

Original article

Prevalence of anxiety among newly admitted dental students

: A cross-sectional study

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Abstract

Background: Anxiety is inevitable for a student subjected to procure a course in a professional environment. In the play of emotions between the satisfaction of acquiring admission into a professional course and a pleasure of success, anxiety dominates. This forms the background for the present study.

Aims & objectives: A cross-sectional study was done among the newly joined dental students regarding their anxiety levels.

Materials & methods: After taking a verbal consent, the students were asked to tick the appropriate column in a printed format distributed to them containing 14 parameters of Hamilton anxiety scale. The results were statistically analyzed and graphically represented.

Result:

80 students took part in the study, of which 3 students got the total score of 1 of the Hamilton Anxiety Scale. One student got the highest score as 45. On evaluation of the total score, 92.5% students were in the range of mild anxiety levels, 6.25% were grouped under mild to moderate levels of anxiety and 1.25% of the students came in the range of moderate to severe anxiety levels. Taking the parameter of anxiety level into consideration, 18.75% of the students had no symptoms, 28.75%, 33.75%, 13.75% & 5% of the students had mild, moderate, severe and very severe forms of anxiety levels respectively. P value was calculated using chi square and it was 0.0001 which is extremely significant. Other parameters were also tabulated.

Conclusion:

The anxiety levels prevailing in the newly joined students are considerably high when compared to other studies which were evident from the significant p value. This might be considered as an alarming sign to take necessary precautions for the students who are newly admitted so that it may not have a deleterious effect on their academic performance.

Keywords: anxiety, dental students, Hamilton anxiety scale, emotions

Introduction

Medical college environment is a highly stressful zone where a student is subjected to a considerable psychological stress. ^[1] Many studies ^[2-8] have shown that there is a definite level of anxiety among the students, the reasons being multifold. A study on medical students of a private university in July 2007,

revealed the overall prevalence of anxiety and depression among females as 66.6% and in males as 44.4%. ^[2] Another study conducted among students from 1st to 4th year disclosed prevalence of anxiety and depression as 60%, particularly more for 1st year students (66%). ^[4] In a different study by Vaidya et al proved that anxiety was present in the newly joined

medical students with an inclination towards female gender. ^[6] Hence the present study was conducted among the newly admitted dental students to observe the anxiety levels.

Materials and methods

After taking an informed consent, a self administered questionnaire was circulated among the students in the class room and they were asked to mark against the appropriate answer. The printable format of Hamilton anxiety scale was used for this purpose. ^[9]The Hamilton anxiety scale is composed of 14 parameters that include various emotions as well as autonomic symptoms. Each parameter is analyzed separately and graphically represented. Each symptom was given a score - 0(not present), 1(mild), 2(moderate), 3(severe) and 4(very severe). The total score range is 0-56, of which, score less than 17 indicate mild severity, 18-24 mild to moderate

severity and 25-30 moderate to severe level of anxiety.

Result

80 students participated in the study of which 74 students got a total of less than 17, 5 pupils scored between 18-24, and only 1 student was recorded 45. The least score from the study was found to be 1, which was given by 3 students. Expressing as percentages, 92.5% got a score indicating mild anxiety levels, 6.25% fell into the category of mild to moderate anxiety levels and 1.25% of the students showed moderate to severe symptoms of anxiety levels. A study by Dr.Reshu Gupta ^[14] etal, by using the Hamilton anxiety scale revealed the following results: 46.7% of the students complained no symptoms of anxiety and 37.3%,14%,2% &0% reported mild,moderate,severe and very severe forms of anxiety respectively.

Table 1: HAMILTON ANXIETY SCALE DEPICTING NUMBERS AGAINST EACH SYMPTOM

S No.	Symptom	Not present	Mild	Moderate	Severe	Very severe
1.	Anxiety	15	23	27	11	4
2.	Tension	20	22	21	12	5
3.	Fear	29	30	7	10	4
4.	Insomnia	47	17	12	3	1
5.	Intellectual symptoms	33	24	18	2	3
6.	Depressed mood	39	24	12	4	1
7.	Muscular symptoms	47	21	9	3	0
8.	Sensory symptoms	57	19	2	1	1
9.	Cardiovascular symptoms	72	6	1	0	1
10.	Respiratory symptoms	72	5	2	0	1
11.	Gastrointestinal symptoms	55	15	7	3	0
12.	Genitourinary symptoms	69	8	3	0	0
13.	Autonomic symptoms	37	30	8	5	0
14.	Behaviour at interview	36	26	13	3	2

TABLE 2: VARIANTS IN HAMILTON ANXIETY SCALE EXPRESSED AS PERCENTAGE

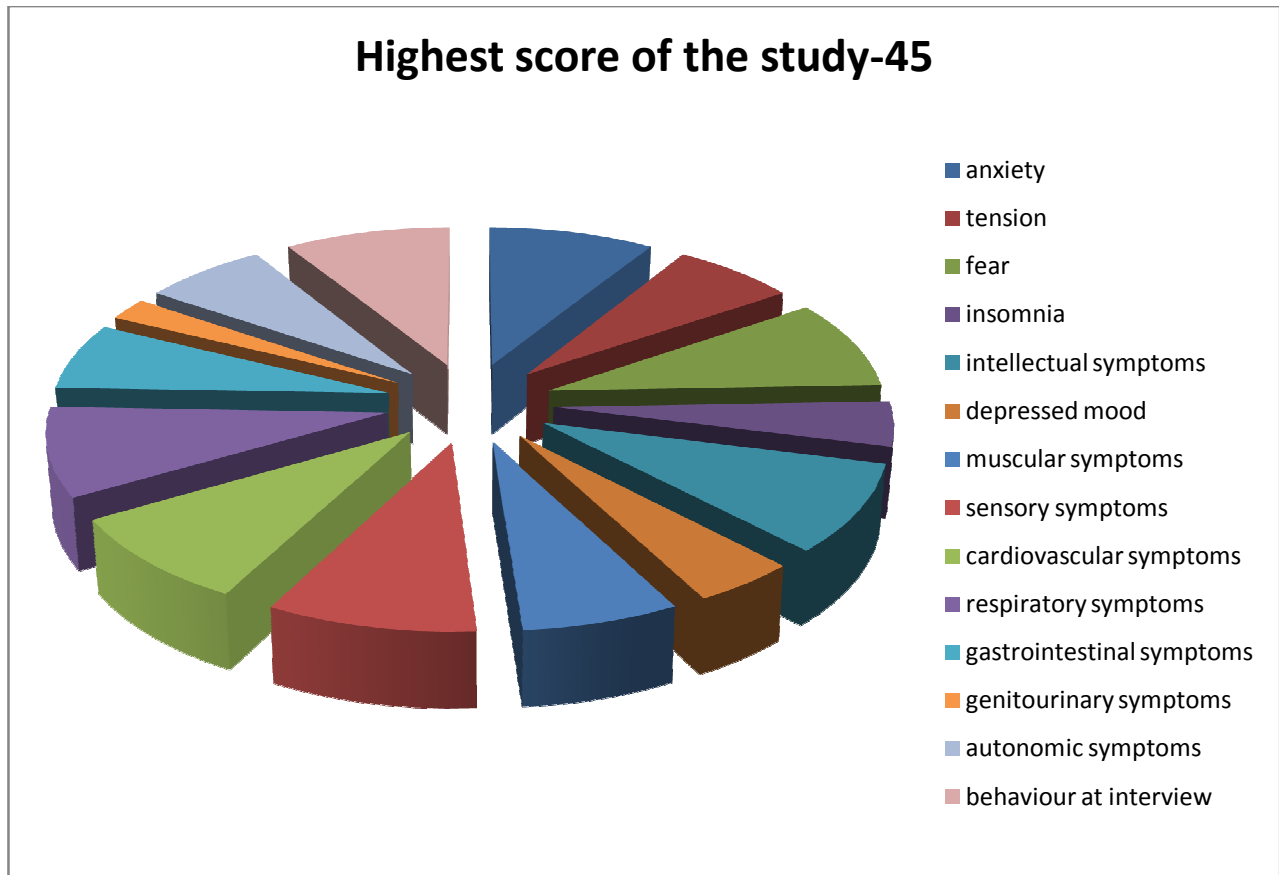
S No.	Symptom	% Not present	% Mild	% Moderate	% Severe	% Very severe
1.	Anxiety	18.75	28.75	33.75	13.75	5
2.	Tension	25	27.5	26.25	15	6.25
3.	Fear	36.25	37.5	8.75	12.5	5
4.	Insomnia	58.75	21.25	15	3.75	1.25
5.	Intellectual symptoms	41.25	30	22.5	2.5	3.75
6.	Depressed mood	48.75	30	15	5	1.25
7.	Muscular symptoms	58.75	26.25	11.25	3.5	0
8.	Sensory symptoms	71.25	23.75	2.5	1.25	1.25
9.	Cardiovascular symptoms	90	7.5	1.25	0	1.25
10.	Respiratory symptoms	90	6.25	2.5	0	1.25
11.	Gastrointestinal symptoms	68.75	18.75	8.75	3.75	0
12.	Genitourinary symptoms	86.25	10	3.75	0	0
13.	Autonomic symptoms	46.25	37.5	10	6.25	0
14.	Behaviour at interview	45	32.5	16.25	3.75	2.5

TABLE 3: INDIVIDUAL TOTAL SCORES OF HAMILTON ANXIETY SCALE

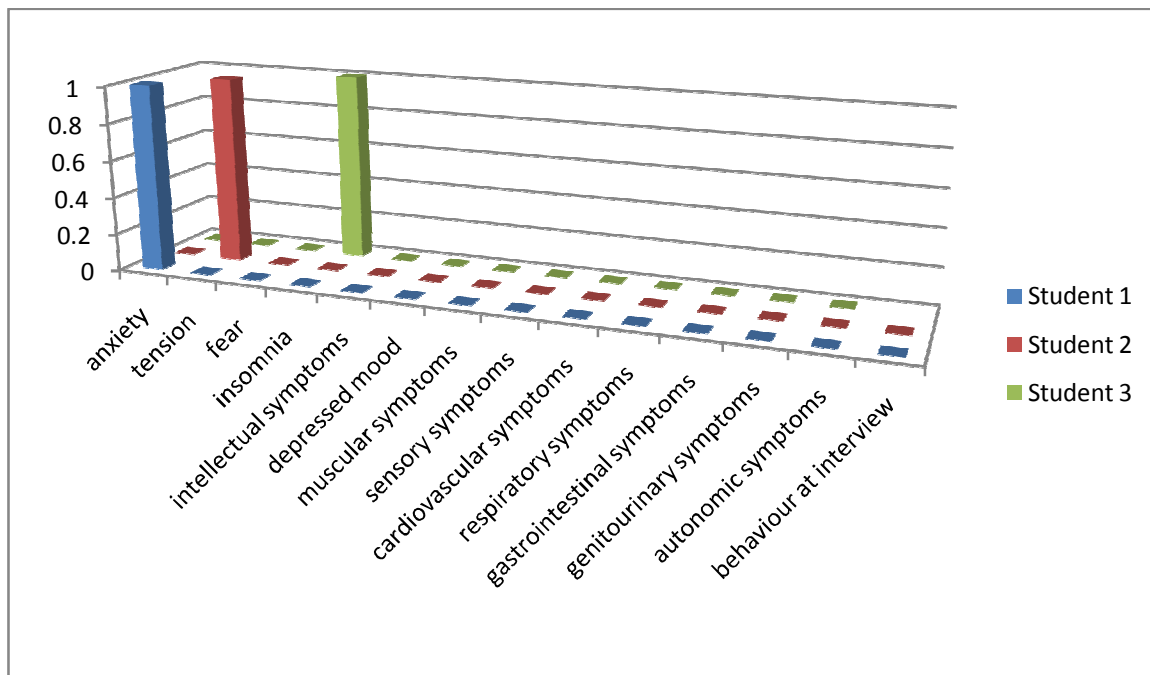
14	15	29	6	3	4	8	6	13	11
5	<i>1</i>	7	10	9	<i>1</i>	5	7	16	12
16	17	11	3	17	9	7	6	13	12
4	5	15	16	13	10	45	8	15	<i>1</i>
24	20	8	3	9	11	4	4	3	17
22	10	13	11	8	6	13	7	3	11
11	10	9	5	12	3	13	14	10	12
8	10	7	7	5	19	14	9	5	8

The least score was 1 (shown in italics), given by 3 students from the study. The highest score recorded was 45 (shown in bold) for which the 14 parameters of the Hamilton anxiety scale were depicted below as a pie diagram.

Graph 1: Pie diagram showing the score of various parameters



Graph 2: Bar chart depicting the parameters of least score



P value is calculated by using chi square and degree of freedom. The study by Reshu Gupta et al^[14] was taken as a criterion of expected results for calculating p value. Chi square (X^2) was calculated using the formula:

$$\text{CHI SQUARE} = \sum \frac{(O - E)^2}{E}$$

$X^2 = 115.56$; degree of freedom $n=4-1=3$, p value = 0.0001 which is extremely significant statistically.

Discussion

Most of the students joining the dental course are in a state of depression of missing the MBBS seat. Some of the students strongly hope for MBBS admission in second or third counselling. Added to this, the entirely new atmosphere of the medical college, the hectic curriculum, different locations of lecture galleries, variable methods of teaching programmes obviously pose them to various anxiety levels. The present study revealed the high prevalence of anxiety levels among the newly joined dental students which is considered as extremely significant statistically. When compared to the values of the previous study, the anxiety levels were very severe in 5% of the students in the present study where it was 0% in the previous study. Similar increased levels were observed for other parameters too. This could be an

alarming sign for the students to face the anxiety in the new premises reflecting badly on their academic performance.

Conclusion

From the present study, there is a clear-cut evidence of high prevalence of anxiety levels among the newly joined dental students with extremely significant p value. Measures need to be taken to include stress relieving programmes in the curriculum like lectures by Psychologists, encouraging sports and other extracurricular activities by providing those facilities, introducing mentor-system so that the students feel free to express their opinion individually to their mentor etc. Schedules need to be modified to acquire their studies in a stress free environment. These may be considered as some of the steps to reduce the anxiety levels in newly admitted students.

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