

**Original Research****THE PREVALENCE OF DENTAL PHOBIA AMONG THE POPULATION IN RIYADH CITY**

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## ARTICLE INFO



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## ABSTRACT

**Aim:** To investigate the prevalence of dental phobia and its related factors in a sample of local population of Riyadh city, Kingdom of Saudi Arabia. **Methods :**A cross-sectional survey was conducted among a sample of 300 local population of Riyadh city, KSA. Using a Modified Dental Anxiety Scale (MDAS). Dental Fear Scale (DFS) was utilized to identify specific fear stimuli and reactions. Data was analyzed using SPSS. The Fisher's exact test was used alongside the Chi-square test. **Results:** The top three dental phobia reported by the participants are 'I'm more concern about teeth pain' (n=209, 79.1%), 'I'm worried about feeling pain after dental treatment' (n=196, 72.8%), and 'I had too much pain in my previous visits' (n=172, 60.9%). Females were more likely to have dental phobia than males and this association was statistically significant (p<0.05). **Conclusion:**The study concluded that dental phobia was more prevalent among females. Dental phobia may result in routine dental care being postponed, negatively affecting their oral health.

**Introduction**

Dental anxiety at all levels of intensity has been reported in up to 50% of subjects and often results in total avoidance of dental treatment. Irregular dental attendance, or poor cooperation with care providers.<sup>1</sup>Dental anxiety may cause management problems during dental treatment and either partial or total avoidance of treatment. These behavioral problems may lead to reduced dental health. Dental phobia is a psychological condition with a multi-factorial etiology. Among phobias, dental phobia was the most common (3.7%).<sup>2</sup>A review estimated a prevalence of dental phobia of 10–14% based on numerous sources.<sup>3</sup>

A study in Australia reported high dental phobia although prevalence estimates are highly dependent on both the scale and cut-points used.<sup>4</sup>Two studies have examined the prevalence of dental fear among adolescents 18 years of age and between the ages of 13-15 years, respectively. They reported that the presence of previous painful events and direct conditioning plays a major role in the etiology of severe clinical fear.<sup>5-6</sup> The aim of this study was to investigate the prevalence of dental phobia and its related factors in a sample of local population of Riyadh city, Kingdom of Saudi Arabia (KSA).

**Materials and methods**

A cross-sectional survey was conducted among a sample of 300 local population of Riyadh city, KSA.

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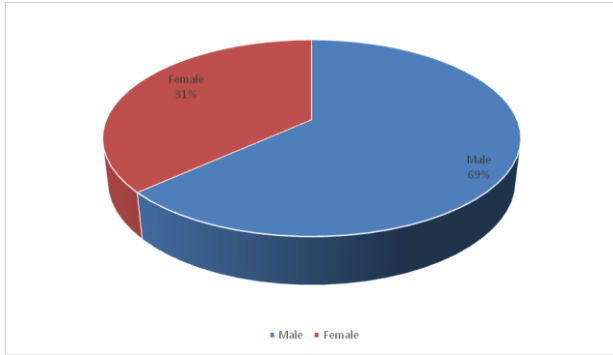


Figure 1. Distribution of gender (n=300)

Modified Dental Anxiety Scale (MDAS) was used as overall strategy of assessment.<sup>7</sup> Each question has five scores ranging from not anxious to extremely anxious in an ascending order from one to five. Dental Fear Scale (DFS), a well-established scale to identify specific fear stimuli and reactions was utilized.<sup>8</sup> The scale, based upon a behavioral approach consists of 20 items; each question has five answer alternatives rating each item from high (5) to low (1) intensity of reaction.

The data collected was entered into Statistical Package for the Social Sciences (SPSS), Version 22 for Windows. A descriptive study which was followed by inferential statistics was conducted. Frequency and percentages were calculated for both quantitative and qualitative sets of data. The Fisher’s exact test was used alongside the Chi-square test. A p value of ≤ 0.05 was considered as statistically significant. The data was presented in tables generated in Microsoft Excel and Word applications.

**Results**

Table 1 and Figure 2 shows the demographic characteristics of the participants. The top three dental phobia reported by the participants are ‘I’m more concern about teeth pain’ (n=209, 79.1%), ‘I’m worried about feeling pain after dental treatment’

		Frequency (n)	Percentage (%)
<b>Age (n=300)</b>	10-20 years	45	15
	21-30 years	92	30.6
	31-40 years	56	18.6
	41-50 years	58	19.3
	51-60 years	38	12.6
	> 60 years	11	3.6
<b>Occupation (n=300)</b>	Student	106	35.3
	Employee	97	32.3
	Free worker	40	13.3
	Retired	30	10
	Housewife	16	5.3
	Doesn't work	11	3.6
<b>Qualification (n=300)</b>	Reads and writes	10	3.3
	Primary school	14	4.6
	Intermediate School	41	13.6
	Secondary school	24	8
	Academic or higher	211	70.3

Table 1. Demographics

(n=196, 72.8%), and ‘I had too much pain in my previous visits’ (n=172, 60.9%) (Table 2). Females were more likely to have dental phobia than males and this association was statistically significant (p<0.05) (Table 3). There was no statistically significant association between age and dental phobia related questions (p>0.05). Housewives were more likely to have dental phobia than other professions. Furthermore, there was no statistically significant association between educational level and dental phobia related questions (p>0.05).

**Discussion**

This study presents information regarding the extent and nature of dental phobia among Saudi sample. The results of the present study show that the prevalence of dental phobia was higher among females than males. This result is similar to that from other studies, which can be attributed to a difference in pain thresholds

	Yes n (%)	No n (%)
The smell of the dentist’s office is bothering me. (n=287)	126 (40.6)	161 (59.4)
The voice of a dental drill machine is scaring me. (n=300)	159 (54.5)	141 (45.5)
The anesthetic needle scaring me too much. (n=300)	167 (58.4)	133 (41.6)
Seeing dental chair is bothering me. (n=300)	107 (28.7)	193 (71.3)
Seeing dental instruments is bothering me. (n=300)	125 (37.6)	175 (62.4)
I’m more concern about teeth pain. (n=300)	209 (79.1)	91 (20.9)
Seeing blood during extraction or digging the teeth scares me. (n=300)	150 (50.0)	150 (50.0)
I’m worried about the contaminated dental tools. (n=300)	163 (56.4)	137 (43.6)
Using the cup for mouth rinsing in dental clinic is bothering me. (n=300)	129 (39.6)	171 (60.4)
I’m worried about feeling pain after dental treatment. (n=300)	196 (72.8)	104 (27.2)
I had too much pain in my previous visits. (n=300)	172 (60.9)	128 (39.1)
Seeing or hearing patients’ screaming in the clinic is bothering me. (n=300)	134 (42.1)	166 (57.9)
Dental chair light is bothering me. (n=300)	96 (23.3)	204 (76.7)
I had a sense of nausea; vomiting while the dentist starts treatment. (n=300)	94 (22.3)	206 (77.7)

Table 2. Questionnaire (Dental phobia)

between the genders.<sup>9-11</sup> The present study supports the evidence that people still have fear from dental treatment. The pain is the prime concern either before, during, and after dental treatment.

There was no statistically significant difference among age groups, qualifications or social backgrounds all have dental fear from pain related to dental treatment. These results are in agreement with a study of dental

	Gender	n (%)	P value
The smell of the dentist’s office is bothering me.	Male	38 (33.3)	0.010*
	Female	38 (52.8)	
The voice of a dental drill machine is scaring me.	Male	58 (69.0)	0.001*
	Female	51 (40.0)	
The anesthetic needle scaring me too much.	Male	67 (53.2)	0.037*
	Female	50 (68.5)	
Seeing dental chair is bothering me.	Male	28(22.2)	0.006*
	Female	30 (41.1)	
Seeing dental instruments is bothering me.	Male	37 (29.4)	0.002*
	Female	38 (52.1)	
I’m more concern about teeth pain.	Male	92 (73.6)	0.020*
	Female	64 (87.7)	
Seeing blood during extraction or digging the teeth scares me.	Male	49( 38.9)	0.000*
	Female	51 (69.9)	
I’m worried about the contaminated dental tools.	Male	68 (54.0)	0.303
	Female	45 (61.6)	
Using the cup for mouth rinsing in dental clinic is bothering me.	Male	46 (36.5)	0.366
	Female	32 (43.8)	
I’m worried about feeling pain after dental treatment.	Male	85 (67.5)	0.031*
	Female	60 (82.2)	
I had too much pain in my previous visits.	Male	70 (55.6)	0.051
	Female	51 (69.9)	
Seeing or hearing patients’ screaming in the clinic is bothering me.	Male	48 (38.1)	0.138
	Female	36 (49.3)	
Dental chair light is bothering me.	Male	26 (20.6)	0.226
	Female	21 (28.8)	
I had a sense of nausea; vomiting while the dentist starts treatment.	Male	26 (20.6)	0.385
	Female	19 (26.0)	

\* Statistically significant

Table 3: Association between dental phobia and gender

anxiety in two major cities of KSA who concluded that patients’ fear of dental treatment continues to pose a great threat to the dental profession.<sup>12</sup> The limitations of this study are small sample size and the use of convenience sample. This limits the degree to which the results can be assumed to apply to the overall KSA population.

### Conclusions

Within the study limitations, it can be concluded that prevalence of dental phobia was higher among females. Dental professionals are encouraged to further assess the extent of this problem in order to find methods and techniques to help patients overcome it. Public awareness about new techniques that decrease pain during dental procedures should be implemented.

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