

## How Does Exam Anxiety Affect the Performance of University Students?

Anisa Trifoni  
Miranda Shahini

Universiteti "Aleksandër Moisiu"

E-mail: anisatrifoni@yahoo.it E-mail: mirashahini@yahoo.com

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**Abstract** *The work of assessing students' learning is complex. In order to assess their work objectively, teachers and instructors use various methods and instruments, one of which is testing. We are aware that nowadays testing has become an inherent part of the society we live in. Consequently, many important decisions are based on test results. So, it is not surprising that anxiety during tests has become a prominent problem in schools all over the world. The present study focuses primarily on test anxiety and its impact on learning, as well as its causes and effects on students. A test anxiety scale followed by a set of questions was completed by a sample group of undergraduate students of "Aleksandër Moisiu" University. The results indicated that a considerable number of students were affected, at least at some degree, by test anxiety. From this perspective, the following questions are raised: "What causes test anxiety?" and "What can be done to alleviate this problem?" The findings of this empirical study, the review of literature as well as students' experiences provide useful suggestions concerning the ways of alleviating test anxiety.*

**Keywords:** *testing, exam anxiety, students' performance*

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### 1. Introduction

Concerning the notion of assessment, also known as the control of knowledge, it has existed since the period of antiquity. Socrates used questionnaires with consecutive questions with the aim to encourage his students to think critically. The same phenomenon was noticed even in Rome around the V century BC. As a tradition, the control of knowledge in Europe consisted of oral questioning, a phenomenon which began in 1219 in the University of Bologna, where students had to answer verbally to questions made in Latin. Apart from the oral exams, starting from 1792, in Europe were introduced the first written exams with a starting point in the University of Cambridge in England.

As we see, exams, especially verbal ones, are used for centuries originally in Europe and later on in America. This indicates that the assessment of students' work was and remains a crucial point in teaching. The work of assessing and judging students' learning is not easy. In order to come out with an objective assessment of their work, teachers and instructors use numerous methods and instruments, one of which is testing. We are conscious that nowadays testing has become an inherent part of our society. It has become more extensive not only in education but in every sphere of life and many important decisions are specifically based on test results. This view is also supported by Spielberger and Vag (1995), two experts in the field of test anxiety. These researchers point out that "... achievement test scores, as well as academic performance, are increasingly used in evaluating applicants for jobs and admissions into educational programs. Consequently, examination stress and test anxiety have become pervasive problems in modern society. (p.xiii)". This view was held earlier by another well known researcher in the field of test anxiety, Sarason (1959), who commented: "We live in a test-conscious, test-giving culture in which the lives of people are in part determined by their test performance". At this point, it is important to emphasize that even though tests are highly valid and reliable, one cannot be sure whether the results truly reflect students' understanding or their actual true abilities.

An important factor that should be taken under consideration is test anxiety. As Cizek and Burg (2006) emphasize, here lies a popular misunderstanding about test anxiety. Test anxiety is not the normal nervousness we experience in testing situation. That feeling of nervousness is the

perfectly normal response that nearly everyone experiences when faced with any challenging task. The present study focuses specifically on test anxiety and its impact on students' performance and learning.

## **2. Research Literature**

Anxiety is a phenomenon that people frequently encounter in their daily life. Anxiety can be described as the tense, unsettling anticipation of a threatening but vague event; a feeling of uneasy suspense (Rachman, 2004). As a result of the nature of anxiety, researchers have provided a classification of this phenomenon into different sub-categories (e.g., language anxiety, speech anxiety, social anxiety,). As was mentioned above, we will concentrate on one of these categories, namely, test anxiety. Test anxiety as a phenomenon has received considerable attention since 1950s. It is considered to be a common educational problem, referring to a situation when students do not feel confident about their abilities, which is reflected especially in their performance and tests results. This view is also supported by a study conducted by Spielberger (1962) with college students, which revealed that while only 8 out of 138 low-anxiety students dropped out of college because of academic failure, twenty six out of 129 high anxious students left for the same reason.

According to Zeidner (1998) test anxiety is a set of phenomenological, physiological and behavioral responses that accompany concern about possible negative consequences or failure on an exam or similar evaluative situation. As we see from Zeidner's statement, test anxiety is strongly related to failure consequences. This connection can be noticed even in (Sarason and Sarason, 1990) who state that when not in an evaluational situation, or anticipating one, the highly test anxious individual may not worry about possibilities of failure, embarrassment and social rejection. But in evaluational situations these possibilities become active. We should also emphasize the fact that students who suffer from test anxiety do not necessarily lack in intellect or drive. Test anxiety and other deficits related to test anxiety, interfere with academic performance (Everson & Millsap, 1991).

In order to understand in what way test anxiety affects students' performance it is necessary to take under consideration the study of Liebert & Morris (1967). These researchers analyzed the responses of students to Sarason and Mandler's Questionnaire (TAQ: Sarason & Mandler, 1952). The results indicated that test anxiety consisted of two major components. The first component was emotionality which was related to the physical reactions to test situations, such as nervousness, sweating, constantly looking at the clock, pencil-taping and so on. The second factor was worry, which comprises the psychological or cognitive aspect of test anxiety. "Worry relates primarily to cognitive concern(s) about the consequences of failure" Liebert & Morris (1967). This is not surprising since a student's test anxiety is something that cannot be perceived by a teacher or instructor. What is more, students' actual levels of test anxiety cannot be directly measured or examined. The only thing that could be observed is the students' manifestation of test anxiety in the form of emotionality responses mentioned earlier. Morris and Liebert study (1970) found that the factor of worry had a stronger negative relationship with performance outcomes than emotionality, in a group of high school students. This suggests that it is the cognitions or thoughts about the evaluative situation that will have the greatest impact upon performance under such conditions.

A lot of research has been conducted in order to identify in what way test anxiety affects performance, considering the fact that this phenomenon has a variety of sources. According to one review of the research on test anxiety different possibilities have been examined. For example, some studies have identified the root of test anxiety as lying in students' poor preparation. Those studies suggest that some students ineffectively organize or process information and they perform poorly on tests because of this. Naveh-Benjamin et al (1987) have found that when compared with less anxious students, highly test-anxious students have

difficulties in organizing material to be learned. As several research studies have noted, highly test anxious students have less effective study habits compared to their low anxious counterparts (Culler and Holahan, 1980). This view is also supported by Hembree (1988), who suggests that a lack of effective study skills contributes to poor performance under evaluative conditions, which in turn leads to heightening feelings of anxiety when it comes to performing in subsequent examinations. Support of this research emerged from treatment studies that have concentrated on helping students to improve study skills. The results of these studies suggest that study skills can also help to reduce test anxiety and improve performance.

At this point, it is important to mention Zeidner's (1998) view of the problem. He is of the opinion that the state of test anxiety cannot be explained away by lack of work or exam performance, for conscientious and highly motivated students also suffer from its debilitating impact. He states that academic performance depends on the information processing routines that directly control learning and comprehension of classroom material, such as focused attention, working memory and long term memory retrieval, processes that may be biased by personality factors such as test anxiety.

Other studies have identified "the habitual, irrelevant, negative thoughts that some students have during a testing situation" as a major cause of anxiety (Mealey & Host, 1992). According to Mealey & Host (1992), there are 3 main categories of test anxious students. They include students who:

1. Do not have adequate study and test-preparation strategies, realize that deficiency, know they are not well prepared for testing situations and are worried.
2. Have adequate strategies in their repertoire and use them but become distracted during tests.
3. Mistakenly believe they have adequate strategies, do poorly on tests and anxiously wonder why. (p. 148)

Sarason (1980) believes that learners' capacity, task difficulty, the fear of getting bad grades and lack of preparation for a test are the other factors that make learners worried. Similarly, learners with high levels of anxiety have less control of attention. He also suggests that there is considerable evidence that the performance of highly test anxious individuals on complex tasks is deleteriously affected by evaluational stressors. The less complex the task, the weaker this effect is. Concerning task difficulty, Gaudry and Spielberger (1971) seem to share the same view. The results of their study showed that high-anxious subjects performed better than low-anxious subjects on simple tasks but performed more poorly than low-anxious subjects on complex tasks. This fact is supported by a study of Zeidner (1998) who found that test anxiety is more detrimental to demanding tasks.

Literature on test anxiety shows that some of the factors that influence students' reactions to tests are related to test validity, time limit, test techniques, test format, length, testing environment and clarity of test instructions (Young, 1999). Concerning the importance of test validity we can mention Young's study (1991) which indicates that students experience anxiety if the test involves content that was not taught in class. Another factor that increases test anxiety and affects performance is time limit. According to Ohata (2005), learners sometimes felt pressured to think that they had to organize their ideas in a short period of time. Another factor that affects negatively students' performance is the inappropriate test technique. Young (1991) found that students felt anxious when they had studied for hours for a test and then found in the test question types which they had no experience about. Last of all, Ohata's study (2005) revealed that most of the participants in the study admitted that they feared taking tests, because test-taking situations would make them fearful about the negative consequences of getting a bad grade. This result has been found in many studies. Furthermore, research indicates that anxiety affects performance negatively not only at school but at the university level as well. Paul and Eriksen (1964) tested the effect of anxiety by giving a group of first-year girl students a traditional examination on their course. The students were aware that the marks of this test

would count on their final grade. Immediately after the test they were asked to fill in a test anxiety questionnaire and were given a parallel form of the examination they had previously taken but this time it was emphasized that the marks would not be taken into count towards their grade. When the results were analyzed, it was found that highly anxious students did better on the non-stressful examination whereas low-anxiety students performed better in the traditional condition.

Sometimes it is the type of test that leads to test anxiety. Some students become anxious during exams that require them to demonstrate their knowledge in ways in which they do not feel comfortable. For example, some students panic when they find they have to take essay tests. Others become anxious over oral exams. Different types of tests can make students anxious (Van Blerkomp, 2009). Researchers do not share the same opinion on when and how test anxiety interferes with test performance. It interferes either at test time or at study time. Wine (1980) believes that test anxious individuals divide their attention between task relevant activities and preoccupation with worry and self criticism. With less attention available for task-directed efforts their performance is depressed.

Apart from these factors, we should mention Hembree's study (1988). He found that the conditions that give rise to differential test anxiety levels include ability, gender and school grade level. Other research has suggested a difference in anxiety responses between males and females (King et al., 2000); with females generally self-reporting higher levels of test anxiety symptoms than males. From this point of view, it would be important to consider the role of gender when interpreting the results from outcome measures of self reported test anxiety.

The research on test anxiety in Albania seems to be limited. This is the main reason why we find it necessary to conduct a research with university students. Another reason is related to the fact that this phenomenon affects a considerable number of students and impairs their performance. Considering the fact that test anxiety is a complex and problematic area, it is necessary to determine the problems, and provide recommendations on the ways of reducing it, which would be helpful to both students and teachers.

### 3. Method

#### 3.1 Subjects

The study was conducted at the Faculty of Education, in "Aleksandër Moisiu" University, Durrës. The subjects in the study consisted of 109 students of the following branches: Elementary Education, Experts in the Processes of Formation and English Language. Of the subjects, 38 (34.9 %) were male and 71 (65.1%) were female students, with a male-female ratio of 38:71. Their ages ranged from 18 to 26, with an average age of 22. The group consisted of 21 first (19.2%), 31 (28.4%) second, 33 (30.2%) third and 24 (22.1%) fourth year students.

#### 3.2. Instruments

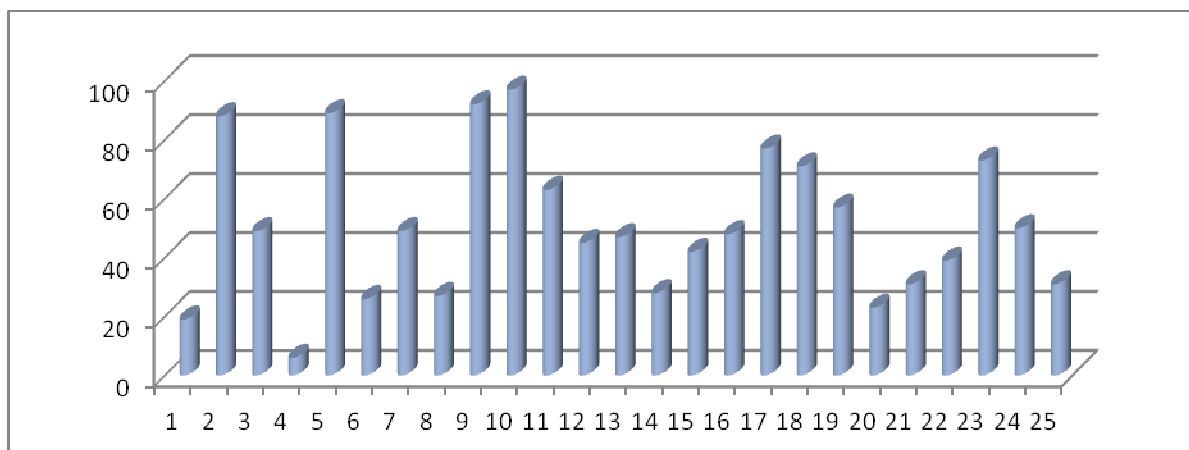
The instrument used to collect descriptive data was a questionnaire that consisted of three parts. The first part was intended to collect personal information of the participants, such as their age, gender, and year at university. The second part was a test anxiety scale adapted from Sarason's (1980) Test Anxiety Scale. The third consisted of an open question survey. The test anxiety scale aimed to measure the degree of test anxiety manifested by the subjects. Lastly, to investigate into participants' attributions of the causes and effects of test anxiety, three open-ended questions were designed, which read as follows:

- In your opinion what causes anxiety during exams?
- What is the effect of test anxiety on students?
- What can be done to alleviate somehow this phenomenon?

The questionnaire was administered to the subjects one week before their final exams.

#### 4. Data Analysis

In order to assess the degree of test anxiety experienced by students, descriptive statistics were used. The results indicate that the participants are affected at least at some degree by test anxiety. In the first graph, the results of the questionnaire administered to all of the subjects, are expressed in percentage (%).



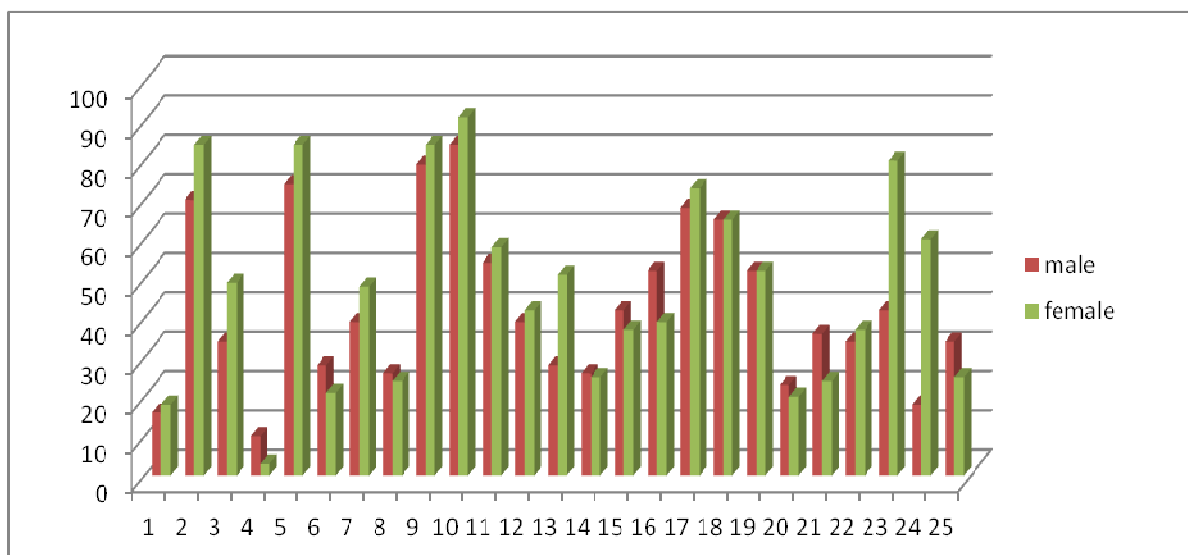
Graph nr.1

As we can see, the analysis of the data indicates that most of the students worry during test taking (2), but especially when they are supposed to take a surprise exam (5). In addition, they do not feel confident and calm before tests (3), whereas after tests the students assume that they could have done better (9). They also admit that they feel anxious before final exams (10). According to the students, emotions affect their performance negatively (11) and sometimes cause to forget what they have learned. During the test, they usually feel pressured by time limits (18) and sometimes believe they will fail. Cizek and Burg (2006) explain their belief in this way:

“Because tests frequently result in the assignment of a grade or score- that is in an evaluation - test anxiety is experienced in testing situations by persons who feel threatened by evaluation. That threat is more likely to be aroused when a test taker perceives that the evaluation of his or her performance is likely to be low. That perception arises because the student believes that his or her knowledge, skill or ability is inadequate to perform successfully on the test. Interestingly, because whatever level of anxiety is aroused in a student often depresses his/her test performance, the test taker’s perception of the threat of evaluation turn out to be accurate, to a degree. That is anxiety causes a poor evaluation, which confirms the students initial perceptions regarding the (un)likelihood of success which reinforces evaluation as a threatening event.”

The students also admit that grades influence both their study and their performance on exams (19), suggesting that good grades make them feel confident. However, the results show that the students feel anxious even when they have studied and are well- prepared for the exam (23). These were some of the aspects on which students expressed their concern.

The second graph shows the the results of the questionnaire for both male and female students expressed in percentage (%).



Graph nr.2

As can be clearly noticed in the second graph, for various questions of the questionnaire, there is a certain difference in the answers of male and female subjects, which points out that test anxiety is also associated with the gender of the subjects. The findings are also supported by a study of Everson and Millsap (1991), which showed that females have higher levels of worry as well as higher levels of emotionality compared to males. The graph shows that at least five items are associated significantly with the gender of the subjects. First, female students feel more worried than the males when they know they will take a test (2). Second, the females feel less confident and relaxed than the males when they know they will take a test (3). Third, female students are more worried than male students when they have to study for an exam (13). Fourth, female students are more worried than male students even when they are well-prepared (23). Last, females find their hands trembling before an important examination (24), which reflects a higher level of emotionality compared to male students.

Based on the answers compiled from the first question of the survey, it was found that lack of preparation for the tests and inefficient or inappropriate test preparation are some of the reasons that make learners anxious. Low self-confidence, fear of negative evaluation and previous test experiences concluded with failure also make the students feel anxious. Besides, time limitation and stress during test administration also cause anxiety, since many students admit that they are not sure if they can finish the test within the time given. In addition, insufficient or unclear orientation from the lecturers concerning the material that will be covered in the exam causes a considerable amount of anxiety. They also make complaints about inappropriate test techniques or the way the test is designed and the number of items included there. Students also admit that difficult course content and the large amount of information to be covered are other anxiety producing sources. Ultimately, the thought that students may forget what they have learned and as a result fail, makes them feel anxious.

Concerning the second question of the survey, the results show that test anxiety mostly causes negative effects. The subjects admit that test anxiety causes difficulty in retrieving from memory the information they have learned and decreases their concentration during the test, as a result of which they make more errors. It also prevents students from displaying their real knowledge and abilities in the test and transferring their real performance to test results. In other words, it is an obstacle to efficient study and to an effective use of the knowledge already acquired. Furthermore, test anxiety causes physical problems. Students who have high level of test anxiety confess that they suffer from headache, insomnia, increasing heart pulse and stomach disorder, before and during test administration. They say that test anxiety causes

psychological problems as well. Among them we can mention an increased level of nervousness, confusion, uncertainty, tension and negative emotions. The findings indicate that test anxiety makes students interested in tests and their results but not necessarily in the content of the course. Apart from these negative effects, it seems that test anxiety has a positive effect on the learners, since it is not a factor that causes them to study less.

The answers to the question “What can be done to alleviate somehow this phenomenon?” show that the teacher is the one who should play the most important role in reducing test anxiety. The students think that teachers should motivate them and provide more specific orientation concerning the material that will be tested. In other words, subjects point out that the teachers should inform the students on the content of tests and number of the questions before the administration. They also suggest that the teachers should avoid negative comments during tests and should not frequently remind them of the time left. In addition students insist that teachers should give them enough time to complete the test. Another aspect in order to alleviate test anxiety is related to the students. They admit that studying systematically would make them less anxious during exams. According to them, the teachers should be aware of students’ anxiety and try to understand them.

## **5. Conclusions and Discussions**

The findings of this study are as follows:

First, the students are usually affected by test anxiety, before but especially during the administration of the test. Some of them report a high level of test anxiety. The results show that subject variables such as gender are correlated with some aspects of test anxiety: female learners feel more worried and anxious although they prepare more than males.

Second, it results that some of the factors that cause test anxiety are related to lack of preparation for the tests and/ or inappropriate test preparation, fear of negative evaluation, bad experiences on previous tests, time limitation and pressure, the number of items included in the test and the difficulty of course content.

Third, according to the survey, test anxiety gives rise to physical and psychological problems as well. It affects motivation, concentration and achievement negatively, increases errors during the exam, creates problems recalling the material previously learned and prevents efficient study.

Fourth, it results that teachers’ attitudes are the key factors in reducing test anxiety. Test techniques, specific orientation before the test, information on the content and number of questions, time limitation and pressure are some significant problems about which teachers and instructors should think in order to reduce test anxiety, not to forget the systematic study, which is students’ responsibility.

Based on the findings of the study, some recommendations can be presented:

First, teachers should be aware of test validity and reflect content of the course to tests.

Second, teachers should inform the students on content, test techniques, number of the items included in the test before the administration as Alcalá (2002) suggests that teachers should familiarize students with the exam format, the type of rating system.

Third, creating a low-stress environment allows students to concentrate on the test rather than being distracted by test anxiety.

Fourth, teachers should be aware of students’ anxiety and should find ways to evaluate students without inducing high levels of anxiety, while still maintaining a positive, effective climate. Another way to decrease test anxiety in testing environment is to give learners the possibility to express their comments. For example, Smith & Rockett (1958) found that if students were asked to write comments on items during multiple choice test the high anxious

students did better and the low-anxious worse but in the “no comment “ condition the high anxious students did worse.

## 6. Limitations of the Study

Concerning this aspect, we can say that some limitations can be noted. The study is limited to the students of only one institution, namely the Faculty of Education, in “Aleksandër Moisiu” University. Secondly, the study is limited to the subject variables such as: age, grade and achievement scores of the students. Lastly, background education is not a variable. As a conclusion, considering the study is limited to test anxiety of “Aleksandër Moisiu” University students, further research should focus on more analytic issues such as teacher attitudes on test anxiety and feedback before and after the exam.

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