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Research Article

Exam-Related Anxiety Levels among Iraqi Medical Students in Baghdad City

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Abstract

Background*:** Exam-related anxiety is a set of responses that include excessive worry, depression, nervousness, and irrelevant thinking from an individual's experience of assessment or testing and its outcome. ***Aim: This study was designed to evaluate exam-related anxiety among medical students in Baghdad City. ***Methods***: This study utilized a cross-sectional survey design and was conducted by administering an online questionnaire to medical students (medicine, dentistry, and pharmacy). ***Results***: A total of 530 students participated in the survey; 20.8% of them came from medical colleges, 41.7% from dentistry schools, and 37.5% from pharmacy schools. Around 27.1% of the respondents reported positive test-related anxiety. ***Conclusion***: Exam-related anxiety is frequent among Iraqi medical students in Baghdad and highlights the need for education programs to reduce this anxiety.

Keywords: Exam-related anxiety, Medical students, Online questionnaire, Anxiety reduction programs.

مستويات القلق المرتبطة بالامتحانات بين طلاب الطب العراقيين في مدينة بغداد

الخلاصة

الخلفية: القلق المرتبط بالاختبار هو مجموعة من الاستجابات التي تشمل القلق المفرط والاكتئاب والعصبية والتفكير غير ذي الصلة من تجربة الفرد في التقييم أو الاختبار ونتائجه. **الهدف**: صممت هذه الدراسة لتقييم القلق المرتبط بالامتحانات بين طلاب الطب في مدينة بغداد. الطرائق: استخدمت هذه الدراسة تصميم مسح مقطعي شامل وأجريت من خلال إدارة استبيان عبر الإنترنت لطلاب العلوم الطبية (الطب وطب الأسنان والصيدلة). **النتائج**: شارك في الاستطلاع ما مجموعه 530 طالبا؛ 20.8٪ منهم جاءوا من كليات الطب، و41.7٪ من كليات طب الأسنان، و37.5٪ من كليات الصيدلة. وأفاد حوالي 27.1٪ من المجيبين عن قلق إيجابي مرتبط بالاختبار. **الأستنتاج**: القلق المرتبط بالامتحانات متكرر بين طلاب الطب العراقيين في بغداد، ويسلط الضوء على الحاجة إلى برامج تعليمية للحد من هذا القلق.

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INTRODUCTION

Apprehension is characterized by a sense of dread or anxiety about the future or present, as well as a variety of autonomic signals and physical symptoms such as tremors, sweating, and palpitations. Excessive worry, depression, nervousness, pointless thinking, and fear in evaluative situations are all symptoms of "exam or test-related anxiety," which is characterized by a severe fear of poor exam performance [1] and can manifest as a variety of responses such as excessive worry, depression, nervousness, pointless thinking, and fear in evaluative situations that affect their learning and performance [2]. Exams are currently the major tool for grading students in several countries' new educational systems. This raises concerns about the possibility of not achieving one's key competencies. Students commonly fail tests despite putting forth considerable effort and studying [3]. There is an inverse relationship between students' mental health and their academic performance, according to several studies [4,5]. The four main sources of reported stress that may be associated to exam anxiety are lifestyle issues, psychological characteristics, studying style, and a lack of critical information [6]. Many authors [7-9] have indicated that lifestyle-related issues such as lack of sleep, insufficient physical activity, poor food, and ineffective time management are connected variables contributing to exam or test anxiety. Medical students are also stressed by excessive course loads, irrational notions, and the prolonged duration, nature, and timing of assessments [10,11,8]. Exam-related anxiety is linked to a lack of a sufficient study strategy, i.e., an adequate studying style, as well as inconsistent topic coverage, which could indicate a lack of review and reviewing of course material learnt, and studying all night before examinations, according to numerous research. Exam-related anxiety is also linked to psychological concerns such parental pressure and irrational thinking about examinations, exam results, and fears of not being able to manage an exam situation (e.g., turning blank during an exam) [12-16]. Both before and throughout the assessment period, medical students have been observed to be stressed [11]. Stress is described as a person's attempt to justify external circumstances that are incompatible with his or her psychological and physiological demands. Physical or psychological qualities of one's social surroundings may make or break adaptation to the environment, depending on their impact on the individual. Students grow mentally and physically fatigued as adjustment becomes more difficult [11,17]. Elevated anxiety is both natural and a required response. Excessive worry, on the other hand, might destroy results if not managed effectively. Numerous studies have connected exam-related anxiety to low academic achievement. Despite their intelligence, students with high exam-related anxiety have been reported to perform worse than those with low anxiety levels [18–22]. Because of fast forgetting and perceptual errors, students with high anxiety have a low success rate [23]. Exam-related anxiety has been connected to a number of negative consequences, including lower desire and focus, which raises the risk of dropping out of school [24]. As a result, it is blamed for a lot of student failures as well as certain medical difficulties [25,18]. According to a review of the literature, no study in Iraq has focused on this topic. The goal of this research was to look into exam anxiety among Iraqi medical students in Baghdad.

METHODS

The study was conducted using an online questionnaire administered to medical students and was planned as a cross-sectional observation design (medicine, dentistry, and pharmacy). The project was approved as a graduation project by Al-Rafidain University College, Faculty of Pharmacy's Research Ethics Committee. The information was gathered from various universities in Baghdad, Iraq. A previously validated test-anxiety questionnaire was converted into a scale that quantified test anxiety [25]. Test anxiety was assessed using sixteen items (Appendix 1), with one point awarded for each true answer except 10 and 13, and one point awarded for each erroneous answer on 10 and 13, with scores of 12 or more indicating a proclivity for test anxiety. Variables such as age and college attendance were gathered. The cumulative anxiety score for each student runs from 0 to 16. The data was gathered on November 2021. The data was processed and displayed as plain numbers and percentages using the SPSS software (version 24.0).

RESULTS

A total of 530 students took part in the research. About 110 (20.8%) students came from medical schools, 221 (41.7%) from dental schools, and 199 (37.5%) from pharmacy schools. About 3 (0.6%) first stage, 212 (40.0%) second stage, 81 (15.3%) third stage, 95 (17.9%) fourth stage, 132 (24.9%) fifth stage, and 7 (1.3%) sixth stage were included in this study (Table 1).

Table 1: Characteristics of the Sample of the medical students enrolled in the study (*n*=530)

College	***n*(%)**
Medicine	110(20.8)
Dentistry	221(41.7)
Pharmacy	199(37.5)
Stage of study	
First	3(0.6)
Second	212(40.0)
Third	81(15.3)
Fourth	95(17.9)
Fifth	132(24.9)
Sixth	7(1.3)
Score ≥12 points indicates a tendency to have test anxiety	144(27.1)

A significant number of students, 144 (27.1%), report test-related anxiety (Table 2).

Table 2: Distribution of test anxiety frequency among medical students (*n*=530)

Test Anxiety Questionnaire	Response *n*(%)	
	Yes	No
1. While taking an important exam, I perspire a great deal.	266(50.2)	264(49.8)
2. I get to feel very panicky when I have to take a surprise exam.	376(70.9)	154(29.1)
3. During tests, I find myself thinking of the consequences of failing.	313(59.1)	217(40.9)
4. After important tests, I am frequently so tense that my stomach gets upset.	322(60.8)	208(39.2)
5. While taking an important exam, I find myself thinking of how much brighter the other students are than I am.	307(57.9)	223(42.1)
6. I freeze up on things like intelligence tests and finals.	274(51.7)	256(48.3)
7. If I were to take an intelligence test, I would worry a great deal before taking it.	368(69.4)	162(30.6)
8. During course examinations, I find myself thinking of things unrelated to the course material.	377(71.1)	153(28.9)
9. During course examinations, I frequently get so nervous that I forget facts that I really know.	398(75.1)	132(24.9)
10. If I knew I was going to take an intelligence test, I would feel confident and relaxed beforehand.	274(51.7)	256(48.3)
11. I usually get depressed after taking a test.	257(48.5)	273(51.5)
12. I have an uneasy, upset feeling before taking a final/test.	430(81.1)	100(18.9)
13. When taking a test, I find my emotional feelings do not interfere with my performance.	186(35.1)	344(64.9)
14. Getting a good grade on one test doesn't seem to increase my confidence on the second test.	189(35.7)	341(64.3)
15. After taking a test, I always feel I have done better than I actually did.	279(52.6)	251(47.4)
16. I sometimes feel my heart beating very fast during important exams.	393(74.2)	137(25.8)

We discovered that half of the participants (266, 50.2%) sweat profusely while taking an important exam, and that more than half (376, 70.9%) felt extremely nervous when given a surprise exam based on their answers. About 313 (59.1%) of them are concerned about the consequences of failure, and 322 (60.8%) of them are frequently tense following big tests, causing stomach discomfort. Approximately 307 students (57.9%) find themselves pondering how much cleverer the other students are when taking a key exam. About 274 (51.7%) of them freeze up on things like intelligence tests and finals. 368 (69.4%) would be extremely apprehensive about taking an intelligence test before taking it. Furthermore, 377 (71.1%) of them find themselves thinking about things unrelated to the course subject during examinations. 398 (75.1%) of them are frequently so terrified during course assessments that they forget facts they already know, whereas 274 (51.7%) would feel confident and relaxed before to the test. If they knew they would be taking an intelligence test at the same time, 257 (48.5%) would be depressed, 430 (81.1%) would be worried and unhappy before taking a final/test, and 186 (35.1%) would find that their emotional feelings had no effect on their performance. When students receive a good grade on the first test, however, 189 (35.7%) of them do not appear to gain confidence for the second test. Finally, 279 (52.6%) feel they have always performed better than they have. Approximately 393 (74.2%) of them had had their hearts race during a critical examination (Table 2). According to the findings of this study, students in pharmacy were more likely than students in dentistry (44, 8.3%) and medicine (44, 8.3%) to experience test-related anxiety (33, 6.2%). The second and fifth stages, on the other hand, showed higher rates of 58 (10.9 percent) and 48 (9 percent), respectively (Table 3).

Table 3: Students indicate a tendency to have test anxiety (*n*=530)

	Tendency to have test anxiety *n*(%)
College	
Medicine	33 (6.2%)
Dentistry	44 (8.3%)
Pharmacy	67 (12.6%)
Stage	
First	0 (0.0%)
Second	58 (10.9%)
Third	20 (3.7%)
Fourth	15 (2.8%)
Fifth	48 (9.0%)
Sixth	3 (0.56%)

DISCUSSION

Students at the medical schools in Baghdad are prone to worrying about mental disorders as a result of their heavy workload and lack of sleep. A cross-sectional descriptive study in Baghdad's medical universities found that about half of the students (52.1%) experienced anxiety symptoms, while 20.1 percent had scores that suggested anxiety borderline symptoms [26]. For various reasons, the percentage of students who indicated a tendency to have test anxiety was around 144 (27.1%) (Table 2). This is generally

considered to be lower than in other countries, such as among undergraduate medical students at Taibah University in Saudi Arabia, where the percentage was around 65% [27]. At the same time, our findings were nearly equal to India's prevalence of high exam-related anxiety, which was around 37% [28]. Test-related anxiety is much higher in women than in males, according to studies conducted at Dow Medical College in Addis Ababa [29], as well as in Saudi Arabia, Pakistan, and India [30-32]. The majority of students were not aware of anxiety-reduction techniques, and those who were not using them [17]. Exam-related anxiety has been addressed using a variety of ways. Behavioral and cognitive behavioral therapies are effective in reducing test anxiety [5], while behavioral-cognitive and "Acceptance-Based Behavior Therapy" (ABBT) are effective in reducing exam-related anxiety [33]. Inflammatory processes have been connected to the pathophysiology of depression and stressful conditions. Accordingly, administering omega-3 to students before a test lowers interleukin-6 levels by 14% and anxiety symptoms by 20% [34]. Furthermore, students' exam-related anxiety has been proven to be reduced by time management training [35]. Exam-related anxiety and the perception of threat from exams have both been demonstrated to be greatly reduced by mindfulness training [36]. As a result, a variety of techniques and even medical approaches can be employed to assist students in dealing with exam anxiety. Given the harmful consequences of exam anxiety on students' self-esteem and academic performance, universities and educational institutions should develop a program that is suited to their level of anxiety. Exam-related anxiety in students can be decreased using a range of behavioral and pharmaceutical approaches [5]. They must be aware of their students' important techniques before taking the exam, such as understanding the time limits of the exam and the many sorts of exam formats (such as descriptive, fill-in formats, multi-choice, etc.). Furthermore, university counselors should rule out a variety of relaxation techniques with students and provide them with cognitive tools to help them overcome any negative self-expression that may occur before to, during, or after the exam.

Conclusion

According to the present study, exam-related anxiety is common among Iraqi medical students, underlining the need for anxiety-reduction programs at medical schools. Educators, academics, and administrators in medical, dental, and pharmacy schools can use the findings of the study to build programs and techniques to reduce test anxiety and improve education as a result.

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Conflict of interests

The authors declared no conflicting interests.

Data sharing statement

The datasets analyzed during the current study will be available from the corresponding author on a reasonable request.

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