

Original Research Article

Dental anxiety among medical field students in University of Hail, Saudi ArabiaManal Ammash Assaf Alshammery¹, Mohammed Essa Mohammed Alhumaid², Gada Saad Eid Alnejeem³,
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Abstract: Dental anxiety is one of the primary causes of avoidance of dental treatment. The adverse effect of such avoidance will be reflected in the oral health and lead to dental caries and periodontal diseases with consequences of early loss of teeth. In Saudi Arabia, there is a high rate of dental caries as well as needs of oral health care. However, factors those contribute in DA remains largely unstudied. One hundred fifty nine students were interviewed using the Corah's Dental Anxiety Scale, Revised (DAS-R) to assess the dental anxiety in the students at the University of Hail at medical field colleges. Data collection was obtained from students of medical field colleges e.g. Dentistry, Medicine, Pharmacy, and Nurse and applied Sciences College through electronic web-based data entry. DA were present in 49.7 % of the total sample. Most of the anxiety level is moderate and dental phobia among this student was 5.5 %. Field of the study was associated significantly with the degree of DA. Dental students had a lower level of DA and Pharmacy student experienced highest DA score compared to other colleges. Half of participant experience some level of dental anxiety. Most of the anxiety level are moderate where the stressor should be identified and deal with it. Furthermore, dental health education measures are required for the university students and the general population to address dental anxiety and thus improve patient dental attitudes and compliance.

Keywords: Dental anxiety, University of Hail, Oral health

INTRODUCTION

Dental anxiety, phobia and fear are terms that used interchangeable most commonly among patient and even among dentist. Anxiety defined as a nonspecific feeling of apprehension towards a concrete situation that does not necessarily require previous experience and is not proportional to the response that triggered in the individual [1].

On the other hand, Dental anxiety defined as a patients 'specific response towards dental situation-associated stress [2]. It considered as one of the primary reasons for avoidance of dental care which result in oral health negligence. Moreover, it is directly associated with poor oral hygiene [3].

It occurs in people of any age and social status. Some studies showed that the most common age 25-26-year-olds that experience higher dental anxiety. This can be attributed to the psychological factors in this age group that can induce dental anxiety, where students constitute a large part of this age group [4].

Several studies have demonstrated that dental anxiety varies from group to group [5]. Female tend to be affected by dental anxiety more often than male [6]. This trend could be explained by emotional stress conditions which are more common in females. However, other studies failed to demonstrate such relationship [7].

Furthermore, previous experiences have been considered as important factor that affects dental anxiety. This experience can be in the form of a field of the study or previous dental visit. According to Al-Omari, Studies on dental anxiety in students related to dental fields may help to understand if education can make changes in their attitude towards dental treatment, as dental health education is an integral part of their curriculum. Taken this point in consideration, Kirova shows that dental student at the beginning of their training have a higher level of dental anxiety than at the end, concluding that education and awareness affect favorably dental anxiety [8].

To evaluate DA, several scales were developed. One of the most common used scales is Corah's Dental Anxiety Scale (DAS), which have been shown its effectiveness, simplicity, and reliability [9]. This scale is consisting of simplified 5-points. Different modifications have been made to this scale. Of these is Corah's Dental Anxiety Scale, Revised (DAS-R) [10].

Data collection in any survey is very crucial. The traditional methods including face to face, telephone interview, and printing methods have been decreased dramatically with the emerge of electronic web-based data entry in the late 1990s [11]. The advantages of electronic over traditional methods are speed, wideness, ease, and cost-effectiveness. However, the disadvantage of this approach is the lack of internet

access for some students or a low Levels of Computer Skills Proficiency[12].

The present study aims to investigate the dental anxiety in the students at the University of Hail at medical field colleges e.g. Dentistry, Medicine, Pharmacy, Nurse and applied sciences college using Corah's Dental Anxiety Scale, Revised (DAS-R).

MATERIAL AND METHODS

Dental anxiety was assessed using Corah's Dental Anxiety Scale, Revised (DAS-R) (10). This scale is consist of a simplified 5-point scale answering scheme was divided ranging from not anxious to extremely anxious. The Corah's Dental Anxiety Scale, Revised (DAS-R) contains four multiple-choice items. Table (1)

Table-1: The Corah's Dental Anxiety Scale, Revised (DAS-R).

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?	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.
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?	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.

The scores for each of the 4 item responses were summed up to give an estimated value of dental anxiety. The questionnaire was distributed to the undergraduate medical Field students which include the following colleges: dental, medical, medical applied, pharmacy

Three hundred electronic questionnaires were circulated to the students. Descriptive statistics were obtained, and the means, standard deviation, and frequency distribution were calculated. Group comparisons were analyzed using two-tailed Student's t-tests as well as one-way analysis of variance (ANOVA) test.

A statistical significance considered was based on the probability values of p= 0.05. Furthermore, Anxiety rating was as follow: 9 - 12 = moderate anxiety but have specific stressors that should be discussed and Managed, 13 - 14 = high anxiety and 15 - 20 = severe anxiety (or phobia).

RESULTS

Out of two hundred emaildistributed, 159 were respond, which accounts for a response rate of 79.5 %. The mean age of the subjects was 21.62+- 1.73 years with a minimum of 19 and maximum of 29. The total anxiety scoring was 9.1.

The distribution of the participants according to gender is present in figure [1]. Forty-four percentages were male, and 56% were female.

The overall prevalence of DA was (49.7%), but severe anxiety (phobia) was low (5.5 %) figure[2].

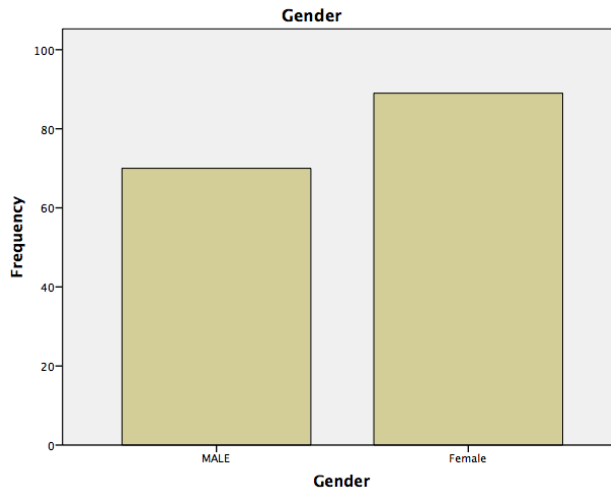


Fig-1: Male to female ratio

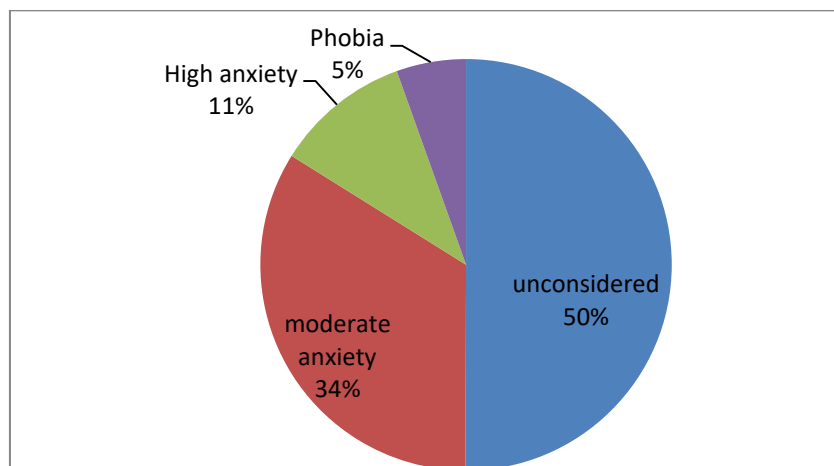


Fig-2: The prevalence of DA among study population

Male was relatively more anxious than female were 47.1% and 52.8% were unconsidered respectively. Female, in their respond to all question, were less

concerned than men. However, such gender variation was not statistically significant table (2).

Table-2 :The prevalence of DA according to gender.

		anxiety Rating			
		unconsidered	moderate anxiety	High anxiety	Phobia
Gender	MALE	%47.1	37.9 %	11.42 %	4.28 %
	Female	%52.8	31.46 %	10.11 %	5.6 %

The anxiety rating of the (DAS-R) based on the field of study. Dental students were significantly less anxious compared to the other specialty. The second most less troubled student was medical student followed by applied medical sciences and nurses with a

total anxiety score of 8.4, 8.8 and 9.6 respectively. The most anxious student was from the college of pharmacy with a score of 11.3. This relashiship is statistically significant with a P-value of 0.04. Table (3)

Table 3: Anxiety rating according to Specialty

		anxiety rating			
		unconsidered	moderate anxiety	High anxiety	Phobia
Specialty	Medicine	52.3%	33.3	9.5	4.7
	Dentistry	94.2%	2.8	2.8	0
	pharmacy	13%	56.5	13	17.4
	Applied medical sciences	42.1%	36.8	15.9	5.2
	Nursing	28.5%	57.1	14.2	0

Out of the anxiety scale questions, the highest anxiety was given for waiting while the dentist gets the drill ready to begin working on their teeth. This was achieved by Dentistry, Medicine, Pharmacy, and applied sciences college students. The nurse students

were more anxious about having teeth cleaned while waiting in the waiting area. This relationship is highly statistically significant with a P-value of 0.001. Figure (3).

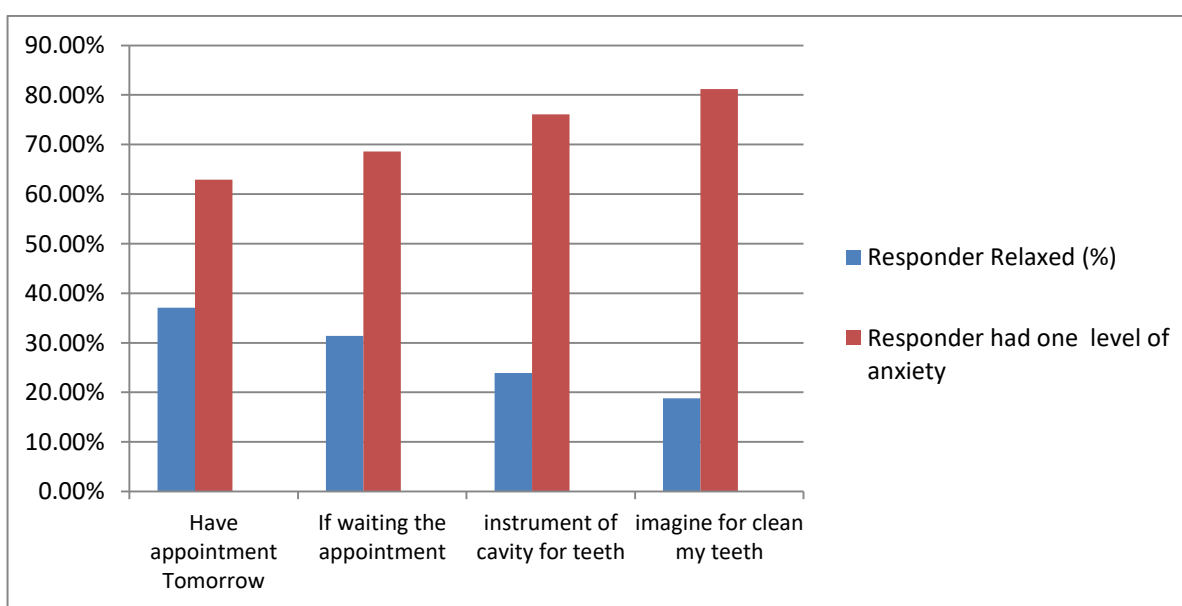


Fig-3: The question and the Responder answers.

DISCUSSION

Oral health is one of the major health problems worldwide. The prevalence of children, as well as adults dental caries, increased at an alarming rate according to a review by Bagramian in 2009(13). Moreover, in Saudi Arabia, a high caries rate has been reported in all age groups [14]. It may be worth to know the effect of some stressor factors on DA and their effect in different groups. These particular stressors should be identified before starting the dental treatment, discussed and manage for a successful dental treatment. The information can be utilized in developing the strategies to manage patient anxiety [15].

The present study evaluates the stressors in the form of gender, field of the study and dental procedure and its effect on dental anxiety levels. The results suggest that half of the participants (49.7 %) are anxious towards some dental treatment and (5.5%) with dental phobia. Literature from Saudi Arabia in Jazan among Dental College and Medical College showed

that 64% of responders were having some level of DA [16].

Regarding the effect of gender on dental anxiety, some previous studies reported that females were having higher DAS values than males [17,18,19]. In contrast, Ozdemir et al. found higher anxiety scores of males than females [20]. However, in the present study, there was no statistically significant different based on gender, and the difference in anxiety scores was minimal (52 % of male and 47.1% of the female has some degree of anxiety). This finding is in agreement with some researchers, where they have found no direct effect of gender on dental anxiety [21].

In the literature, Gerry Kent concludes that the anxiety is more likely to occur during drilling and extraction treatments than during a check-up or scaling [22]. Furthermore, Inamdar et al. found that 89% of respondents were having some level of anxiety when participants were asked about the dental procedure was

done to them[16]. This finding is similar to this study where the levels of anxiety are high for procedures i.e. when dentist gets the drill ready to begin working on teeth.

Many authors had highlighted the important of previous experiences on the dental anxiety level. This experience can be in the form of previous dental visit or the field of study [23]. The results of this study indicate that the dental students are less anxious than other students with high statistically significant difference table [4].

The results of this study suggest that the dental students are less anxious than other students with high statistically significant difference table[4]. Moreover, the pharmacy student showed the highest level of anxiety where 17.4% of them demonstrate a dental phobia. This may be explained by the fact that their course lack any dental related subject and they are the least student exposed to patients during their undergraduate training. On the other hand, dental students exposed to dental health education and more patients. Involvement of student in efficient dental health education may govern mitigation of the effect of stress and personality factors on dental anxiety [4].

The dental management in a patient with dental anxiety needs gentle and supportive, professional approach [24]. Furthermore, behavioral therapy was found to be acceptable and effective methods for treatment of dental fear [25].

CONCLUSION:

Evaluation of anxiety levels in the dental and other medical field students of this study suggests that half of them are anxious towards some dental treatment. Also, it demonstrates that most of the anxiety level are moderate where the stressor should be identified and deal with it.

For the time being, educational dental curricula evaluation and accordingly, dental health education measures are require for the university students and the general population to address dental anxiety and thus improve patient dental attitudes and compliance. Further epidemiological studies are needed to investigate the effect of different correlates among the general population and other factors related to dental anxiety.

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