

## Frequency of Fears and Phobia in Clients Reporting for Oral Dental Treatment in A Tertiary Care Dental Hospital of Karachi Pakistan

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### Abstract

#### Background

Phobia against dental procedures is recognized as an important factor in inhibiting patients from seeking dental treatment.

#### Objectives

To study the nature and severity of fears of dental procedures in clients seeking dental treatment.

#### Settings and Duration of Study

This study was conducted at Dr. Ishrat-ul-Ebad Khan Institute of Oral Health Sciences (DIKIOHS) Karachi from January 2017 to June 2017.

#### Settings and Duration of Study

All adult clients presenting to the out patient's department (OPD) for minor surgical issues

e.g. teeth polishing, dental scaling, tooth extraction, dental filling and root canal treatment (RCT) were approached and briefed about the research study. Those adults who consented to participate in the study were included randomly, while those clients with major or serious dental issues like tooth impaction, widespread periodontal treatment and edentulous were not included in the study. Complying clients were questioned regarding their fears about dental procedures using a structured questionnaire. The information was classified into a Likert scale like 3 replies measuring as strongly fearful, moderately fearful and not fearful.

### **Results**

Total number of clients fulfilling the inclusion criteria were 102 who were included in this study. Dental fear presenting as lack of self-assurance to inquire from the dental surgeon was seen in 22% clients while 89% clients had developed fears from an unscrupulous past run-through at a dentist's surgery. Erratic levels of dread were observed for all other categories of facilities as well as for the dental surgeon's approach towards the clients.

### **Conclusions**

Dental surgeons need to realize and spot the existence of dental fears in clients reporting for dental procedures and need to self-cultivate expertise in minimizing phobias.

### **Guiding Principle**

To reduce fears and phobia in clients the dental surgeons need to converse more with the patients before undertaking any surgical procedure. This can be achieved readily with the ability to empathize with the clients.

## **Introduction**

Oral and dental hygiene is an important part of health care sector. There are fears associated with dental treatment. Phobia or fear, rational or irrational is common in health services [1]. The procedures being undertaken at dental surgeries are mostly associated with some form of fear or phobia based on some painful past experience at a dentist's surgery. Many patients with severe dental phobia delay their dental treatment for years because of fear of dentists, resulting in poor oral health and compromised chewing [2]. This in turn leads to poor oral hygiene and further predisposes and aggravates pathological conditions in oral cavity subsequently leading to severe complications and oral morbidities. Furthermore, individuals may have low self-esteem and have dearth of self-assurance because of unpleasant oral smell or an unappealing suppressed smile. Dental fears may range from delaying or not getting dental treatment to florid retorts at a dental surgery.

Factors that may influence dental fears might be influenced by gender, age, nature of dental procedures and approach of the dental surgeon. Women tend to report more dental fear than men [3], and younger people tend to be more fearful than older individuals [4]. It is also reported that people are more fearful of invasive procedures, such as oral surgery, than of less invasive treatments, such as dental scaling, or prophylaxis [5].

Majority of dental instruments generate a natural gag reflex causing a fear of shortness of breath. It is therefore expected of a dentist that he/she should clarify all queries of the procedure in detail before starting the procedure to relieve the fears and unwind the patient. This research was conducted as there was dearth of literature in Pakistan on this subject. The objective of this study was to delineate the correlation between fear of dental procedures and likely causes, among patients reporting to the out patient's department of a tertiary care dental facility in Karachi.

## Patients and Methods

This study was approved by the institutional ethical committee. Researchers have complied with the Declaration of Helsinki Research Ethics in the treatment and interaction of the study participants. Patients were approached keeping in mind their oral predicament and pain they would be experiencing. They were explained the purpose of the study and they were ensured about the anonymity of their identity. Those clients who gave written informed consent were inducted into this study who fulfilled the inclusion criteria. Those who needed teeth polishing or scaling, simple tooth extractions, dental filling and root canal treatment were included. Those who did not consent or had serious dental issues like tooth impaction, wide-ranging periodontal treatment and edentulous were excluded. A total of 102 patients of both genders aged between 18-50 years were selected. Three subcategories of less than 20 years, 21-45 years and more than 45 years were made.

All interviews were carried out in an ethical environment by the main researcher while data collection was done by other colleague authors. The specially prepared Performa was filled with interview details recording the basic demographic details and type of dental surgeries being planned for them. The individuals were walked through hypothetical scenarios to elicit fearful and phobic responses. During the interview and subsequent questioning a three grade Likert scale (strongly agree, no comments, and strongly disagree) was employed. The mean interview time was 20 minutes.

## Results

The age and gender of patients is shown in Figure-1 where 57% cases were in the age group of 21-45 years.

Majority (87%) of the patients were matriculate or above and only 13% were illiterate. Literacy rate was same in both genders. More than half (54%) of the patients were employed and about 32% females were housewives.

About 68% patients under went drilling for cavitations or root canal or scaling where no injection was given while 32% required anesthesia for extraction or neuralgia. All of them were asked to comment on their confidence or phobia for undergoing such procedures. The denominator for each question was maintained as 102. The phobia was higher among females (Table-1). Half of the patients had no phobia for getting anaesthesia for tooth extraction and males were more confident in this regard. Injection use showed similar pattern to anaesthesia in males, but females had higher anxiety (Table-1). Dental scaling showed higher concern in males and the difference was wider in the stronger reaction of scare (56% and 42% in males and females respectively) (Table-1).

**Table 1:** Distribution of cases by dental care and percentage of phobia against types of services

Nature of service	No involved	Fear/ Phobia from surgical procedures (gender wise)								
		Male n=51			Female n=51			Total n=102		
		Reaction scale (%)			Reaction scale (%)			Reaction scale (%)		
		1	2	3	1	2	3	1	2	3
<b>Drilling procedures for cavities or RCT</b>	42	41	32	27	64	21	15	52.5	26.5	21
<b>Anaesthesia for tooth extraction</b>	22	20	21	59	34	25	41	27	23	50
<b>Injection as treatment for Neuralgia</b>	11	10	28	62	23	42	35	16.5	35	48.5
<b>Scaling</b>	27	56	23	21	42	31	26	49	27	23.5
<b>Total</b>	102	32	26	42	41	30	29	36	28	35

Key: 1=Strongly negative (High phobia), 2=Moderately negative (Medium phobia), 3=Neutral (No phobia)

Three questions were raised regarding reaction to behavior of the dentists. If the dentist criticized about poor status of the teeth 53% patients reacted strongly against, while 36.5% did not mind such remarks. The difference between males and females was negligible (Table-2). Majority (66-74%) of the patients did not have any inhibition in asking questions to the dentists and female were more confident in asking questions. About a third of males (34%) did not feel like asking questions to the dentist (Table-2).

**Table 2:** Distribution of phobia status about dentist’s remarks and behavior.

Dentists behaviour (Situation)	Fear/ Phobia level								
	Male n=			Female n=			Total n=		
	Reaction scale (%)			Reaction scale (%)			Reaction scale (%)		
	1	2	3	1	2	3	1	2	3
<b>Surgeons criticism about oral hygiene</b>	59	9	32	47	12	41	53	10	36.5
<b>Confidence to inquire from the dentist</b>	28	6	66	16	10	74	22	8	70
<b>Poor response from the dentist</b>	48	31	21	22	36	37	35	33.5	29
<b>Total</b>	45	15	40	28	19	51	37	17	45

Key: 1=Strongly negative (High phobia), 2=Moderately negative (Medium phobia), 3=Neutral (No phobia)

If the dentist did not provide good response to the questions, about 68.5% had a strong reaction against the person. Males (79%) felt more strongly against the dentist than females (58%) (Table-2). If there was an unhappy previous experience from the dental care unit, almost all (89%) patients did not feel like going back to the same dentist. Reactions of males and females did not differ in this regard (Table-3). If a friend had a poor opinion about a dentist, then 88% patients said that they will not visit that same dentist and the response was same irrespective of gender.

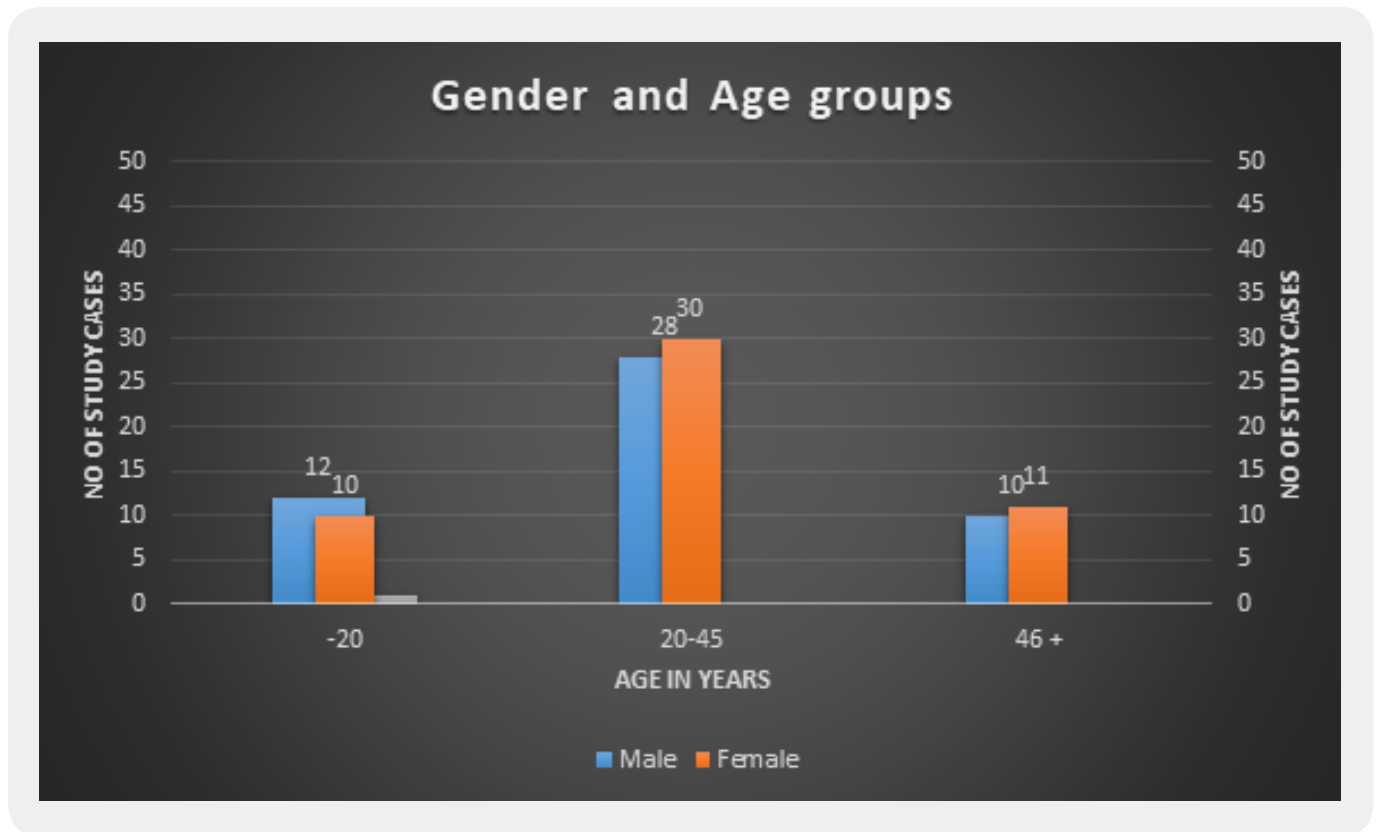
**Table 3:** Distribution of phobia level by personal past experience and experience of a friend.

Variable situations	Fear/ Phobia level								
	Male n=			Female n=			Total n=		
	Reaction scale (%)			Reaction scale (%)			Reaction scale (%)		
	1	2	3	1	2	3	1	2	3
History of previous bad experience with dental care	86	9	5	92	5	3	89	7	4
A bad experience of dental care by a friend	66	19	15	77	14	9	71.5	16.5	12
<b>Total</b>	76	14	10	84.5	10	6	80	12	8

Key: 1=Strongly negative (High phobia), 2=Moderately negative (Medium phobia), 3=Neutral (No phobia)

## Discussion

It is a well-known fact that fears and phobias amongst clients based on their past horrid dental experiences further predispose them in delaying treatment for oral issues and further aggravating their dental problems. Majority of clients resort to homemade remedies as part of the delaying tactics from fear of pain and discomfort of dental procedures. Dental phobia is much more common than thought and therefore attracts attention because of its adverse effects on oral health [6,7]. In developing nations like Pakistan variables like poverty, poor access to dental facilities, illiteracy and abundance of road side unhygienic shaman's make the whole situation dire indeed. Unlike in operation theatres of surgeries where patients are usually anaesthetized and are not aware of the surgeries, the patients of dental surgeries are well awake and aware and the very sight of intimidating tools and instruments predispose individuals to develop long lasting fears and phobias. These fears are coupled with pain and a recipe for a lifelong phobia is primed. Hallstron and Hallign found that most dental phobias that started before the age of 20 years, persisted in life [8]. Vessend in 1993 also reported higher percentage of anxiety between ages of 15-19 years. In this study 55% having anxiety were in age group of 21-40 years and only 22% in less than 20 years of age (Figure-1). In a study conducted in Kingdom of Saudi Arabia on 853 cases between ages 18-71 years, dental phobia was found to be more common in men than in women [9]. The present study studied the nature and severity of fears formed for painful dental surgeries, was not in concordance with the study in Saudi Arabia.



**Figure 1:** Distribution by age and gender.

The approach of a dental surgeon has an abundant part in developing dental phobia in their clients. A caring and empathetic surgeon who takes considerable time to resolve and address the queries of patients may dispel fears. The approach of a dental surgeon has an abundant part in developing dental phobia in their clients. If the dentist is caring and spends time in informing and relaxing the patients about the dental procedures, the people do not develop dental fear even if they experience painful procedures [10,11]. Many patients develop phobia as a result of their past horrid and painful surgical experience during dental treatment. The phobia may also develop if they had witnessed painful procedures being employed on someone else that they accompanied. They prefer to keep living with dental abnormality and deformity leading to more morbidity and subsequent pathology just to avoid pain and stress of a dental surgery. A survey in USA found that 5-10% of people avoided dental care and about 50% delayed treatment or failed to attend their appointments or even disregarded to cooperate with dental procedure [12]. This research however does not comprise these factors in the inquiries. In the present research 55% reacted strongly against the humiliating remarks of dentist for poor status of teeth.

This reaction between males and females was not different from each other (Table-2). In studies elsewhere dental phobia was found more common among women [8,13]. In our study there were no significant gender based difference. However, studies have shown that farmers and manual workers developed more dental phobia than executives, teachers, employees and shopkeepers [11]. In this study educated group of high



school qualification and people in jobs were found to be more dental phobic (55%) followed by students (21%). In present study relation to various types of dental procedures, high proportion (64%) showed phobic attitude. Among them 52.5% showed strong and 26.5% moderate phobia towards drilling procedures. This was higher among females. For taking anaesthesia in tooth extraction males were found more confident (59%) than females (41%). In one study it was found that most common fears among dental phobia were in relation to oral anesthetic injections or for the whole dental process [13, 14]. In the current study, strong reaction towards scaling was 56% in males and 42% in females (Table-1). A study in Saudi Arabia showed dental phobia to be more in women than in men (75% vs 48%) [13,15]. Another study in America estimated that 75% of US adults experienced some degree of dental fear ranging from mild to severe [16-18]. Studies have shown that dental fear may also develop if people hear about someone else's traumatic experience or negative views of dentistry [19]. In current study 88% of the people were influenced by their acquaintance's poor belief about some dental care facility. The difference in opinion between men and women was almost similar. 96% did not feel like going back to the same dentist, if they were not satisfied earlier. The males and females shared similar level of phobia in this regard (Table-3).

On the matter of taking liberty of probing queries from dentist, 66-74% showed self-confidence in doing so. By comparison, females showed more courage than males to cross-question the dentist and getting their points clarified (Table-2). In some countries like USA, Sweden, the psychologists join the dentist in alleviating and relaxing patients for the purpose of obtaining satisfactory dental treatment. These strategies have shown significant reduction in dental fears [20,21]. In a study conducted in Pakistan it was showed that a high proportion (79%) of patients showed phobic attitude toward drilling procedure with 52% showing strong and 27% moderate phobia and 21% had no phobia [22]. The results of the present study are generally synonymous with the literature. Keeping in view the above, it becomes imperative for the dentist to acknowledge the fears in their clients and they should be proactive in making the clients appointments relaxed, stress-free and with minimum pain by improving doctor-patient communication.

The limitations of the present study were that it was conducted in a selected hospital of Karachi due to convenience and was not randomized. It was also a cross-sectional study including purposive sample and hence neither it could provide association nor generalization.

### **Conflict of Interest**

Authors declare no conflict of interest.

### **Grant Support and Financial Disclosure**

None declared.

### **Ethical Considerations**

This study was approved by the institutional ethical committee.

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