

ORIGINAL ARTICLE

Dental Phobia in Medical Students of Lahore Medical and Dental College, Lahore, Pakistan

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ABSTRACT

Background: Dental phobia the fear to dental procedures, dental instruments or dentist is the common fear among people of all ages that cause delay of dental treatments. By finding out the response of students towards dental treatment will help in the apprehension and overcoming the dental phobia. The purpose of this study conducted in LMDC among the medical graduates was to know the prevalence of dental phobia in them.

Method: A cross sectional study was conducted to access the dental phobia among the BDS, MBBS, DPT and Pharm D students of Lahore Medical and dental college using the MDAS . Descriptive statistics including means, standard deviations, and percentages were calculated. Group comparisons were analyzed using t-tests and analysis of variance. Multiple group comparisons were conducted using Tukey's post-hoc test. $P < 0.05$ was considered as the significance level.

Results: Three hundred students took part in this study. Equal number of response was recorded by BDS, MBBS, DPT and Pharm D students. There was significant difference seen in dental phobia among gender. Females had higher level of dental phobia than males. Past negative dental experiences have valid impact on people and lead to increased prevalence towards dental phobia. Dental students exhibited the least amount of dental phobia.

Conclusion: BDS students had lowest level of dental phobia. By increasing the dental health education and awareness about oral health the dental phobia can be reduced among people

Keywords: Dental student, Dental phobia, Anxiety Scale.

INTRODUCTION

Dental phobia the fear to dental treatment causes a person to delay all his dental procedures. It can be the fear to any sort of dental stimuli which patient perceive as threatening and dangerous and become fearful to protect from any kind of treatment which is causing stress and fear. Mostly patients have similar particular reaction which is avoiding and delaying dental treatment. This can cause high rate of caries and periodontal diseases. People feel comfortable with familiar experience and feel anxious with novel experience¹. Fear of dental treatment is very common and distressing problem for a dentist. Anxiety has a major impact on doctor-patient relationship and can lead to misdiagnosis and incomplete treatment. It is common in children and adults. Dental phobia is a complex multidimensional phenomenon which effects the dental treatment and important procedures. Previous traumatic experience and procedures are also major factors in development of extreme dental fear and anxiety². A survey was conducted on adults in 2009 regarding their oral hygiene which showed that 12% of the adults were phobic to dental treatments³. Being scared of the dental treatments causes the delay of all dental procedures which aggravates the problem. The phobia depends on the past dental experiences of the patients. The phobia of some people is minor while some have major phobia that has damaging effect on their lives. Watching needles during treatment, white coats of the dentist, drilling noises trigger the anxiety. The increasing dental anxiety levels and the progression of oral diseases have made us ponder on the mechanisms by which dental phobia is aggravated⁴.

The dentally anxious patient is always presented with more decayed surfaces and sometimes even missing teeth. Avoidance to dental treatment will lead to maladaptive behavioral response for any visit to dentist, this will cause impairment in their timely preventive dental behaviors^{5,6}.

The prevalence of dental phobia was calculated among the dental students in many countries e.g. Malaysia, and it was compared to the students of other medical fields which showed that dental students have low dental phobia .Usually females have more anxiety levels but male students are at more risk of suicides due to depression and mental sickness. Also there is a correlation

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between emotional stress and disturbed eating patterns which can cause increase consumption of sugary food and processed carbohydrates in form of junk food which deteriorate health both medically and dentally and because of tension and sickness patient already have, he is not willing to get treatment done.

The main goal of your study conduction was that to calculate phobia level among different medical using anxiety scale consisting of five questions with options ranging from not to extremely anxious⁷ and what measures can be taken to reduce anxiety.

METHOD

Study sample: Size of sample was determined and final sample size considered was 300 subjects but survey was considered on a larger scale knowing that if someone don't want to participate he may not participate and final sample size must be achieved of desired value. A cross sectional study was conducted among students of BDS, MBBS, DPT and Pharm D of Lahore medical and dental college Pakistan to evaluate dental phobia among the students. Permission was granted by College Ethical Committee.

Recruitment strategy: Researchers went to lecture theatres individually where classes of following programmes were conducted and before making questionnaires filled by student we informed them about our research purpose and made them sure that there participation is voluntary all their personal information will be kept confidential and they can withdraw from research whenever they want .for filling questionnaires we gave them 15 minutes and finally a 300 individuals sample was collected who want to be part of research voluntarily in the end participants were made sure again that there information will be kept private and their participation is voluntary.

In our questionnaire we used modified dental anxiety scale which consist of 5 options from 1 (not anxious) to 5 extremely anxious questionnaire comprised of 5 question each question having five option 1) if you went to your dentist for treatment tomorrow how would you feel ?2) if you were sitting in waiting room how would you feel ?3) if you are about to have your tooth drilled how would you feel ?4) if you were about to have your teeth scaled

and polished how would you feel?5) if you were about to have local anaesthetic injection in your gum above an upper back tooth how would you feel ? MDAS scale ranges from 5-25 predicting that score of 19 and above extremely dental anxious 12-18 mildly dental anxious and 5-11 not anxious at all. Participants were asked about their study programme, study year, age and gender.

Descriptive statistics was conducted and after compilation of result group comparison was conducted by using two tailed student's t test for one-way variance analysis and tukey's post hoc test for multiple variance. P<0.05 was considered to be significant of all test.

RESULTS

Total 300 filled the questionnaire. Table provides statistics the participants age, gender, and field of study. The student response were female of 63%. The man age of the study participants was 21.44±1.71 years. The baseline characteristics of the study participants are shown below.

Table 1: Baseline characteristics of the study participants

Parameter		Frequency	%age
Gender	Male	111	37%
	Female	189	63%
Age	18-20	92	30.7%
	21-23	171	57%
	24 and above	37	12.3%
Field of study	Pharm D	75	25%
	Physiotherapy	75	25%
	BDS	75	25%
	MBBS	75	25%

BDS: Bachelors in dental sciences
MBBS: Bachelors in Medicine and Bachelors in surgery

Most of the students i.e. 48.3% in our study population showed mild dental anxiety while 10.7% of the population was dental phobic The distribution of frequency of MDAS score and their categorization are shown in table 2 and Table 3.

Comparison of mean MDAS score across gender shows that there was a significant difference between the mean MDAS score of across genders. Females showed a higher mean MDAS score than males (p = 0.001). As far as field of study is concerned, there was a statistically significant difference in MDAS score of each study group (p=0.001). This is shown in Table 4. Tukey post-hoc

Table 5:

Field of study		Mean Difference	Standard error	P Value	95% Lower Bound
Pharm D	Physiotherapy	-1.65333	.62941	.045	-3.2795
	BDS	2.32000	.62941	.002	.6938
	MBBS	-1.58667	.62941	.059	-3.2129
Physiotherapy	Pharm D	1.65333	.62941	.045	.0271
	BDS	3.97333	.62941	.000	2.3471
	MBBS	.06667	.62941	1.000	-1.5595
BDS	Pharm D	-2.32000	.62941	.002	-3.9462
	Physiotherapy	-3.97333	.62941	.000	-5.5995
	MBBS	-3.90667	.62941	.000	-5.5329
MBBS	Pharm D	1.58667	.62941	.059	-.0395
	Physiotherapy	-.06667	.62941	1.000	-1.6929
	BDS	3.90667	.62941	.000	2.2805

DISCUSSION

Dental anxiety is among the most common phobias still seen in dental practice, despite of many advances and technology. The study conducted by the Dentists of Lahore Medical and Dental college was regarding this phobia we see in the students that are well connected with the human physiology and hospital but still fear dental treatment and try to avoid it. This study included students from Medical, dental, pharmacology and physiotherapy department of Lahore Medical and dental college.

The sample collected was of 300 students equally distributed in four departments as mentioned above. The questionnaire was filled by students that were near to completion of their courses and

analysis was used to assess multiple comparison of MDAS score between different fields of study. The BDS students had the lowest MDAS scores as compared to the physiotherapy and MBBS students. This difference was statistically significant (P<0.05) (Table 5).

Table 2: Distribution of MDAS score among the study participants

Score	Frequency	%age
5	10	3.3
6	6	2.0
7	11	3.7
8	16	5.3
9	2	6.7
10	32	10.7
11	28	9.3
12	15	5.0
13	28	9.3
14	25	8.3
15	25	8.3
16	21	7.0
17	14	4.7
18	17	5.7
19	12	4.0
20	8	2.7
21	6	2.0
22	3	1.0
23	3	1.0

Table 3: Distribution of anxiety levels among the participants

Anxiety Levels	Frequency	%age
Not Anxious	133	41%
Mildly dentally anxious	145	48.5%
Dentally anxious/Dentally phobic	32	10.7%

Table 4: Comparison of mean MDAS score across study groups

Parameter		Mean MDAS Score	P-Value
Gender	Male	11.68± 4.11	0.001*
	Female	13.75±3.97	
Field of study	Pharm D	12.76±3.81	0.001**
	Physiotherapy	14.41±4.06	
	BDS	10.44±3.24	
	MBBS	12.99±4.16	

*Independent samples t-test **One-way analysis of variance

are doing some kind of clinical practice. This study results were on the basis of gender and courses of study employing MDAS (modified dental anxiety scale) that is used by our reference article. The results of sample analysis on the basis of course of study was in accordance to the article by al jaseer⁸ depicting that the dental students are least anxious, this can be explained by the fact they are familiar with the dental protocols, environment and instrumentation used. Students of physiotherapy were the most anxious as they have least acclimation with the surgical procedure and protocols.

On the basis of gender females are more anxious than males, this can be explained by neuroticism (emotion trait) and they do not visit dentist regularly^{9,15}.

Public awareness of oral health has improved for past decades¹⁴. Dental anxiety is correlated with information students are having about dental procedures, knowing about the instrumentation and being familiar with the atmosphere, this study supports this statement as dental students showed least anxiety scale score (10.47). Mathai Thomas¹³ in India conducted the study that also supports the statement that dental students are least anxious among others.

According to the data collected, the fear of administration of local anesthesia and drilling was the most common cause of the anxiety in patients about 37% in study conducted by Mohd G.Sghaireen¹⁰. It can be explained that past dental experience with dentist in which LA was used patient felt pain which lead to anxiety. Explaining the procedure to the patients prior to performing decreased the anxiety of the patients. Adding courses that include dental knowledge can reduce such anxiety levels¹¹. Anxiety reduction protocol is also being used in this regard used.

CONCLUSION

As per our data and results dental anxiety was minimum in dental students because of prior knowledge of dentistry. The fear of needle was seen at its peak. Providing proper dental knowledge and a good past dental experience can decrease the fear of dental procedure, this will not only encourage the patients but will also help them improve their lifestyle.

Recommendation: The object of the research was to comprehend dental phobia among the medical graduates of LMDC .Sample size was kept small of 300 students only. A research should be carried out to calculate the dental phobia on the population not related to medical field collecting a larger sample and methods should be carried out to overcome the dental anxiety.

Ethics approval and consent to participate:

Authors Contribution: **NF:** Conception, Data Collection and analysis, **NB and ET:** Literature research, **RZ, FA:** Manuscript design and drafting, **KN, MAM:** Manuscript review, Manuscript Editing

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