



## Evaluation of the Rate and Causes of Stress in Bandar Abbas Dental Students in 2016 in Different Clinical Units and Its Relationship with the Performance (Performance Score) of Students in Each Department

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### ABSTRACT

Stress has a broad meaning that is used to define different mental conditions, and it has been proven that dentistry is one of the most anxieties among the fields of study. Considering the importance of dental students' stress and its effect on learning and practice this study was conducted to determine the rate and stress factors of Bandar Abbas dental students in 1395. This study was a descriptive-analytic study. The stress level was obtained by using the DASS-21 questionnaire and the rate of performance based on the clinical assessment score. The stress level was assessed by a researcher using a questionnaire. Data were analyzed by SPSS version 24 and analyzed by ANOVA, Chi-square, Spearman correlation coefficient and T-test. This research was conducted on 122 third, fourth, fifth and sixth year students of Bandar Abbas dental school in the academic year 1395-1396. The total number of questionnaires was 100 of which 48 were male and 52 were female. This study showed that there is a significant relationship between the degree of student's education and stress ( $P = 0.005$ ) and between gender and stress ( $P < 0.001$ ) and between university entrance and stress ( $P = 0.003$ ). The highest score of practical lessons in the pathology department was obtained with a mean of  $17.04 \pm 2.42$  and the lowest score was achieved with a mean score of  $14.4 \pm 1.7$ . Endodontic courses with the mean of  $2.16 \pm 0.69$  out of 4 scores had the highest stress levels. After that the lessons of restoration and prosthesis were in lower ranks and the least stress belonged to community dentistry, pathology and radiology courses respectively. These factors lead to more stress: Completion and high requirements require the greatest amount of stress in periods of periodontics, regeneration, pediatrics and endodontics. Dissatisfaction with clinical evaluation is in the second rank of stress factors in surgical and endodontic courses. Validation of taste sometimes seen in some practical lessons is very anxious and sometimes confronts students with a lot of psychological problems.

**Keywords:** Stress, Students, Dentistry, Clinical Function, Learning, Evaluation, Psychological Problems

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academic and clinical competencies and interpersonal skills [2, 3].

### INTRODUCTION

Stress is a very broad term that has been used imprecisely to describe different psychological conditions [1]. Dental education has been asserted as one of the most challenging, demanding, and stressful fields of study, as dental students are expected to acquire diverse competencies such as

Research has shown that individual characteristics such as personality type and emotional intelligence, as well as social support (4) are factors that serve to mediate and modify stress responses. Sociocultural and gender differences have also been reported [5-7]. university students are vulnerable to psychological problems due to the various stressors and demands of their education [8]. This

is especially true for those students in the health care fields who face additional challenges (e.g., providing care for patients, including performing treatments that could cause harm if performed inappropriately) compared to other students [9-11].

The results of that study showed that the top three stressors for students were examinations and grades, full loaded day, and lack of time for relaxation [12]. Over the last three decades, numerous studies have examined dental students' sources of stress in diverse educational settings [13]. Workload, clinical training, assessments, and the academic environment are factors that have been cited most [4, 14-16].

Academic stress may lead to reduced or compromised performance for students. Previous research has found that greater academic stress is associated with lower grades [17] and student burnout and is negatively associated with academic achievement [18].

Students with low emotional intelligence scores perceived more stress when dealing with patients in their training clinics. Incidental to the primary focus of their research on emotional intelligence, these researchers found that third- and fourth-year students had higher levels of stress than preclinical students in their first or second year of training [19].

Students belonging to lower socioeconomic strata and relying on loan support demonstrated higher perceived stress in most domains compared to those in higher strata and using own funds, independent of other curricular and sociodemographic factors [20].

On the other hand, generally experience stress related to difficulties in meeting procedural clinical requirements [21-25]. Long hours and heavy workload were also noted in several studies as contributing to a stressful learning environment [16, 22-29]. Heavy workload pressures result in a fear of failure due to concerns about falling behind in course requirements [24, 27, 29].

Researchers in both dental and medical education have reported student frustration with the lack of social support from their schools or an inadequate amount of time for rest and relaxation [22, 30-33].

Both dental and medical students also suffered stress due to a perceived lack of competence in being able to treat patients. Upperclassmen in dental school demonstrated stress related to insecurity about professional failure [19]. Stress among predoctoral dental students has been a subject of interest for researchers from all over the world [12, 23]. Dental students have been identified as having a higher level of stress than medical students [10, 13].

During their training, predoctoral dental students develop and hone a plethora of clinical, theoretical, critical thinking, and interpersonal skills while functioning in overcrowded schedules [34]. Dental students need to obtain training in both theoretical and surgical aspects of dental care, including performing treatments on patients to qualify as competent dental professionals. In the preclinical years, dental students need to manage laboratory requirements that require a significant amount of time and manual skills. The clinical part of their training requires that students find their patients, be responsible for their care, and perform irreversible dental treatments on those patients, in addition to their clinical requirements and exams, including both internal exams and external licensing exams. All these factors collectively contribute to significant amounts of stress for dental students that put them at additional risk for psychological problems like anxiety, depression, and burnout [9, 11, 35, 36].

## MATERIALS AND METHODS

This study is a descriptive-analytic study that was conducted on students of Bandar Abbas dental academy who entered the clinical department. The stress level was assessed by Dass21 questionnaire and the degree of performance according to the clinical sections score. Data were entered by SPSS software version 24 and analyzed by ANOVA, Chi-square, Spearman correlation coefficient and T-test.

## RESULTS

The present study was conducted on 122 third, fourth, fifth and sixth year students of Bandar Abbas dental school in the academic year 1395-1396. The number of questionnaires was 100 series (81.96%) and among them 48 (48%) were boys and 52 (52%) girls. In this study 60% of

normal people and 20% were moderate in terms of depression. Also, in terms of anxiety, 52% were normal and 16% had severe anxiety and 64% normal and 20% were moderate in terms of stress.

There was a significant relationship between the time of students education and stress ( $P = 0.005$ ) and gender and stress ( $P < 0.001$ ) as well as between university entrance and stress ( $P = 0.003$ ). In other variables this relationship was significant Failed. In the study of students in terms of acquired scores in practical units, the highest score was in the pathology department with a mean of  $17.04 \pm 2.42$  and the surgical lesson with the mean score of  $14.43 \pm 1.7$  was the lowest and then there were degrees of endodontics and orthodontics. In assessing the total stress level in each lesson, the endodontic had a mean of  $0.69 \pm 2.16$  out of 4 scores with the highest stress levels followed by restoration courses and prosthesis which were ranked next. In addition, the least stress levels belonged to general dentistry, pathology and radiology courses.

#### DISCUSSION AND CONCLUSION

Based on the results there was a significant relationship between stress and academic year gender and the way of entering university but there was no significant relationship between stress and place of living and marital status. Stress was seen among students in the fourth and then third years which can be attributed to newcomers to clinical conditions and new situations. The lowest stress levels were recorded for the last year students which can be used to increase self-esteem in patient treatment and increase their skills. Also in a study conducted by Akbary *et al*, in Mashhad University of Medical Sciences in 1388 high stress was observed among fourth-year students [37]. Most male and female students (over 60%) were at the normal level of stress and 16.7% of boys were very severe and 15.4% of girls had severe stress. Another study that was carried out in 1968 at Shahid beheshti School of Dentistry with the aim of estimating the stress level of dentistry students by Mr. Koshky *et al*, found higher levels of stress for girls [38]. The difference between these two reviews can be attributed to the difference in ranking and comparison. In the current study, if the high stress baseline is a combination of moderate, severe and severe stress, high stress levels will be recorded for girls.

This study did not show a significant relationship between the effect of marital status on students stress but the level of stress among single people was much higher than that of married people. In addition, there was no significant relationship between Koshky *et al*, [38].

In this study there was no meaningful relationship between living conditions and stress but the level of stress among those in the dormitory is higher than those who have a private home or live with their families. In the study of Amini *et al*, In 1391 this difference was observed and of course a significant relationship was observed [39]. The severity of stress among students who continue to be self-educated pardis is 4 times higher than those enrolled in college and state scholarship but in general they showed abnormal stress among the 100 evaluated students. 36% of students have moderate, severe and very severe stress so they need more attention and their dimensions should be checked. In a study conducted by Akbary *et al*, about the stress of university dentistry students in Mashhad in 138, 52 percent of students reported abnormal stress [37]. This rate was 57.5% in the study of Jafarzadeh his colleagues. In the study of Mr. Amini *et al*, on dental students at Kerman University of Medical Sciences, this figure is up to 36.9% [39].

In general, the highest stress level (average of 5 above) was observed in the course of endodontics and after that the highest stress was reported for restorative lessons and denture prostheses respectively. Also the lowest recorded stress relates to general dentistry, pathology and radiology courses. Another study was conducted in Kerman University of Medical Sciences in 1394 with the aim of assessing stress and anxiety among students along with the separation of clinical sections by Jafarzadeh *et al*, in which they stated that stress in surgical and endodontic and oral health departments more than the other sections.

An interesting result from one of the questions in the questionnaire which most often left unanswered was that if other factors cause your stress in each group, please list the name. Of the 16 students who answered this question 4 had a shortage of patients and 12 had inappropriate behavior of some of the professors. In fact the study of the tastes that are sometimes observed in some practical lessons is very stressful and

sometimes confronts students with a lot of psychological problems because it may lead to a better score for better communication with the teacher due to clashes between professors and students and students Vice versa In another study that was conducted by Koshky *et al.*, at the dental faculty of Shahid Beheshty University of Medical Sciences in 139, the results showed that the stress factors were the end of term exams, the lack of time required for internal duties or requirement the high volume of the syllabus And the lack of patients in some health care departments is fearful of the inability to accept a course unit and different faculty attitudes toward student work [38].

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