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Original Research Article

Dental fear among the school going-children of Taif, Saudi Arabia

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ABSTRACT

Background: Dental fear is a phenomenon that is founded in most of the populations weather the individual is a child or an adult. Objectives were to understand the aspects and the percentages of dental fear among school going children and determine the nature of dental fear in children and to assess the prevalence of dental fear in school going children of Taif city, Suadi Arabia.
Methods: Participants were the school children of Taif city, Saudi Arabia. The Children's fear survey schedule – dental subscale (CFSS-DS) was used that was obtained from an online article with a similar topic and it was in Arabic language. The questionnaire forms were distributed to the school going children and responses collected from them at the end of each school visit.
Results: The study included 303 school-aged children. It was discovered that the statement with the highest mean indicating that the child is very afraid was: "Are you afraid of the dentist's drill?" (1.84±1.17). The statement with the lowest mean indicated that the child was not afraid: "Are you afraid of people in white clothes?" (1.18±0.69). The mean CFSS-DS score was 22.05±9.44. According to the CFSS-DS score classification cutoff, 19 (6.3%) of the studied children had dental anxiety.
Conclusions: The most feared aspect was the dentist drilling followed and the least feared aspect was people in white coat, with a prevalence of 6.3% of dental anxiety among studied children.

Keywords: Dental, Fear, School, Children, Taif, Saudi

INTRODUCTION

Fear the noun as we find in dictionary means a distressing emotion aroused by impeding danger, pain, whether the threat is real or imagined.[1] Dental fear is defined as a subjective state of feeling or reaction to a dental source of danger such as needles or hand pieces.[2] It is well known that fearful and anxious patients are generally uncooperative during dental visits. This can frequently cause a lower pain threshold to develop and lead to the cancellation of appointments.[3]

Regarding fear of dental treatment, it was found to cause the formation of a vicious cycle leading to future delay of dental treatment, with a deterioration in oral health, which consequently reinforces the dental fear.[4]

It is a unique problem with multifactorial etiology affecting all age groups.[5,6] The environment of the dental clinic, stress-induced while undergoing any procedure, cognitive abilities of the individual, parental attitudes, and cultural practices have been found to have some influence on DFA.[7] Dental fear and anxiety can limit the utilization of oral health services, which in turn affect early detection and management of the disease.[8] Dental fear and anxiety among children is not only frustrating for the child and their family but challenging for the dentist as well. Very often, the planned treatment procedures have to be deferred due to behavior management issues.[9] Children have relatively limited communication skills and are less able to express their fears and anxieties.[10] Children's inability to cope with threatening dental stimuli often manifests as behavior management problems. Early recognition and

management of this dental fear is the key to delivering effective dental treatment to the child patient.[10] Different studies conducted in different countries have reported that the prevalence of DFA to be 12.5% in Canada, 12.6% in Russia, 13.5% in France, and16.1% in Australia.[11-14] As for studies conducted in Saudi Arabia, it was reported that DFA prevalence among adults was 27 to 51%.[15,16] There is no previous research in causes of dental fear among school going children in Taif city, Saudi Arabia.

This study aimed to assess dental fear among school going children and the prevalence of dental anxiety in Taif city, Saudi Arabia.

METHODS

Study design, setting and time frame

This was a descriptive cross-sectional study done in Taif City, Saudi Arabia from February to May 2022. Taif City, Saudi Arabia and Taif city located at an elevation of 1,879 m (6,165 ft) in the slopes of the Hejaz Mountains, which themselves are part of the Sarawat Mountains, the city has a 2020 estimated population of 688,693 people, making it the 6th most populous city in the kingdom.

Study participants

The inclusion criteria were 303 school going children aged 6-18 years.

Data collection

The study questionnaire was the children's fear survey schedule (CFSS-DS) that was adapted from the CFSS-DS English version [4] and translated into Arabic language by a native speaker. The item 12 (“choking”) was improved by addition of “entrance of something into the throat”. In item 15 the word (“nurse”) was replaced by (“dentist”) because in Arabic communities the dentist is responsible for the cleaning procedure of the teeth.

Questionnaires were distributed to the participants and the study aim was explained to the guardian and the participants. Each week there was a school visit by the researchers and consent forms were taken orally from the children guardians which were the school principals and the class teachers and the verbal approvals were taken from the participant children. Questions were explained to the children and the children were instructed to rate their fear according to the scales in the questionnaire. The approximate time to fill the questionnaire was about 6-8 minutes and then collected by the researchers. The CFSS-DS consists of 15 items related to different aspects of dental treatment which were scored as follows: not afraid=1; a little afraid=2; fairly afraid=3; quite afraid=4; and very afraid=5. Total scores thus ranged from 15 to 75. Children with CFSS-DS ≥38 was defined as dentally anxious.[5,6]

Statistical analysis

Data were entered and analyzed using statistical package for the social sciences (SPSS) version 26. Qualitative data was expressed as numbers and percentages and quantitative data was expressed as mean and standard deviation (mean±SD).

RESULTS

The study included 303 school going-children. Their responses to the CFSS-DS 15 items are illustrated in (Table 1). As for quite afraid and very afraid answers, it was found that 4.9%, 3.7% and 9.9% of children were quite or very afraid of dentists, doctors and needle injections respectively. Of them, 3.3% would be quite or very afraid and hide if someone examined your mouth. In addition, 3.3%, 4% and 3.6% were quite or very afraid to open their mouth during treatment, being touched by a stranger and look at them as someone respectively. Almost 10% (10.9%) and 8.3% were quite or very afraid of the dentist's drill and when they see the dentist digging Wallace respectively. At the same time, 5.6%, 8% and 9.6% of children were quite or very afraid of mature teeth digging, of putting tools in your mouth and of entrance of something into the throat respectively. Only 2.6% were quite or very afraid of going to the hospital, 3% were quite or very afraid of people in white clothes and 3.4% of having your teeth cleaned by a dentist. It was found that the statement that had the highest mean indicating that the child is very afraid of was: " Are you afraid of the dentist's drill?" (1.84±1.17). While the statement that had the lowest mean indication that the child not afraid was: "Are you afraid of people in white clothes?" (1.18±0.69). The mean CFSS-DS score was 22.05±9.44. Based on the CFSS-DS score classification cutoff, 19 (6.3%) of studied children were dentally anxious (Figure 1).

Table 1: Distribution of studied participants according to their responses to the CFSS-DS items (n=303).

CFSS-DS items	Not afraid=1	A little afraid=2	Fairly afraid=3	Quite afraid=4	Very afraid=5	Mean±SD
Are you afraid of dentists?	218 (71.9)	61 (20.1)	9 (3)	7 (2.3)	8 (2.6)	1.44±0.87
Are you afraid of doctors?	247 (81.5)	40 (13.2)	5 (1.7)	2 (0.7)	9 (3)	1.3±0.8
Are you afraid of needle injections?	185 (61.1)	66 (21.8)	22 (7.3)	9 (3)	21 (6.9)	1.73±1.16
Would you hide if someone examined your mouth?	251 (82.8)	29 (9.6)	13 (4.3)	4 (1.3)	6 (2)	1.3±0.78

Continued.

CFSS-DS items	Not afraid=1	A little afraid=2	Fairly afraid=3	Quite afraid=4	Very afraid=5	Mean±SD
Are you afraid to open your mouth during treatment?	240 (79.2)	45 (14.9)	8 (2.6)	2 (0.7)	8 (2.6)	1.33±0.79
Are you afraid of being touched by a stranger?	225 (74.3)	51 (16.8)	15 (5)	3 (1)	9 (3)	1.42±0.87
Are you afraid to look at you as someone?	255 (84.2)	30 (9.9)	7 (2.3)	3 (1)	8 (2.6)	1.28±0.79
Are you afraid of the dentist's drill?	164 (54.1)	76 (25.1)	30 (9.9)	13 (4.3)	20 (6.6)	1.84±1.17
Are you afraid when you see the dentist digging Wallace?	181 (59.7)	67 (22.1)	30 (9.9)	10 (3.3)	15 (5)	1.72±1.09
Are you afraid of mature teeth digging?	193 (63.7)	68 (22.4)	25 (8.3)	7 (2.3)	10 (3.3)	1.59±0.97
Are you afraid of putting tools in your mouth?	188 (62)	64 (21.1)	27 (8.9)	12 (4)	12 (4)	1.67±1.05
Are you afraid of entrance of something into the throat?	164 (54.1)	88 (29)	22 (7.3)	15 (5)	14 (4.6)	1.77±1.08
Are you afraid to go to the hospital?	156 (84.5)	31 (10.2)	8 (2.6)	4 (1.3)	4 (1.3)	1.25±0.69
Are you afraid of people in white clothes?	275 (90.8)	17 (5.6)	2 (0.7)	2 (0.7)	7 (2.3)	1.18±0.69
Are you afraid of having your teeth cleaned by a dentist?	259 (85.5)	28 (9.2)	6 (2)	5 (1.7)	5 (1.7)	1.25±0.72

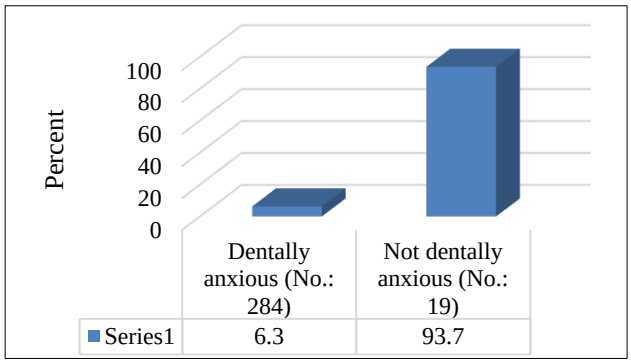

Figure 1: Percentage distribution of the participants according to the prevalence of dental anxiety based on the CFSS-DS score classification (n=303).

DISCUSSION

DFA remains one of the biggest obstacles a dentist faces when treating a patient, even with the advancement of technology in dentistry.[20] It is well established that children who have greater DFA levels are more likely to have poor oral health and untreated dental caries.[21] Furthermore, youngsters are more susceptible to DFA as a result of invasive dental operations. The dentist must determine the variables that can lead to DFA and adjust the intended treatment plan in order to foster a positive attitude about dental care.[22] This study aimed to assess dental fear among school-aged children and the prevalence of dental anxiety in Taif City, Saudi Arabia. The current study discovered that the dentist drilling was the most terrifying aspect, while people wearing white coats were the least frightening. The average CFSS-DS score was 22.05±9.44, with 6.3% of the children experiencing dental anxiety. Alshoraim et al conducted a study on 1522 boys and girls in Jeddah, Saudi Arabia, to assess dental fear among Arabic-speaking children aged 12 to 15. The study found a total mean CFSS-DS score of 25.99±9.31, which is similar to the current study.[23] This mean score was lower than those found in previous Saudi studies.[24,25] However, our mean score is comparable to previous studies, which reported similar scores around 22.1.[26-29] Other studies have found higher scores in their populations, ranging from 37.8 to 45.9.[30,31] The disparity in dental fear among children in Arabic-speaking countries and developed countries could be attributed to differences in the organization of dental health care systems.[32] Previous studies found similar results in terms of the most feared item, with "dentist drilling" being the most feared item reported by children.[33-35] The high scores on these items across cultures suggest that children have similar concerns about specific dental procedures, even if the overall DF severity varies.[33] Specifically, the sight, sound, and vibration of rotary drills as well as the sensation of local anesthetic injections were found to be powerful dental anxiety triggers in Nepal.[36] Nonetheless, children's dread of "injections" was greatest in the majority of the studies.[37,38] There isn't a specific explanation for how DFA develops in youngsters or what causes it. Numerous research has suggested that DFA may result from a variety of circumstances, including age, sociocultural background, prior dental experiences of parents and siblings, or personal experiences.[39,40] The prevalence of dental fear in the present study (6,35) is lower than that observed in international studies (12.5% in Canada, 12.6% in Russia, 13.5% in France, and 16.1% in Australia).[11-14] The disparity in DFA between developed and Arabic-speaking nations may be related to cultural and systemic organizational variations in healthcare delivery. While the majority of children in developing nations only seek dental care when they are in pain, preventive

measures are prioritized more in wealthy nations than therapeutic ones.[23]

Limitations

A limitation of the present study was the use of a self-administered questionnaire that could have a recall bias.

CONCLUSION

According to the findings of this study, 6.3% of the children studied experienced dental anxiety. The dentist drilling was the most terrifying aspect, while people in white coats were the least frightening. Pediatric dentists should be encouraged to make the child's dental experience pleasant. Furthermore, school health programs should be designed to familiarize children with dentistry, and appropriate treatment modalities should be provided to make the child feel comfortable seeking dental care.

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