

Research Article**Prevalence of Dental Anxiety in Medical and Dental Students****Sidra Junaid, M.Rayyan Saleem, Arbab Mukhtar,****Sehrish Hina and Usman Irfan****ABSTRACT**

Background/purpose: Fear from dental treatment is widespread distressing problem for the dentist. Anxiety affects the dentist patient relationship and may cause misdiagnosis. Therefore, this study aimed to assess the level of dental anxiety and fear among students of King Edward Medical University, Lahore and de'Montmorency College of Dentistry, Lahore.

Material and Methods: Dental Anxiety Scale (DAS) and Dental Fear Scale (DFS) were completed by undergraduate students. Cross tabulations were applied to determine the level of DAS and DFS.

Results: The prevalence of high dental anxiety among the students of de'Montmorency College of Dentistry was 19.81%. 29.66% students had moderate anxiety level and 47.26% students had low anxiety level. In comparison King Edward medical university had a high Dental Anxiety Rate of 31.17%. 28.08% students had low dental anxiety and 31.33% had moderate concerned about their anxiety level.

Conclusion: The overall dental anxiety and fear rate was higher in the students of King Edward medical university. Therefore, more educational programmes for eradication of dental fear and anxiety should be established for better oral health.

INTRODUCTION:

Dental fear is a type of fear in which an emotional reaction to a stressful stimulus is elected. It is most commonly seen in children and adults. Whereas dental anxiety is a multi-dimensional phenomenon that deals with once feeling or reaction to a known source of danger that lies in the subconscious¹. The concept of dental fear and dental anxiety are often used as synonyms of each other and are combined as dental fear and anxiety (DFA). Generally, it is related to the unpleasant or negative emotion associated with dental visit and treatment. It is commonly related with the traumatic experience, negative childhood dental, experience negative attitude and negligence a family bad experience of closed ones and personality. Dental fear is one of the major issues in many countries. The prevalence of fear has been found to vary across different culture and population. Dental anxiety and fear can affect the

patient dentist relationship and leads to misdiagnosis. A comparison between anxious and non-anxious patients showed that the former group had more decayed surfaces, significant periodontal diseases and more missing tooth. Consequently, the patient adopted less preventive dental behaviour and more extensive treatment. These findings suggest that dental fear and anxiety plays an important role in delayed preventive and treatment options, resulting in the deterioration of oral health 19 -20.

Over the years many improvements of dental equipment and procedure have been made. However dental fear and anxiety still remains a problem. A better understanding of the difference between dentally anxious and non-anxious patient is important as it gives information about the DFA on patients quality of life and oral health.

MATERIALS AND METHODS:

Sample:

This cross sectional study was conducted between undergraduate students of King Edward Medical University, Lahore and de' Montmorency College of Dentistry, Lahore.

The students were recruited from final year, about 373 students decided to take part in it but analysis was done on 305 students who provided complete data according to research

Procedure :

After a brief explanation about the aims of the survey, all participants received an unidentified copy of the questionnaire. They were asked to fill copy of the questionnaire retrospectively . The questionnaire was distributed through faculty members.

Materials :

Corah's dental anxiety scale (DAS) was used in this research .it consisted of four questions with 5 choices with the score of 1-5. The questions are 21.

1; If you had to go to the dentist tomorrow, how would you feel about it?

2: When you are waiting in the dentist's office for your turn in the chair, how do u feel?

3: When you are in the dentist chair waiting while he gets his drill ready to begin working on your teeth, how do you feel?

4: You are in the dentist chair to have your teeth cleaned, while you are waiting and the dentist is getting out the instruments which he will use to scrape your teeth around the gums, how do u feel?

The scores were summed to give the level of dental anxiety. The overall maximum score is 20.

Scoring the dental anxiety Scale:

A = 1

B = 2

C = 3

D = 4

E = 5

Total possible = 20

Anxiety Rating:

5 -8 = low anxiety

9-12 = moderate anxiety

13-14 =high anxiety

15- 20 = severe anxiety (or phobia)

The Dental fear survey (DFS) was also used along with Corah's. It consists of 26 questions each provided with 4 choices scoring 0-3.The score was summed to give the level of dental fear. The overall maximum score is 78. A score of less than 26 indicated the low fear rates, between 26 and less than 52 is referred as median fear rate and 52 above indicates high fear rate

Statistical Analysis:

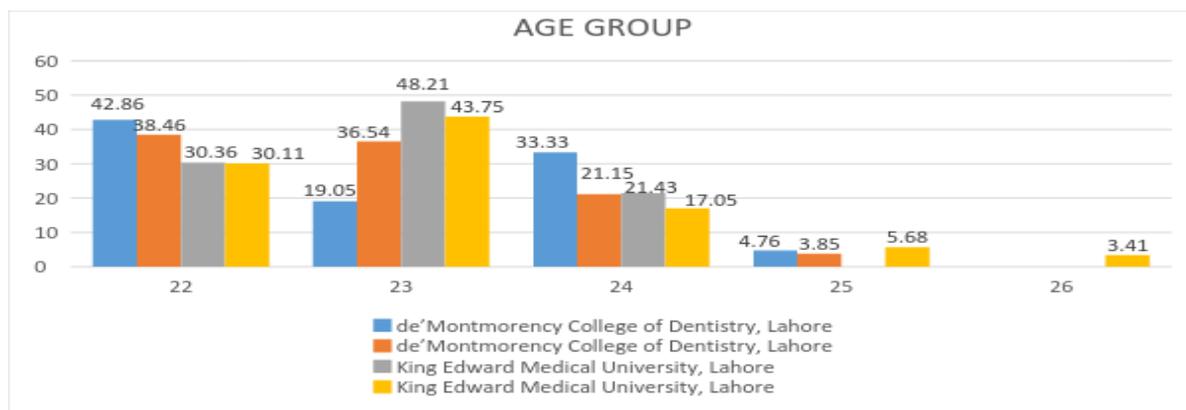
Data have been collected and enter to the computer using SPSS (statistical package for social sciences) program for statistical analysis. Cross tabulations were used to determine the percentage of non-anxious students against anxious students

RESULTS:

The population included medical and dental undergraduate students distributed among all level of study. The percentage of non-anxious students against anxious students are shown in table one with respect to age and sex. Table 1 shows the comparison between anxious students of de' Montmorency College of Dentistry and King Edward Medical University.

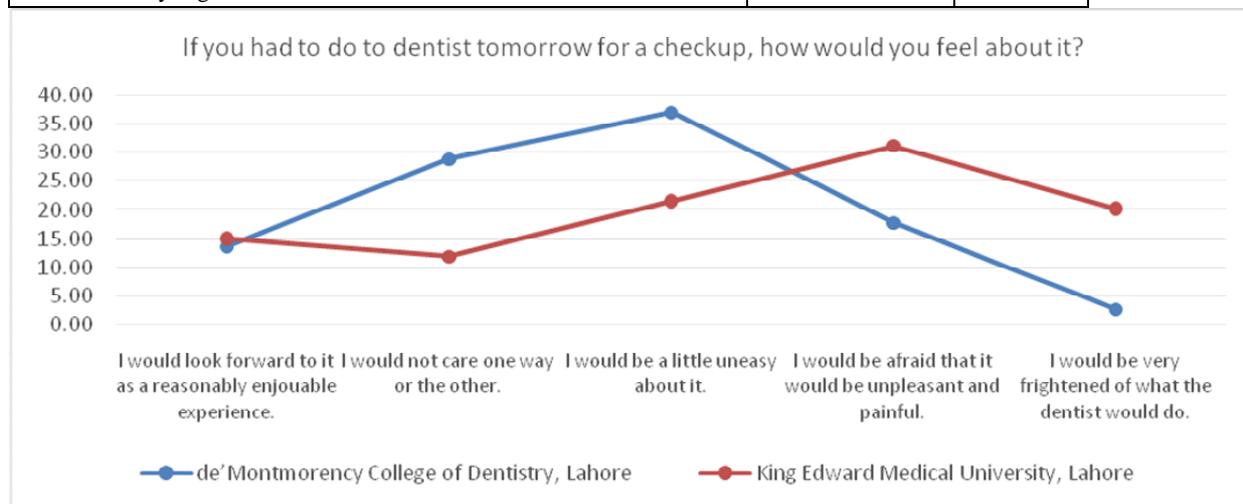
Age	de'Montmorency College of Dentistry, Lahore		King Edward Medical University, Lahore	
	Male (%)	Female (%)	Male (%)	Female (%)
22	42.86	38.46	30.36	30.11
23	19.05	36.54	48.21	43.75
24	33.33	21.15	21.43	17.05
25	4.76	3.85	0	5.68
26	0	0	0	3.41

Prevalence of Dental Anxiety in Medical and Dental Students



This table show that the ratio of anxious students of King Edward Medical University is more than de'Montmorency. Corah's question number 1 score showed that 36.99% students of de'Montmorency would be little uneasy about the dental visit whereas 31% students of King Edward Medical University would be afraid. As shown in the given table.

	de'Montmorency College of Dentistry, Lahore	King Edward Medical University, Lahore
I would look forward to it as a reasonably enjoyable experience.	13.70%	15.09%
I would not care one way or the other.	28.77%	12.07%
I would be a little uneasy about it.	36.99%	21.55%
I would be afraid that it would be unpleasant and painful.	17.81%	31.03%
I would be very frightened of what the dentist would do.	2.74%	20.26%

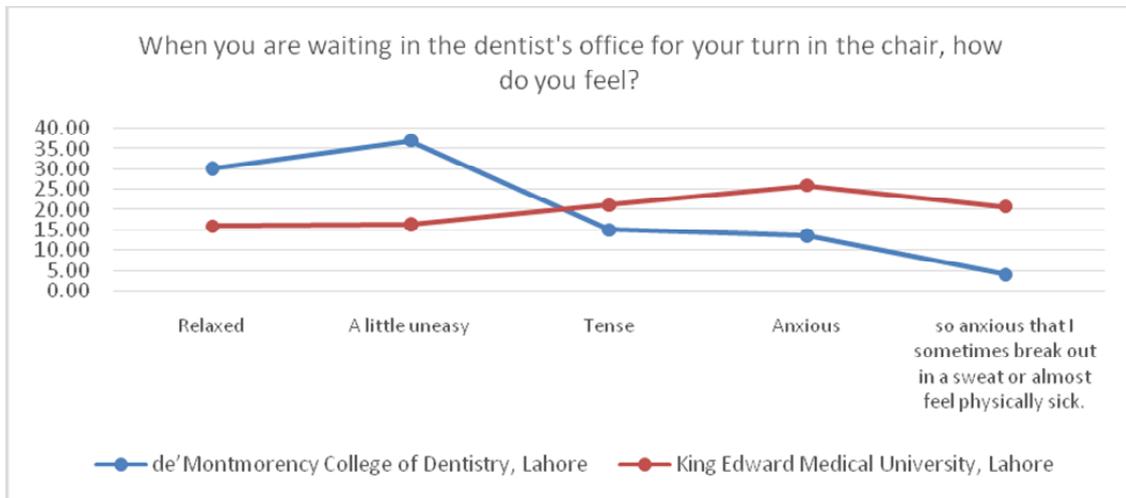


Corahs Question No. 2 showed that 36.99% students of de'Mont felt uneasy waiting in the dentist's office whereas 29.31% students of K.E.M.U. are given below:

	de'Montmorency College of Dentistry, Lahore	King Edward Medical University, Lahore
Relaxed	30.14%	15.95%
A little uneasy	36.99%	16.38%
Tense	15.07%	21.12%

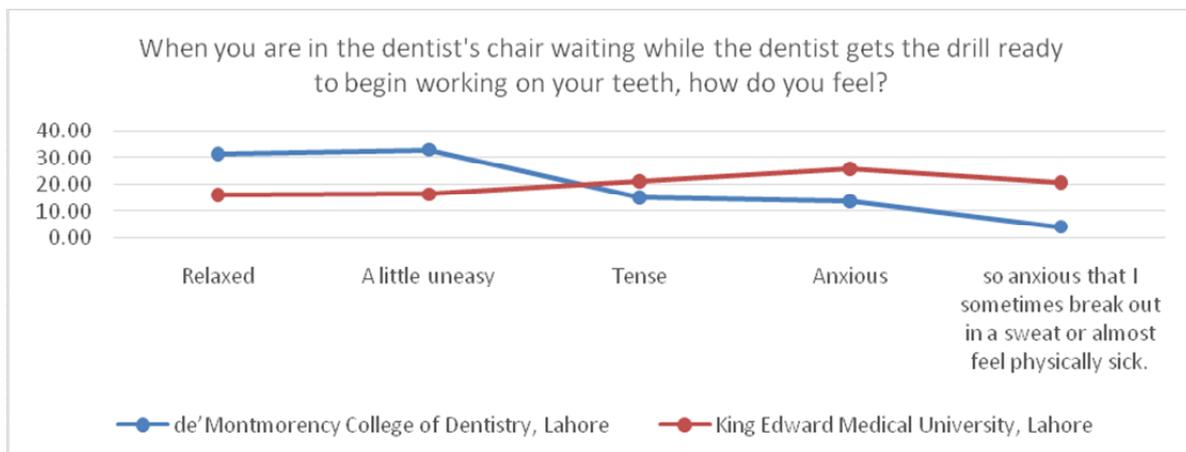
Prevalence of Dental Anxiety in Medical and Dental Students

Anxious	13.70%	25.86%
so anxious that I sometimes break out in a sweat or almost feel physically sick.	4.11%	20.69%



The score of Question No. 3 depicted that 32.99% students of de'Mont felt a little easy whereas 25.86% students of K.E.M.U were anxious as shown as given below :

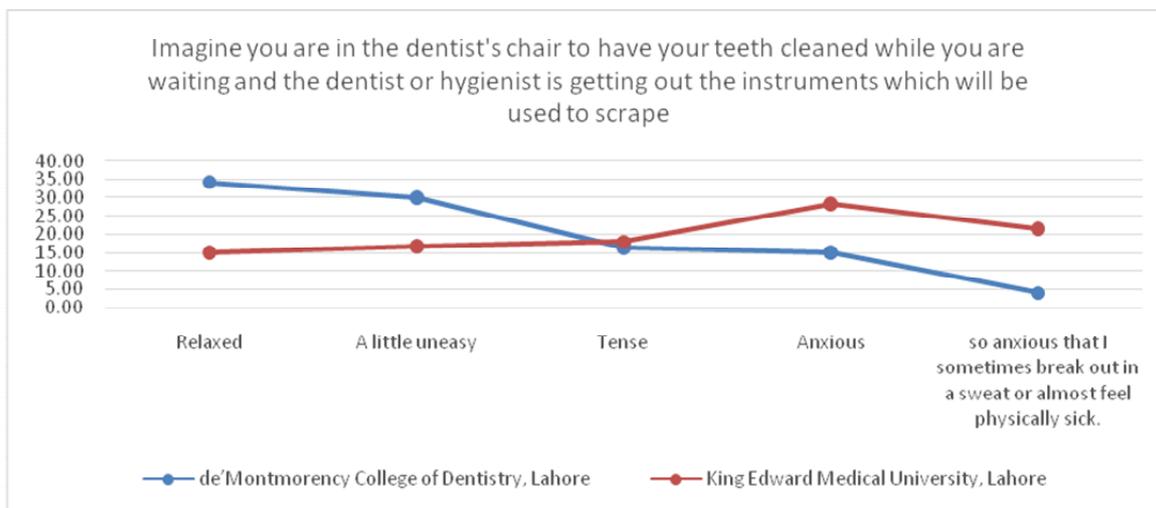
	de'Montmorency College of Dentistry, Lahore	King Edward Medical University, Lahore
Relaxed	31.51	15.95
A little uneasy	32.99	16.38
Tense	15.07	21.12
Anxious	13.70	25.86
so anxious that I sometimes break out in a sweat or almost feel physically sick.	4.11	20.69



The result of Question No. 4 showed that 34.20% students of de'Mont were little uneasy whereas 28.45% students of K.E.M.U. were anxious as shown as the given table

	de'Montmorency College of Dentistry, Lahore	King Edward Medical University, Lahore
Relaxed	34.20	15.09
A little uneasy	30.10	16.81
Tense	16.40	18.10
Anxious	15.10	28.45

so anxious that I sometimes break out in a sweat or almost feel physically sick.	4.11	21.55
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Pearson’s correlation was used to investigate the association between DAS & DFS. The Correlation between the question No. 1 with question No. 2, question No. 3 & question No. 4 was 0.745, 0.672 & 0.673 respectively (P = 0.00). Question No 2 showed association with question No. 3 & question No. 4 was 0.688 & 0.649 respectively (P = 0.00). Question No. 3 showed association with question No. 4 that was 0.652 (P = 0.00).

Table: Pearson's correlation representing interrelationship among variables.

	Question 1	Question 2	Question 3	Question 4
Question 1	-	.745**	.672**	.673**
Question 2	.745**	-	.688**	.649**
Question 3	.672**	.688**	-	.652**
Question 4	.673**	.649**	.652**	-

** . Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION:

Generally, communication with non-anxious patients is easy as compared to anxious patients who initially are afraid to seek any dental treatment and try to avoid it till the last resort. Lack of dental care leads to bad oral health with acute pain.

Since dental fear and anxiety is multidimensional it is difficult to study. Many scales and questionnaires have been developed over the years to measure DFA however no gold standard has been set. Corah's DAS has been reported the most widely used measure of dental fear and anxiety for adults. Thus DAS was selected in the study.

Students completed the questionnaires on their own and asked for help only if needed. Otherwise it would have been biased. Students who left the questionnaires empty were excluded from the analysis.

The sense of fear to different stimuli varies with each individual. The study revealed the fear of injection, drilling R.C.T and extraction are most common fears. The finding of the study suggest that the rate of dental anxiety is 19.81 among students of de'Montmorency College of Dentistry whereas 31.17 students of King Edward Medical University suffers from it .

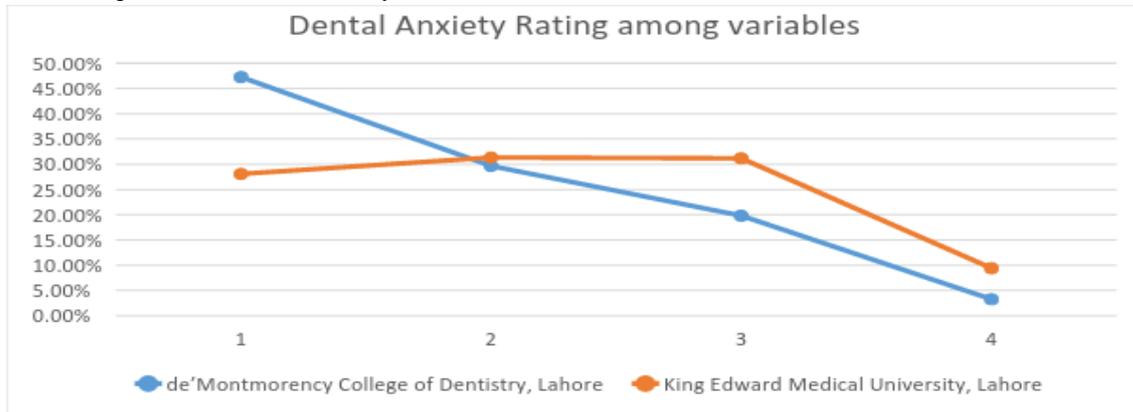
Dental Anxiety Rating among variables

Low	Moderate	High	Don't Know
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Prevalence of Dental Anxiety in Medical and Dental Students

de'Montmorency College of Dentistry, Lahore 47.26% 29.66% 19.81% 3.27%

King Edward Medical University, Lahore 28.08% 31.33% 31.17% 9.42%



To show the different anxiety levels towards different procedures a study was done between students of King Edward Medical University and de'Montmorency College of Dentistry is as Follows:

	Male vs Male	Female vs Female	Overall
1 Sound or vibration of the drill			
de'Montmorency College of Dentistry, Lahore (n=73)	M = 13 (17.81)	L = 25 (34.25)	M = 38 (52.05)
King Edward Medical University, Lahore (n=232)	H = 22 (9.48)	H = 55 (23.71)	H = 77 (33.19)
2 Not being numb enough			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 12 (16.44)	L = 19 (26.03)	L = 31 (42.47)
King Edward Medical University, Lahore (n=232)	H = 18 (7.76)	M = 61 (26.29)	M = 79 (34.05)
3 dislike the numb feeling			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 11 (15.70)	L = 27 (36.99)	L = 38 (52.05)
King Edward Medical University, Lahore (n=232)	L = 21 (9.05)	M = 66 (28.45)	M = 84 (36.21)
4 Injection ("novocaine")			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 8 (10.96)	L = 20 (27.40)	H = 26 (35.62)
King Edward Medical University, Lahore (n=232)	H = 27 (11.64)	H = 82 (35.34)	H = 109 (46.98)
5 Probing to assess gum disease			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 12 (16.44)	L = 29 (39.73)	L = 41 (56.16)
King Edward Medical University, Lahore (n=232)	M = 24 (10.34)	M = 56 (24.14)	M = 80 (34.48)
6 The sound or feel of scraping during teeth cleaning			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 12 (16.44)	L = 26 (35.62)	L = 38 (52.05)
King Edward Medical University, Lahore (n=232)	L = 19 (8.19)	M = 63 (27.16)	M = 82 (35.34)
7 Gagging for example during impressions of the mouth			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 9 (12.33)	L = 17 (23.29)	L = 26 (35.62)
King Edward Medical University, Lahore (n=232)	M = 21 (9.05)	M = 59 (25.43)	M = 80 (35.34)
8 X-Rays			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 15 (20.55)	L = 34 (46.58)	L = 49 (67.12)
King Edward Medical University, Lahore (n=232)	L = 26 (11.21)	M = 59 (25.43)	L = 80 (35.34)

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9 Rubber Dam			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 13 (17.81)	L = 27 (36.99)	L = 40 (54.79)
King Edward Medical University, Lahore (n=232)	L = 20 (8.62)	M = 62 (26.72)	M = 80 (35.34)
10 Jaws get tired			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 10 (13.70)	M = 20 (27.40)	L = 29 (39.73)
King Edward Medical University, Lahore (n=232)	L = 19 (8.19)	H = 58 (25.00)	H = 76 (34.76)
11 Cold air hurts teeth			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 11 (15.70)	L = 24 (32.88)	L = 35 (47.95)
King Edward Medical University, Lahore (n=232)	M = 26 (11.21)	H = 60 (25.86)	M = 82 (35.34)
12 Not enough information about procedures			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 11 (15.70)	L = 28 (38.36)	L = 39 (53.42)
King Edward Medical University, Lahore (n=232)	L = 23 (9.91)	M = 56 (24.14)	L = 74 (31.90)
13 Root canal treatment			
de'Montmorency College of Dentistry, Lahore (n=73)	M = 12 (16.44)	M = 21 (28.77)	M = 33 (45.21)
King Edward Medical University, Lahore (n=232)	H = 25 (10.78)	H = 74 (31.90)	H = 99 (42.67)
14 Extraction			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 10 (13.70)	H = 23 (31.51)	H = 32 (43.84)
King Edward Medical University, Lahore (n=232)	H = 31 (13.36)	H = 82 (35.34)	H = 113 (48.71)
15 Fear of being injured			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 10 (13.70)	M = 21 (28.77)	M = 31 (42.47)
King Edward Medical University, Lahore (n=232)	M = 10 (13.70)	H = 75 (32.33)	H = 99 (42.67)
16 Panic attacks			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 12 (16.44)	L = 28 (38.36)	L = 40 (54.79)
King Edward Medical University, Lahore (n=232)	M = 21 (9.05)	H = 58 (25.00)	M = 76 (32.76)
17 Not being able to stop the dentist			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 13 (17.81)	L = 30 (41.10)	L = 43 (58.90)
King Edward Medical University, Lahore (n=232)	L = 24 (10.34)	M = 70 (30.17)	M = 83 (35.78)
18 Not feeling free to ask questions			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 12 (16.44)	L = 28 (38.36)	L = 40 (54.79)
King Edward Medical University, Lahore (n=232)	L = 24 (10.34)	M = 67 (28.88)	M = 83 (35.78)
19 Not being listened to or taken seriously			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 14 (19.18)	L = 32 (43.84)	L = 46 (63.01)
King Edward Medical University, Lahore (n=232)	L = 24 (10.34)	L = 61 (26.29)	L = 85 (36.64)
20 Being criticized, put down or lectured to			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 12 (16.44)	L = 32 (43.84)	L = 44 (60.27)
King Edward Medical University, Lahore (n=232)	L = 20 (8.62)	M = 56 (24.14)	M = 74 (31.90)
21 Smells in the dental office			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 15 (20.55)	L = 29 (39.73)	L = 44 (60.27)

King Edward Medical University, Lahore (n=232)	L = 21 (9.05)	H = 64 (27.59)	H = 81 (34.91)
2 I am worried that I may need a lot of dental treatment			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 11 (15.70)	L = 30 (41.10)	L = 41 (56.16)
King Edward Medical University, Lahore (n=232)	L = 24 (10.34)	M = 55 (23.71)	L = 77 (33.91)
2 I am worried about the cost of the dental treatment I may need			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 11 (15.70)	L = 27 (36.99)	L = 38 (52.05)
King Edward Medical University, Lahore (n=232)	L = 23 (9.91)	L = 63 (27.16)	L = 80 (34.48)
2 I am worried about the number of appointments and necessary appointments and treatment; time away from work or the need for childcare or transportation			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 10 (13.70)	L = 18 (24.66)	L = 28 (38.36)
King Edward Medical University, Lahore (n=232)	L = 23 (9.91)	H = 61 (26.29)	H = 72 (31.03)
2 I am embarrassed about the condition of my mouth			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 9 (12.33)	L = 23 (31.51)	L = 31 (42.47)
King Edward Medical University, Lahore (n=232)	L = 29 (12.50)	H = 66 (28.45)	H = 82 (35.34)
2 I don't like feeling confined or not in control			
de'Montmorency College of Dentistry, Lahore (n=73)	L = 10 (13.70)	L = 25 (34.25)	L = 35 (47.95)
King Edward Medical University, Lahore (n=232)	M = 22 (9.48)	M = 55 (23.71)	M = 73 (31.47)

L = Low, M= Moderate, H=High,

The prevalence of dental anxiety among medical students was still high as compared to dental one which raises the potential for serious health consequences. This high level of anxiety will complicate the dental treatment because of low cooperation and dental fear of the patients. So the students with high dental anxiety and fear should be motivated with non-threatening processes such as oral prophylaxis. Students should be encouraged to discuss oral health and needs with their primary care clinicians and should be regular dental relationship.

The dental students had less fear and anxiety towards it because of their knowhow of the subject.

CONCLUSION:

Under limitation of the current studies it can be concluded that dental fear and anxiety remains the serious problem. The overall dental fear and anxiety among medical students was still high as compared to dental students therefore more preventive protocols and educational program are recommended.

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