

Short Communication

The Levels of Anxiety Among Undergraduate Preclinical, Clinical, and Postgraduate Dental Students

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Introduction: Anxiety in our modern world has been a common subject and a major topic disturbing students in many different specialties. Anxiety is an emotion characterized by an abnormal feeling of apprehension usually associated with physical signs such as increased pulse rate, sweating, fatigue, tension, and many other signs. "Studies have observed a higher anxiety levels among dental students". **Aims of the study:** To compare the levels of anxiety between dental preclinical, clinical, and postgraduate students. **Materials and Methods:** Study design: a cross-sectional study. Study subject: Undergraduate Preclinical, Clinical, and Postgraduate Dental Students at Saudi Universities. The target sample size will be around 384. **Results:** 280 participants responded to the questionnaire. The Mean age of participants was 24 and SD was 2.97. The levels of anxiety significantly differed among students in different levels of studies ($p=0.000$). **Conclusion:** Levels of anxiety are found to be higher in students in the preclinical dental education levels.

Keywords: Anxiety, Preclinical, Postgraduate, Dental students.

INTRODUCTION

Anxiety in our modern world has been a common subject and a major topic disturbing students in many different specialties. Anxiety is an emotion characterized by an abnormal feeling of apprehension usually associated with physical signs such as increased pulse rate, sweating, fatigue, tension, and many other signs (Major et al., 2000). "Studies have observed higher anxiety levels among dental students" (Cooper et al., 1987) Dental students can experience different levels of anxiety and stress in their preclinical and clinical period.

A study that determines and gives information about the different anxiety levels among different levels of dental students, which can provide feedback on the stress levels of dental students. "The dental educational system is composed of five years of dental schooling" (Al-Samadani and Al-Dharrab., 2013). The first two years for the dental student are considered the preclinical period, which consists of studying the general sciences with no clinical involvement, the remaining three years are the clinical period, which is when the dental student enters the clinical environment, then is followed by a one year of internship (Basudan et al., 2017). After

obtaining the dental license, in the postgraduate education, the doctor can continue his study by becoming a specialist which can range from 2-5 years of study.

AIMS OF THE STUDY

To compare the levels of anxiety between dental preclinical, clinical, and postgraduate students.

NULL HYPOTHESIS

There is no difference in the level of anxiety among dental preclinical, clinical, and postgraduate students.

BACKGROUND AND RATIONALE FOR THE STUDY

Anxiety can significantly affect the student's life and academic performance as it may lead and develop into a serious mental issue. It is known that dental students have higher anxiety, this

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study aims to measure different levels of anxiety among different levels of dental students.

MATERIALS AND METHODS

Study design: a cross-sectional study.

Study subject: Undergraduate Preclinical, Clinical, and Postgraduate Dental Students at Saudi Universities. The target sample size will be around 384.

Inclusion criteria

- Dental students (pre-clinical, clinical, and postgraduate)
- No history of psychological disorders
- Students attending Saudi universities
- No systemic diseases or medications

Methods

In this study Beck Anxiety Inventory (BAI) has been used to measure the level of anxiety among dental students. This self-

reported questionnaire has been distributed through e-mails and social media using Google forms. BAI was already validated to measure anxiety (Fydrich et al., 1992). To test the reliability of the questionnaire, 20 students have been asked to fill the questionnaire twice within one week. The results of the two measurements have been compared using Cronbach's alpha. Data collection has been done over a period of 4 weeks.

Statistical Analysis

Data analysis has been performed using the Kruskal-Wallis test with a cut-off point of ($P < 0.05$). Statistical Package for Social Sciences v.27 (SPSS) software has been used for the statistical analysis (SPSS, IBM, Armonk, NY)

RESULTS

280 participants responded to the questionnaire. the Mean age of participants was 24 and SD was 2.97. The levels of anxiety significantly differed among students in different levels of studies ($p = 0.000$). Detailed pairwise differences are shown in Table 2.

Table 1 Mean and SD of the level of anxiety of the study

Level of study	Number	Mean	SD
Preclinical	45	1.5778	0.72265
Clinical	174	1.2184	0.55715
Intern	26	1.1923	0.56704
Postgraduate	35	1.1143	0.3228

Table 2 Pairwise comparison of the level of anxiety among different study levels

Sample1-Sample2	Test Statistic	Std/. Error	Std. Test Statistics	Significance
PG-Intern	2.181	14.298	0.153	1.000
PG-Clinical	6.396	10.231	0.625	1.000
PG-Preclinical	46.454	12.446	3.732	0.001
Intern-Clinical	4.214	11.612	0.363	1.000
Intern-Preclinical	44.273	13.604	3.254	0.007
Clinical-Preclinical	40.058	9.236	4.337	0.000

DISCUSSION

Beck Anxiety Inventory is well established and validated questionnaire to measure the levels of anxiety. In this study, the levels of anxiety were investigated in dental students attending different levels of undergraduate and postgraduate dental education. It was found that preclinical dental students had the highest levels of anxiety compared to undergraduate clinical, interns, and postgraduate students. However, no differences were found between undergraduate clinical, interns, and postgraduate dental students.

Reports on anxiety among dental students reported different prevalence rates. Basudan et al. (2017) found that 66.8% of dental students in their samples had anxiety. Abualshamat et al. (2015) also reported a prevalence of 66.4% of dental and medical students suffer from anxiety. While Alahmadi (2019) in a systematic review of studies investigating anxiety among college and school students found that between 34.9% and 65% of students had anxiety. In this study, 81.1% of the sample reported low anxiety, 11.8% moderate anxiety and 7.1% reported severe anxiety.

LIMITATIONS OF THE STUDY

The time available to conduct this study was short, so the sample size was not enough to draw conclusions.

RECOMMENDATIONS

It is recommended that this study be continued with a larger sample size that is representative of the study population. Etiology and mitigation protocols should also be investigated to reduce the levels of anxiety among dental students, especially preclinical students who suffered higher levels compared to their counterparts.

CONCLUSION

Levels of anxiety are found to be higher in students in the preclinical dental education levels.

CONFLICT OF INTEREST

There was no conflict of interest among the authors.

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