

# Dental Phobia among Dental Patients Attending Academic Dental Hospital

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## Abstract:

**Background:** Dental phobia refers to extreme fear of dentists or dental procedures. Studies have shown that dental phobia is a condition whereby an individual visits a dental clinic only when it is impossible to avoid. There is little information available in Sudan about the impact of dental fear on oral health care seeking behaviours. Aim of this study was to examine the relationship between dental phobia and gender, and to determine the primary reason why dental phobic patients visit clinics.

**Materials and Methods:** Self-administered questionnaire was completed by patients at an academic dental hospital. The study design was observational cross-sectional.

**Results:** Females have a higher level of dental phobia than their male counterparts. Also, pain is the primary reason that brings in dental phobic patients.

**Conclusion:** Females are more likely to suffer from dental phobia than men. Also, the most phobic age group is 26-40 years.

**Key Word:** Dental Phobia, Oral Health Care Seeking Behavior, Gender, Pain, Noman Corah scale .

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## I. Introduction

Dental fear (also known as odontophobia or dentophobia, dental anxiety, dental fear, dentist phobia or dental anxiety) refers to a fear of dental treatment and the fear of having it done. However, the term dental phobia is not recommended for those who feel their fears are not excessive or unreasonable. They may also resemble people with post-traumatic stress disorder, which can be caused by past traumatic dental experiences.<sup>1</sup> Phobia is a fear that is unreasonable and causes great anxiety.<sup>2</sup> According to estimates, 75% of US adults experience mild to severe dental phobia.<sup>3-5</sup> An estimated 5 to 10 percent of American adults report having a dental phobia, which causes them to avoid getting their teeth cleaned, even if it's free.<sup>6</sup> Younger individuals tend to have more anxiety about their teeth than do men.<sup>7</sup> So, we ask: What are the causes of this phobia? People fear dentist treatment most often through direct experience.<sup>8</sup> Most people say that they developed their fear after having an unpleasant dental experience.<sup>9</sup> Dental anxiety has been used interchangeably in the dental literature to refer to the paralyzing discomfort that some children and adults feel during dental procedures. Between 5.7% and 19% of children and teenagers report having dental phobia.<sup>10</sup>

## II. Material And Methods

**Study design:** Descriptive cross-sectional study.

**Study area:** the study was conducted in Academy Dental Teaching Hospital.

**Study population:** patients attended the Academy Dental Teaching Hospital from the period of February 2017 to march 2017.

**Inclusion criteria:** well healthy patients (physically, mentally) above 7 years old.

**Exclusion criteria:** physical or mentally handicapped and any patient younger than 7 years old.

**Sampling:** systematic sampling technique will be used to select the patients

**Data collection tool:** Data was collected through the use of self-administered anonymous questionnaires to ensure confidentiality. Before data collection began, the questionnaires were tested on 5 patients to ensure

understanding and validation. The questionnaires consisted of questions aimed at studying dental phobia and its oral manifestations in patients attending the Academy Dental Teaching Hospital.

**Procedure:**

To collect the data, a systemic sampling technique was employed on patients who attended the academic dental hospital between February 2017 and March 2017. The sample size was 202, however, 14 patients refused to fill out the questionnaire, resulting in a total sample of 188 patients. A Noman Corah scale was used to determine the level of anxiety in patients, with the scale being classified according to three levels: moderate (9-12), high (13-14), and severe (15-20).

The questionnaire was divided into two parts. The first part used the Noman scale to determine the level of dental phobia, while the second part focused specifically on those who had dental phobia. The Noman scale consisted of four questions, each with four answer options (a=1, b=2, c=3, d=4). Analysis was then conducted to determine individuals with or without phobia and the severity of the phobia..

**Data Analysis:**

Data was analyzed using the Statistical Package for Social Sciences (SPSS) version 22 was used. Descriptive statistics such as mean, standard deviation, and frequency distributions were calculated for all variables of interest. Additionally, the chi-square test was conducted to determine the statistical significance of the relationships between categorical variables. The level of significance was set at  $p < 0.05$ .

**III. Result**

the largest group of participants fell within the 15-25 age range (31.4%), followed by the 26-40 age range (27.7%). The smallest group of participants were those over the age of 40 (10.6%). For gender, there was an almost equal distribution between male (40.4%) and female (39.9%) participants.

**Table no1 Demographic features**

		Frequency	Percent	Valid Percent	Cumulative Percent
Age	(7-14)	34	18.1	20.6	20.6
	(15-25)	59	31.4	35.8	56.4
	(26-40)	52	27.7	31.5	87.9
	(>40)	20	10.6	12.1	100.0
	Total	165	87.8	100.0	
Missing	System	23	12.2		
Total		188	100.0		
Gender	Male	76	40.4	50.3	50.3
	Female	75	39.9	49.7	100.0
	Total	151	80.3	100.0	
Missing	System	37	19.7		
Total		188	100.0		

67% of the patients had dental anxiety that was moderate, severe, or high according to Noman scales for dental phobia. Table no2

**Table no2 Noman Scale**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Phobic	62	33.0	33.0	33.0
	Moderate	63	33.5	33.5	66.5
	High	33	17.6	17.6	84.0
	Severe	30	16.0	16.0	100.0
	Total	188	100.0	100.0	

The table below provides information on the levels of pain reported by the study participants, with a majority reporting moderate to high levels of pain. The scale of pain shows that 9.6% of participants reported pain levels between 1 and 3, 13.3% reported pain levels between 4 and 6, and 21.3% reported pain levels between 7 and 10. Table no3

**Table no3 Scale of pain**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	(1 thru 3)	18	9.6	21.7	21.7
	(4 thru 6)	25	13.3	30.1	51.8
	(7 thru 10).	40	21.3	48.2	100.0
	Total	83	44.1	100.0	
Missing	System	105	55.9		
Total		188	100.0		

Significant differences were found between dental fear and age (P value = 0.004). Table no4

**Table no4 Association between age and degrees of phobia**

			Age				Total
			(7-14)	(15-25)	(26-40)	(>40)	
Noman Scale	Not Phobic	Count	20	18	16	2	56
		% within Noman Scale	35.7%	32.1%	28.6%	3.6%	100.0%
	Moderate	Count	8	26	13	10	57
		% within Noman Scale	14.0%	45.6%	22.8%	17.5%	100.0%
	High	Count	3	8	10	6	27
		% within Noman Scale	11.1%	29.6%	37.0%	22.2%	100.0%
	Severe	Count	3	7	13	2	25
		% within Noman Scale	12.0%	28.0%	52.0%	8.0%	100.0%
Total		Count	34	59	52	20	165
		% within Noman Scale	20.6%	35.8%	31.5%	12.1%	100.0%

There were also significant differences in dental phobia and gender (P =0.031). Table no5

**Table no5 Association between degree of phobia (by Noman scale) and the gender**

			Gender		Total
			Male	Female	
Noman Scale	Not Phobic	Count	33	18	51
		% within Noman Scale	64.7%	35.3%	100.0%
	Moderate	Count	24	24	48
		% within Noman Scale	50.0%	50.0%	100.0%
	High	Count	11	15	26
		% within Noman Scale	42.3%	57.7%	100.0%
	Severe	Count	8	18	26
		% within Noman Scale	30.8%	69.2%	100.0%
Total		Count	76	75	151
		% within Noman Scale	50.3%	49.7%	100.0%

#### **IV. Discussion**

The sample we used was representative of the ADH population. We were concerned about the prevalence of dental anxiety among patients in academic dental hospitals. Our survey revealed that pain was the most common complaint with 39.9% of those surveyed. 9.6% had severe pain, 13.3% had moderate and 21.3% had mild pain. This is a sign that patients are neglecting to take care of their teeth. 25.5% were only suffering for a few days, 19.7% suffered for a week, and 14.4% for a whole month.

Our study revealed that 33.5% of patients weren't phobic and only 16% had severe phobia. This may be because patients with severe phobias don't usually visit clinics unless they have a very serious problem. Another study was done by ADH in Kentucky in 1997 (Milgram and S) single item dental fear measure. The results showed that there was no fear at 63.5%, little fear 16.6%, and some fear 19.9%.<sup>11</sup>

The majority of non-phobic patients were between 7-14 years old (35.7%). The highest level of phobia was observed in those aged 26-40 years (52%). There was a strong association between age and phobia.

The gender difference was more apparent in females than males. This could be because they are more fearful of their own bodies.

64.7% of males were non-phobic, while only 35.3% were non-phobic in females. This may be because of the males' high tolerance.

Only 30.8% of males and 69.2% of females suffered from severe phobias. This could be because females are unable to tolerate dental pain like men, so they seek out dental care. On the other hand, men with severe phobia try to tolerate it. Similar to our findings from a 2002 study in Sweden, the majority of phobic patients were females.<sup>12</sup> According to a study done in Amsterdam, the sound from the handpiece is the leading cause of anxiety in patients. It was also the 7th most common of the 67 causes.

#### **V. Conclusion**

Our research results revealed that dental fear is more common in females than it is in males. Also, the 26- to 40-year-old age group was most fearful.

- People fear the dentist's voice, which is the most common cause of phobia.
- Pain was also a common reason for bringing phobic patients to the dental care unit. There is no relationship between the level of phobia and the reason they came..

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