers and one elaboration. The participants were asked about their fear from the dental clinic visit, causes of fear of the dentist, and if there were family members suffering from fear of the dentist. Also, they were asked about the date of the last visit and avoidance of dental visits. Data was entered on the computer using the "Microsoft Office Excel Software" program (2016) for windows. Data was then transferred to the Statistical Package of Social Science Software (SPSS) program, version20 (IBM SPSS Statistics for Windows, Version 20.0.Armonk, NY: IBM Corp.) to be statistically analyzed. Data were presented using mean and standard deviation for quantitative variables and frequency and percentage for qualitative ones. A comparison between groups was performed using the Pearson Chi-square test. p values less than 0.05 were considered statistically significant.

RESULTS

A total of 200 participants responded to our survey; the authors divided them into two equal groups based on their occupation (medical and non-medical) and then further divided each group to two equal sub-groups depending on the gender, so half of the participants [100 (50%)] were medical (25 participants male and 25 participants females) and [100 (50%)] were non-medical (25 participants male and 25 participants females). Their ages ranged from 18 to 60 years with equal participant ages in each subgroup. Our results reported that the majority of the participants showed a low level of fear and discomfort before their dental appointment (Figure 3)- (Figure 6). Among the participants who had dental fear, 49% of them were in the medical field and 51% weren't with no statistical significance found between the two groups in the prevalence of dental fear (p-value 0.885) (Figure 1). Regarding the prevalence of dental phobia among different genders, the females showed higher prevalence of dental phobia than males in each group with a statistically very significant difference (Figure 2). On the contrary, there was no significant difference regarding the prevalence of fear and the participants' age.

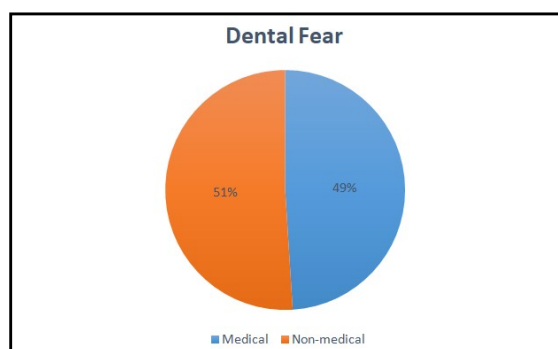
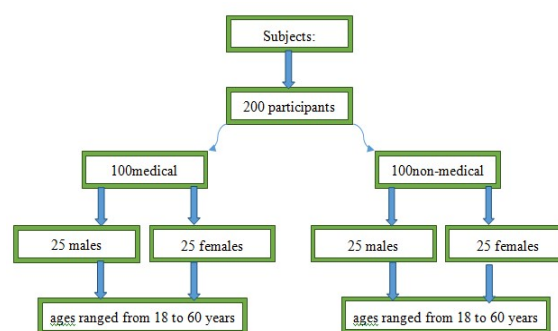


Figure 1. Prevalence of dental fear in relation to occupation

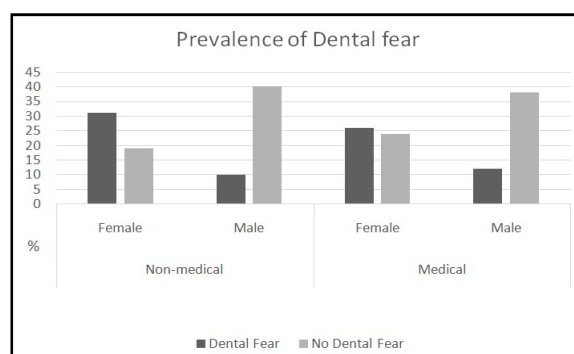


Figure 2. Compare the prevalence of dental fear among occupation and gender

A comparison between medical and non-medical participants revealed several key differences regarding dental fear and related behaviors. When comparing feelings before a dental appointment between medical and non-medical participants, both groups showed similar levels of discomfort and fear. However, a slightly higher number of medical participants felt relaxed and happy about the treatment compared to the non-medical group. Conversely, more non-medical participants expressed indifference than medical participants (Figure 6). These results suggest that while dental fear exists in both groups, medical participants may approach dental treatment.

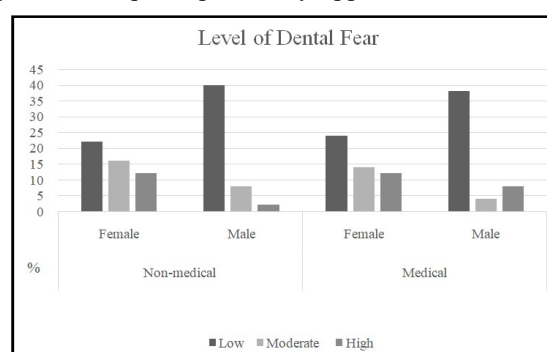


Figure 3. Level of dental fear among the occupations and gender

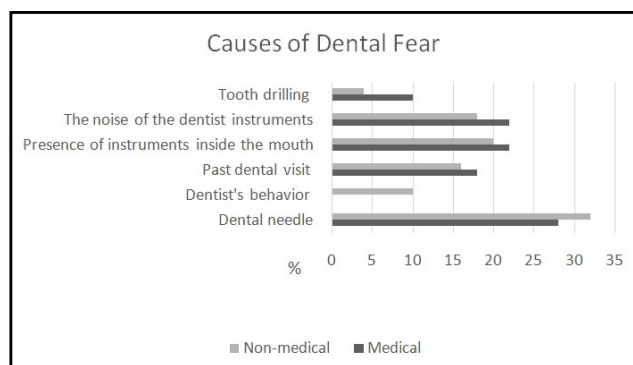


Figure 4. Causes of dental fear among the participants' occupations

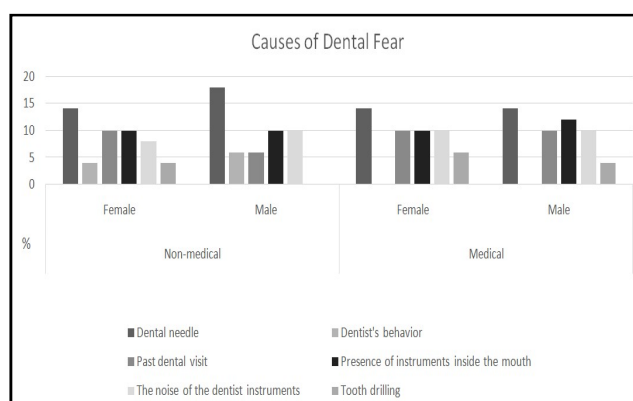


Figure 5. Causes of dental fear among occupations and gender

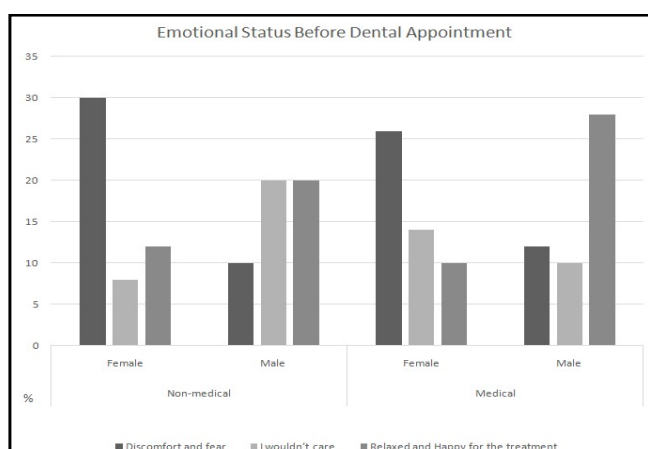


Figure 6. Emotional status before dental treatment among occupation and gender

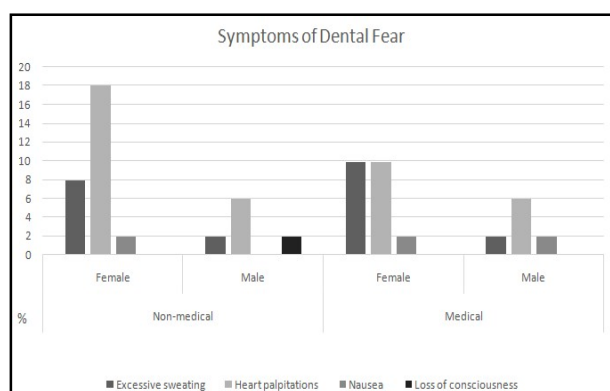


Figure 7. Symptoms of dental fear among the participants' occupation and gender

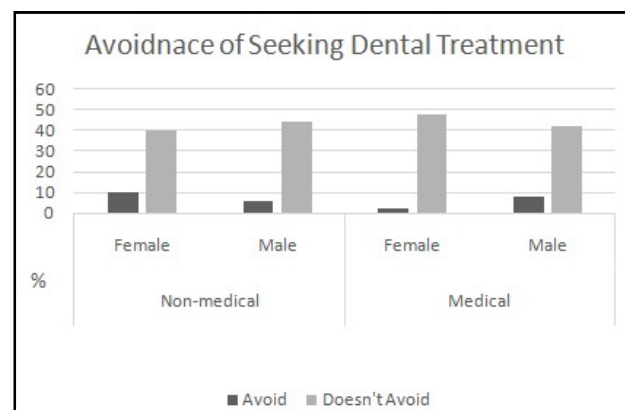


Figure 8. Dental Treatment of dental fear participants in relation to their occupation and gender

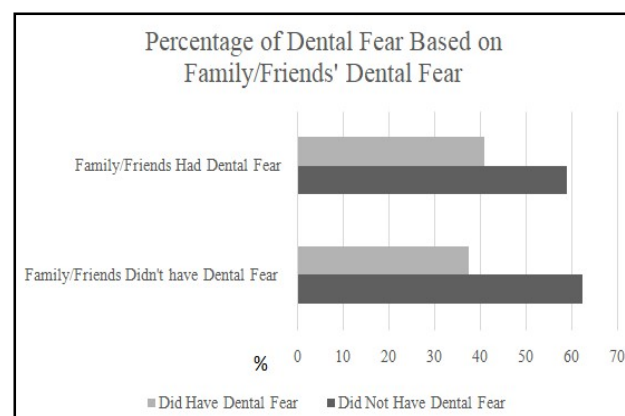


Figure 9. Dental fear and the role of family's fear in their fear

with slightly more confidence or positivity, likely due to their familiarity with clinical environments. When analyzing the causes of dental fear, both groups most frequently cited the dental needle as the primary reason. Medical participants were more likely to report fear due to tooth drilling and the noise of dental instruments. In contrast, non-medical participants uniquely reported dentist behavior as a cause of fear. Other factors, such as past dental visits and the presence of instruments inside the mouth, were similarly reported by both groups (Figure 4)- among gender (Figure 5). The most experienced symptom in subjects with dental fear was heart palpitation during the dentist's appointment and some of them complained about excessive sweating and shortness of breath (Figure 7). Dental fear among the participants in the study did not prevent them from seeking dental treatment (Figure 8). An analysis of the relationship between participants' dental fear and whether their family or friends also experienced dental fear revealed minimal differences. Among participants whose family or friends did not report dental fear, 37.5% experienced dental fear themselves. In comparison, 40.9% of those with a family or friend who had dental fear also reported personal fear. Although the percentage is slightly higher among those with fearful relatives or friends, the difference was not statistically significant ($p = 0.730$). This suggests that in this sample, having a relative or a family member with dental fear does not have a strong influence on whether an individual develops similar anxiety (Figure 9).

DISCUSSION

The percentage of fear from visiting the dentist varies around the world. The prevalence of DF in our study was found to be

54%. Prevalence was higher among the non-medical participants (51%) than medical participants (49%). In this study, the prevalence of DF was higher among females than males, this results of prevalence of dental fear in our study is consistent with the findings described in previous studies⁽⁹⁾. Several previous studies reported that there was an inverse relationship between age and levels of DF, as they reported that the prevalence of dental fear among the young participants was higher than in old participants due to increased exposures over time, allowing patients to develop a tolerance to treatment. In the present study, age was found to be a non-significant factor. This may be explained by the targeting of ages of 18 years and older. Also, awareness and education regarding oral and dental health by the Ministry of Health and easy access to educational information via social media. Early detection of the causes of fear is essential to overcome this issue. DF has several causes and is considered complex and multifactorial. Our findings indicate that dental injection was the most contributing factor in DF, these results matched with that of Taani et al⁽⁹⁾.

Our research study has proven that the fear of visiting the dentist among the target group in our study is low and does not prevent them from visiting the doctor and receiving treatment, also it must be noted that our research study shows that participants with DF mostly complain from heart palpation. Everyone is afraid of the unknown. Social media and health education about the importance of visiting the dentist can alleviate a person's fear of visiting the dentist. Constant education programs for dentists should motivate them to help individuals overcome their fear, explaining the procedure sufficiently and providing them with correct pain management. Furthermore, dentists should remember to increase their knowledge of prevention in dental hygiene rather than restricting their dental treatment. Again, dentists should actively participate in community programs aimed at promoting oral health and reducing dental fear. Constant education programs for dentists can also help them effectively address patients with mild form of dental fear. The limitations of the study include a small sample size and using a self-administered questionnaire, which could be biased as there are chances that the patients may over or underestimate their responses that may influence dental fear⁽⁹⁾.

CONCLUSION

This cross sectional study confirmed that the fear of visiting the dentist is higher among female than male. Also age is not a reason for fear as much as awareness and education about the importance of visiting the dentist and dental procedures.

The results showed that the percentage of fear differed in health sector people in compare to outside medical field, and the odontophobia increases among people outside medical field, this may be due to the proximity to the field of dentistry, also the awareness and education of the health sector people. Results showed that the most common cause of dental fear during the dental appointment is dental needle and most of the people complain of increased heart palpitation due to their dental appointment. The study showed that health awareness and education play a key role in reducing dental fear among the subjects which allow them to seek dental services and preserve their oral condition in a good and healthy appearance.

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