

# DENTAL FEAR AMONG VISITORS OF PRIMARY HEALTH CARE CENTERS IN SAUDI ARABIA

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## INTRODUCTION

The effective utilization of any implemented health care program based to a large extent on the ability of the targeted population to reach provided services with minimal restricting factors. In Dentistry, several reports showed that dental fear is an important limiting factor that may interfere or prevent effective utilization of available services (1-5). It is estimated that 80% of dental patients have anxiety, fear or phobia of dental treatments (6). Among intense fears dental procedures was ranked the 10th and was the 5th among common fears (7).

In Saudi Arabia several health programs are provided to the general population through governmental and private institutions (8-12). Dental services are important components of such programs. The effective utilization of offered services could have a great impact on the dental status of the served individuals. Review of literature indicated a lack of information about the prevalence of dental fear among Saudis and only one study was found (13). It is the purpose of this study to give an assessment of dental fear among adult visitors of primary health care centers in Saudi Arabia.

## MATERIALS AND METHODS

A questionnaire in Arabic consisting of 24 items was

prepared. The contents of the questionnaire were obtained from several scales and modified to suit the need of this investigation (14-16) Seven hundred copies were distributed to seven primary health care centers (PHCC) selected randomly in the Southern region of Saudi Arabia. These centers provide medical and dental services to a total of 81,062 individuals registered in their records.

A total of 520 answered questionnaires (74%) were returned. Those with incomplete information or with ages less than 18 years were excluded. A net of 343 questionnaires were studied and analyzed for dental fear assessment.

## RESULTS

Age and sex distribution is summarized in Table 1. It shows that out of the 343 studied cases, 35% (13% male and 22% female) were fearful of dental procedures and 65% (39% male and 26% female) were not. When the level of education was considered, only 24% of non-educated individuals were fearful compared to 47% of those with university level (Table 2). The profile of dental fear among the fearful individuals is shown in figure 1.

Table 1 : Age and sex distribution

Age years	No fear				Fearful					
	M	%	F	%	M	%	F	%	Total	%
18-30	69	20%	47	14%	22	6%	55	16%	193	56%
31-40	30	9%	25	7%	13	4%	13	4%	81	24%
41-50	17	5%	8	2%	6	2%	8	2%	39	11%
51-60	10	3%	5	1%	3	1%	0	0	18	5%
>60	9	3%	3	1%	0	0	0	0	12	4%
Total	135	39%	88	26%	44	13%	76	22%	343	100%

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**Table 2 : Level of education among fearful and non-fearful individuals**

Education level	Fearful		Non-fearful		Total	%
	No.	%	No.	%		
Not Educated	25	28	63	72	88	100
High School	29	32	63	68	92	100
High School	38	37	65	63	103	100
University	28	47	32	53	60	100

Table 3 shows the sources and effects of dental knowledge among individuals with dental fear. Personal experience, stories told by others, and living an experience of a relative or a friend were found to have moderate effect, 58%, 44%, and 45% respectively. Media was ranked by 62% of the individuals as having a marked effect. Answers for questions related to dentist and dental clinic and their effect on dental fear are summarized in table 4. Dentist appearance and nationality were found to have marked effects (43% and 68%) but dentist behavior was ranked by 70% of the individuals to have no effect. Dental clinic decoration and smell were selected to have marked effect (49% and 44%). Dental tools arrangement and sounds were found to have moderate effect (44% and 43%), but dental syringe shape has no effect (53%).

**Table 3 : Sources and effects of dental knowledge among fearful individuals**

Source	RESPONSE							
	No. effect		Moderate Effect		Marked Effect		Total	
	No.	%	No.	%	No.	%	No.	%
Personal Experience	30	25	70	58	20	17	120	100
Stories told by others	17	14	53	44	50	42	120	100
Living an experience of a relative or friend	34	28	54	45	32	42	120	100
Media (Radio, T.V. Press.)	8	7	38	31	74	62	120	100

\* All individuals have to answer each source.

**Table 4 : Effect of factors related**

**to dentist and dental clinic on fear**

Factors	RESPONSE*					
	No Effect		Moderate		Marked	
	No.	%	No.	%	No.	%
Dentist Appearance	31	26	38	32	51	43
Dentist Behavior	84	70	21	18	15	13
Dentist Nationality	12	10	26	21	82	68
Clinic Decoration	19	16	42	35	59	49
Clinic Smell	24	20	43	36	53	44
Arrangement of Dental Tools	27	23	53	44	40	33
Shape of the Dental Syringe	63	53	45	37	12	10
Sounds of Dental Tools	42	35	52	43	26	22

\* All individuals have to answer each item.

The effect of different forms of dental treatment on respondents with dental fear are shown in table 5. Extraction, surprisingly was found to have no effect on dental fear in 49% of cases. Restoration, on the other hand, was ranked to have moderate effect on 38% of cases.

**Table 5 : Dental fear as it related to different types of dental treatment**

Types of Treatment	RESPONSE*							
	No Effect		Moderate		Marked		No. Exp.	
	No.	%	No.	%	No.	%	No.	%
Extraction	59	49	30	25	6	5	25	21
Restorative	28	23	46	38	25	21	21	18
Endodontics	30	25	4	3	6	5	80	67
Periodontics	11	9	22	18	25	21	62	52
Orthodontics	6	5	4	3	6	5	104	87
Removable Prosthesis	4	3	3	3	11	9	102	85
Fixed Prosthesis	6	5	6	5	10	9	98	82

\* All individuals have to answer for each type.

**Table 6 : Interval duration between dental visits**

**among fearful and non-fearful individuals**

Interval	Fearful		Non-Fearful	
	No.	%	No.	%
6 months or >	45	38	91	40
6 months to 1 year	40	33	72	32
> 1 to 2 years	12	10	21	9
2 years to 3 years	5	4	10	5
>3 years	18	15	29	13
Total	120	100	223	100

For interval duration between dental visits among individuals with dental fear and those without, no significant variations were noticed. Findings are shown in table 6.

**DISCUSSION**

The age range in the study shows that about 80% of the participants are between 18 and 40 years of age. This is almost in agreement with a previous report which showed that the ages of 66% of the population included in that study were between 6 years and 45 years (17). Such findings support the importance of limiting all factors that may prevent the utilization of delivered services by this age demanding group which is in this case the dental fear was found that 75% of clinician surveyed said that patient anxiety is the greatest barrier preventing patients from receiving adequate dental care (18, 19).

The percentage of respondents with dental fear in this study (35%) is considered to be high compared to some reported findings which were found to be about 25% (13, 20,21). This could be due to sampling variations since the participants in this study are already seeking health care.

Among the sources of dental knowledge, media was chosen by 62% of patients to have a marked effect on their fear towards dentistry. This even higher than the personal experience which was found only to have a moderate effect (58%). This finding necessitates an important action of dental professionals in Saudi Arabia to cooperate with media workers in producing carefully studied programs that will present dental information to the public in a pleasant acceptable manner.

Among the factors related to dentist in this study that

was selected by the majority of respondents to have a major impact on their dental fear (68%) was nationality. This reflects the nature of mixed nationalities of dentists in the area and probably the unpleasant experience of some of the respondents with some specific nationalities. Some of the respondents mentioned that their fear will be reduced if treated with Saudi dentist (unshown findings).

Answers about the dental clinic indicated that about 50% of the respondents selected the dental clinic decoration to have a marked effect on their fears followed by the clinic smell (44%). On the other hand, only 10% said that the shape of the dental syringe had a marked effect. Such answers indicate that dental fear among a high percentage of the respondents could be reduced by selecting an acceptable decoration and smell for this group of patients. Further studies are needed to explore in depth the effect of the dentist and the dental clinic on patients with dental fear.

Some of the dental treatments were found to be unknown for some of the respondents like prosthodontics (85%) and orthodontics (87%). This may reflect the nature of demanded dental services by the respondents or the unavailability of the other services. The types of dental services provided at some primary health care centers in Saudi Arabia were reported earlier (12). About half of the respondents with dental fear selected extraction to have no effect on their fears. On the other hand 59% said that restorative dental work has a moderate or a marked effect on their fears. This might be explained with the fact that some dentist do dental restorative works without anesthesia and hence give a painful experience compared to extraction.

The interval duration between dental visits among the individuals with dental fear and those without showed no significance variations. This is in disagreement with some internationally reported findings in which the utilization of dental services was significantly low among patients with dental fear (15, 22). Such finding might indicate that the participants in this study only visit dental clinic for an immediate need for dental care rather than for routine general check-up.

Finally, it could be concluded that dental fear among Saudi dental patients is very important variable that necessitates further investigations and should be considered in future planning for effective utilization of provided dental services.

**ABSTRACT**

The purpose of this study is to give an assessment of dental fear among adult visitors of primary health care centers in Saudi Arabia. A questionnaire in arabic consisting of 24 items was prepared and 700 copies were distributed to seven primary health care centers (PHCC) selected randomly in the southern region of Saudi Arabia.

A total of 520 answered questionnaire (74%) were returned and a net of 343 with complete information were studied and analyzed for dental fear assessment.

Findings showed that 35% of the respondents were fearful of dental treatments (13% male and 22% female). Media was ranked by 62% of fearful individuals to have a marked effect as a source of dental knowledge. Dentist behavior was ranked by 70% of the respondents with dental fear to have no effect on their feelings. Extraction, surprisingly was found to have no effect on dental fear in 49% of cases. No significant variations were found in the interval duration between dental visits among individuals with or without dental fear.

**Key words :** *Dental fear, primary care, Saudi Arabia.*

## RÉSUMÉ

### *L'appréhension du dentiste parmi les personnes visitant les centre de soins primaires en Arabie Saoudite*

Cette étude a pour but d'évaluer l'appréhension du dentiste parmi les adultes fréquentant les centres des soins primaires en Arabie Saoudite. 700 copies d'un questionnaire comportant 24 questions ont été distribuées dans 7 centres de soins primaire dans le sud de l'Arabie Saoudite. Au total, 520 questionnaires ont été remplis représentant 74% mais seulement 343 avaient une information complète et ont été analysés.

Il a été constaté que 35% des patients analysés avaient une grande appréhension du dentiste. Parmi ces malades ayant peur du dentiste, 62% parmi eux ont indiqué que les medias sont une source importante de leurs connaissances de la chirurgie dentaire. 70% des patients anxieux ont répondu que le comportement du dentiste n'a aucun effet sur leurs sentiments. A la surprise, il a été constaté dans 49% des cas, que l'extraction n'a aucun effet sur la peur du dentiste. Aucune différence concernant l'intervalle entre les différentes visites dentaires n'a pu être constatée parmi tous les patients avec ou sans appréhension du dentiste.

**Mots clés :** *Appréhension du dentiste, centre de soins primaire, Arabie Saoudite.*

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