



## A TEACHING STRATEGY TO REDUCE TEST ANXIETY

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### *ABSTRACT*

*The current study aimed to identify the effect of using a proposed teaching strategy to reduce test anxiety among students of the College of Science and Arts in Rafha – University of Northern Border. The study sample consisted of (30) students from the College of Science and Arts. The author divided them into two equal groups; an experimental group consisting of (15 students), and a control group of (15 students).*

**Keywords:** *Instructional strategy, test, anxiety.*

### INTRODUCTION

The interest of the Saudi families towards the education of their children has been growing in recent years. This growing interest has stemmed when the families felt the importance (both on a social and economical basis) of education. This feeling resulted in increased numbers of admissions to higher education in the universities.

On the other hand, the officials identified several associated learning concerns such as psychological and academic problems (e.g. test anxiety). Therefore, they started to confront such issues. Firstly, they considered the process of educational guidance and psychological counseling. The most important was that the officials acknowledged this guidance and counseling as a second task for them after scientific research and education.

However, this orientation process cannot be conducted apart from standard tools stemming from the Saudi environment or, at least, compatible with the customs and traditions of the society, taking into consideration the diagnostic goal. The arguments concerning the difficulties of the learning process are diverse. For instance, there is a concern whether test anxiety constitutes the conscious and subconscious energy of mental and academic achievements that allow the formation of an individual's vision and goals, or it may be a hindrance to the mental and academic process. Hence, it is debated that test anxiety may be as such in the light of its levels and severity and according to the individual differences, especially at the stage of higher education.

Spielberger believes that test anxiety increases for students who have aspirations to study a specific field of study or join certain jobs. Performance, then, on the test forms an important pillar for those students. The more performance in the test is linked to achieving the desired goal, the higher the test anxiety and vice versa because academic achievement is affected by the general mental ability. Mental stability is considered one of the important aspects of the mental activity that the student performs in college.

Test anxiety is an aspect of the general anxiety that is provoked by the test situation and expresses an individual psychological-emotional problem. Gender (i.e. male and female students) does not affect this anxiety. However, the fear of not succeeding (test anxiety) is affected by the students' previous experiences in situations similar to test stances they passed through it at home or in their daily lives (Abdel-Rahim, 1989).

Anxiety is one of the ancient psychological phenomena that have accompanied mankind since his inception. This is due to what we are experiencing in terms of changes and pressures that make one feel that anxiety. However, part of this anxiety can be positive and creative. The larger aspect of anxiety is that plagues man's talents and creativity. Therefore, it is not surprising that most psychologists have a consensus that anxiety is the basis of all mental illnesses, and it also plays an important and clear role in achieving positive achievements in a person's life.

Anxiety research has focused on anxiety in general. Despite the great interest in general anxiety; there has also been a relative interest in studying other types of anxiety, such as test anxiety as a limited form of anxiety associated with evaluation and assessment attitudes (Shaheen, 2016).

However, the results of psychological research indicate the important role that the level of anxiety plays in learning. It was found that high and low anxiety levels both constitute obstacles for students to achieve goals. While high anxiety weakens thinking, therefore, affects achievement, low anxiety leads to poor motivation, interest, and indifference. Medium anxiety is considered one of the energies that drive work, performance, and achievement, and in this context, it becomes clear that the more anxiety intensifies; the more students' achievement level deteriorates (Majami, 2006).

Test anxiety is a variable that may affect the student's comprehension in general. The importance of test anxiety develops from the seriousness of the situations that the student is exposed to in society (e.g. university admission, position acceptance, promotion, etc.) This means that test anxiety takes on special importance due to its strong connection with determining the fate of the student, his academic and professional future, and, consequently, his position in society (Zahran, 2000).

Al-Ajami, (1999a) considers test anxiety as one of the most important emotions related to academic achievement. He adds that most psychologists acknowledge that a plausible level of anxiety may drive students towards learning. While excessive anxiety leads to a state of cognitive disintegration.

The current study employs a suggested teaching strategy to reduce test anxiety among students of Northern Border University, KSA.

### ***The Study Problem:***

Test anxiety is an emotional state that some students may experience during academic life and may be accompanied by some kind of psychological reactions as a result of the fear of failure in the test, or of not obtaining a satisfactory due to family. This situation leads to results that may be appropriate sometimes and not appropriate in most cases.

Due to the effects of test anxiety on learning, many studies such as Leary & Kowalski, (1995) have shown that anxiety is one of the important variables that can negatively affect academic achievement. This is confirmed by Furmark (2002), which concluded that increased anxiety is



the cause of poor academic achievement. Waradia (2003) concluded that fear and anxiety about the exam impede academic achievement.

Based on our educational role at the university and what we face from anxiety situations among some students during the probation period, the author emphasizes the importance of this problem and the need to investigate it. The current study is an attempt to find the appropriate solutions to enable the students and help them to overcome this situation with ease. In light of the above, the study problem is summarized in the following main question: *What is the effect of using a suggested teaching strategy to reduce test anxiety among students of Northern Border University, KSA?*

### ***The importance of the study:***

The study is concerned with providing a strategy to help university students overcome the problem of test anxiety. The suggested strategy provides ideas and guidelines that help students overcome the study problems they face. It shows the students how to prepare to study, the optimal use of the mental ability, focus on study tasks, and continued motivation. It also shows the university students how to review their courses through effective recall methods. Therefore, the suggested strategy helps in deep learning that sends confidence instead of confusion and distraction, and how to confront test anxiety. It also helps students to cope up with the stress associated with test anxiety through the use of a self-guided menu which reduces stress as well as the use of muscle relaxation techniques that help remove tension and anxiety in students. The suggested strategy trains students to seek help or counseling when necessary in the event of suffering anxiety, pressure, and lack of adaptation to the study tasks. Hence, the importance of the current study is to shed light on the effectiveness of using a teaching strategy based on providing ideas, instructions, and techniques to help university students overcome their test anxiety. It is not how students would challenge or overcome anxiety only, but through presenting methods, ideas, and instructions aiming at how students think, feel and behave, as well as how students deal with any study problem they face through a sense of strength and will.

### ***Objectives of the study:***

The objectives of the current study are as follows:

- Identifying the level of test anxiety of Northern Border University students
- Identifying the effectiveness of the proposed teaching strategy to reduce test anxiety among such students

### ***The limits of the study:***

#### ***(A) Subjective boundaries***

The subjective limits of this research are limited to test anxiety and the proposed teaching strategy that investigates the severity of test anxiety among a sample of students of Northern Border University.

#### ***(B) Human boundaries***

This research was limited to the students of the Faculty of Science and Arts in Rafha, Northern Border University, KSA.



### ***(C) Spatial boundaries***

The spatial boundaries of this research were limited to the Faculty of Science and Arts in Rafha, Northern Border University, KSA.

### ***(D) Time limits***

This research was applied in the academic year 1440/2020

### ***Study hypotheses:***

- There are no statistically significant differences between the scores of students in the experimental group on the test anxiety scale before and after applying the teaching strategy.
- There are no statistically significant differences between the mean scores of the students in the control group on the test anxiety scale before and after applying the teaching strategy.
- There are no statistically significant differences between the mean scores of the experimental group students and the mean scores of the control group students on the test anxiety scale after applying the teaching strategy.
- There are no statistically significant differences between the mean scores of the students in the experimental group on the test anxiety scale in the post and tracer measures.
- There is an effectiveness of the teaching strategy in reducing test anxiety among students of the Faculty of Science and Arts at the Northern Border University.

### ***Terminology of study:***

#### ***(A) Exam stress***

Gabriel et al., (2004) defined test anxiety as a characteristic of the personality in a specific situation that consists of distress and emotionality, which are the most prominent elements of test anxiety, and defines distress as a cognitive concern for fear of failure and defines emotionality as reactions of the nervous system.

The author of the current study defines test anxiety theoretically as the emotional state that accompanies the student in the test as a result of his fear of failing to take the test.

The author of the current study defines test anxiety practically as the score obtained by the student through his response to the paragraphs of the test anxiety scale.

#### ***(B) Strategy:***

It is the science and the art of employing plans in the political, economic, and psychological fields for a society or group of societies to provide maximum assistance towards achieving a specific goal (Webster, 1988).

Also, the author of the current study defines the teaching strategy in the current study as the employment of some ideas, guidelines, and techniques to help university students overcome test anxiety by preparing for study, increasing motivation and determination to continue studying, improving focus and memory, and using methods that lead to effective review during the study, as well as providing treatment techniques to alleviate Test anxiety and finally provide appropriate ways to cope with test anxiety to achieve the maximum possible achievement that leads to success and excellence.



**The Theoretical Part:**

This section discusses and reviews the aspects of the strategy that was used during the study to overcome test anxiety among students as follows:

**First: Ability (Aptitude to Study)**

There are limits to the student's ability to accomplish. This ability depends on growth and training (Gordon and Wayne, 1994) in terms of the importance of the cognitive factor represented by the mental aspect of accepting academic subjects and its impact on the academic achievement of students.

Fouad Abu Hatab and Amal Sadiq (1980) stated that mental ability, although it is a necessary condition for the learning process to occur, is not a sufficient condition. It requires understanding and predicting the achievements in light of the interests, characteristics, and motives of the student.

Thus, time may be wasted if the student does not follow a certain method in using mental ability. The following is a plan to prepare for the study represented by the following questions:

**1- What do you want to do?**

It means the extent to which the student is prepared to accomplish the multiple mental tasks and the extent of a sense of time allocated to the completion of these tasks.

**2- Are you ready to learn?**

The starting point for better learning is the emphasis on self-learning such as having the student set questions for himself and tries to answer them on his own.

**3- Is what you want to do clear to you?**

This refers to the student's willingness to choose between different tasks and the way of selection depends on the clarity of each task and the way to complete that task.

**4- How to choose the right time to work?**

Some routine tasks require less focus and less time per day, but certain tasks like completing educational tasks that include solving problems or designing models, take a longer time. Therefore, it is necessary to determine the appropriate time for each task so that time is not wasted uselessly.

**Second: Determination and Motivation:**

Abu Hatab Fouad and Amal Sadiq (1980), as well as Entwistle and Kozeki (1985), emphasized the importance of non-cognitive variables such as motivation, tendencies, and trends on students' academic achievement. Bembentty et al., (1998) also presented several concepts to increase motivation and determination for learning among students through managing the self-learning system and achieving academic success. They are as follows:

- 1- Defining academic goals.
- 2- Maintaining the sense of will and good accomplishments that has been previously achieved and preparing a plan for success. This training helps students build confidence in them.
- 3- Thinking and speaking positively; for instance, never say that I am not ready for study?
- 4- Focusing on academic work, maintaining motivation, never give up, or giving in to laziness and indolence.



Williams and Janice (1998) explained that anxiety affects the impulse for the academic achievement of the student. Therefore, anxiety must be reduced so that the student has the ability to self-learning which comes through talking about worries with Friends, tutor, or psychological counselor to overcome this anxiety.

### **Third: Work Rate:**

Acres, (1995) has noted that many students can achieve high levels of achievements without making hard work, but with good assistive techniques that increase the appropriate aptitude for achievement. He summarized these techniques as follows:

#### **1- Improving Concentration**

The improvement of Concentration depends on the use of effective study methods and the determination to succeed and not be distracted in other matters in addition to the progress in the study from a short period in the beginning to longer periods gradually according to the diversity of the subjects.

#### **2- Starting a learning journal.**

It means recording study notes and basic topics in short phrases that may be on small cards or in the book itself. This helps to remember some of the information that the student understood during the day and to link some of the situations that occur in lectures. Finally, make a list of things to be done and to determine the best times for study and when his/her concentration increases.

#### **3- Efficient Revision:**

The misconception controlling the students is trying to remember the topics and information from the first review. This is done, usually, right before the test, yet effective review means deep learning that inspires confidence in remembering rather than confusion and distraction. The effective review of the undergraduate student in the following points:

- A. Determine a complete picture for the topics and decide what to review.
- B. Determine a time for each task, regardless of the ease or difficulty of the task.
- C. Making summaries for the topics or sub-topics, in innovative and illustrated ways. This could be in diagrams, comparison tables, or illustrations such as spider drawings, to help remember the main points of the topic. (Acres, 1995)

#### ***Fourth: Basic Revision Method***

##### **The first step:**

Read notes and search for answers to suggested questions.

##### **The second step:**

Remember what he is reading or a sense of understanding previous notes.

##### **The third step:**

Determine if the subject to be reviewed has become clear and understood, or it may need further clarification, and thus put new notes.

##### **The fourth step:**

Review your original notes along with new notes so that you remember all the answers to the questions you put in the first step.





**Fifth step:**

Rereading notes as in the first step and trying to carefully consider the main points that were not remembered, and then repeat the next steps. This helps improve good recalling.

***Fifth: Improving Memory***

The United States of America considered the 1990's, the decade of brain research, and made it clear that research should focus on how the brain works, how we learn and recall? As a result, the term NLP appeared. It refers to using the visualization and verbal abilities together in improving memory (how the student can benefit from the right side of the brain, which includes the ability to visualize, intuition, drawing and making models, as well as from the left side of the brain, which includes an actual, objective, logical and theoretical thinking) and analytical writing and reading (Acres, 1995)

Ragan and Ragan, (1982) presented some ideas that help improve memory; namely:

**A) Association:**

It means the interconnection between words, numbers, and pictures leading to verbal and visual interdependence that helps the memory to function efficiently.

**B) Repetition:**

It means revising several times loudly and repeatedly, listening repeatedly to record, or re-reading multiple times. The association of such processes with writing information whenever possible helps to improve memory. Ragan and Ragan, (1982) and Krugman et al., (1985) added another idea for improving memory:

**A- Use of visual memory:**

It refers to using pictures, signs, or drawings related to the information to be remembered, in addition to using other senses such as touch or hearing whenever possible. (Krugman et al., 1985)

***Previous Studies:***

Due to the importance of the subject of test anxiety and because it is closely related to the level of achievement of learners, it received the attention of researchers as follows:

- The study of Rajih and K, Saravanan, (2014) that was entitled (The effectiveness of psychological imagination and psychological education in reducing test anxiety and raising motivation among students of the first stage of pharmacy students). The study aimed to identify the effectiveness of psychological imagination and education in reducing test anxiety and raising motivation among junior students of pharmacy in Malaysia. The sample of the experiment consisted of 21 students as an experimental group and 21 for the control group. The first phase of the experiment lasted for 5-7 weeks where an initial application of a scale to measure test anxiety and also a scale to measure academic motivation as well as a measure of post-traumatic stress disorder. The most prominent results were that the psychological intervention helped significantly to reduce the degrees of test anxiety and psychological distress, and helped to improve students' GPA.
- The study which was conducted by Abdel-Hamid (2013) considered that a counseling program to reduce test anxiety and modify the characteristics of behavior pattern (A) among a sample of baccalaureate students. The study aimed to achieve planning and



preparing an extension program and applying it to the experimental sample, identifying the extent of the effectiveness of the counseling program in modifying the characteristics of the students having the behavior pattern (A), identifying the extent of the effectiveness of the counseling program in reducing test anxiety, and ensuring the continuity of the counseling program's effectiveness after its application in modifying the behavior pattern in decreasing the degree of test anxiety.

- The study of Atalla's (2010) study that was entitled (The effectiveness of cognitive-behavioral therapy in developing some test anxiety management skills among a sample of university students). The study aimed to know the effectiveness of cognitive-behavioral therapy in developing some test anxiety management skills among a sample of university students and to recognize the difference between both male and female university students in test anxiety management skills (training in muscle relaxation - controlling negative thoughts - replacing negative thoughts with positive ones - time management) and their overall score after implementing the program. It also aimed to identify the extent of the program's continuing effectiveness in developing and strengthening test anxiety management skills among the study sample after application within a period (one and a half months). The anxiety management scale was applied to a sample of 28 male and female students of the experimental research sample because they obtained a low score (less than a cut-off score = 89.5) on the test anxiety management skills scale and a high score (higher than a cut-off score = 56) on a scale Test anxiety. The study reached the following results:
  1. The cognitive-behavioral therapy program used in the current study has great effectiveness in developing test anxiety management skills, which was highlighted by the presence of statistically significant differences between the mean scores of the experimental group members and the control group members on the dimensions of the test anxiety management skills scale, and in the dimensional measurement in favor of the members of the experimental group.
  2. The effectiveness of the cognitive-behavioral treatment program did not statistically differ significantly due to the gender between the mean scores of male and female members of the experimental group on the test anxiety management skills scale and its dimensions in the post-measurement.
  3. The continuing rate of improvement in the skills of managing test anxiety among the members of the experimental group after a period of the complete implementation of the program. The follow-up period, which is evident through the findings of the results, that there are no statistically significant differences between the scores of the experimental group members in the post and tracer measures on the dimensions of the test anxiety management skills scale.
- The study of Abdel-Hamid (2013) entitled "The effectiveness of cognitive-behavioral therapy and training in learning skills in reducing test anxiety and improving the academic performance of university students." aimed to identify the effectiveness of cognitive-behavioral therapy and training in learning skills in reducing test anxiety and improving academic performance among university students. The sample included (400 students) and then the experimental sample was inclusive to only 44 students (only those from the first group who had high test anxiety) of which males were and 28 female





students. They were divided into 4 equal groups (11 each). The first group was the control; the second was an experimental group for cognitive behavioral therapy, the third was for training in learning skills, and the fourth was for the Therapeutic Training Consortium (TTC). The program consisted of 12 counseling sessions as per the Spielger test for test anxiety. The results of the study showed that there were statistically significant differences at the test level before and after applying for the program in favor of the post-application. The cognitive-behavioral therapy program, training in learning skills, and the training therapy coalition showed effective efficacy in reducing test anxiety, and also an improvement in students' academic performance.

- The study of Al-Ajami study, (1999a) entitled “The relationship between test anxiety and academic achievement among female students of the College of Education for Girls in Al-Ahsa,” aimed to identify the relationship between test anxiety and achievement among female students of the College of Education for Girls in Al-Ahsa. For this purpose, the test anxiety tool of Abdel Rahim Bakhit Abdel-Rahim (1989). Five hundred questionnaires were distributed. The authors analyzed the data and the results revealed the followings:
  1. Female students suffer from test anxiety with a moderate degree, while the score increases in the fourth level.
  2. There is a negative and statistically significant correlation between test anxiety and academic achievement. (Al-Ajami, 1999b).
- The study that was conducted by Farah 1997 entitled "The effect of psychotherapy in reducing test anxiety among Yarmouk University students." aimed to discover the effectiveness of using written materials, or what is known as a reading therapy strategy and the sample consisted of (55) students from Yarmouk University. The researcher used statistical methods such as data testing and mono-analysis of variance. Results revealed that there were statistically significant differences in favor of the experimental group during the treatment period due to the exposure of their members to the treatment.

It also appeared in a study (Farah and Hammouri, 1997) conducted on a sample of university students in Jordan to reveal the effect of a program that includes reading therapy procedures in reducing test anxiety (Self - Help Bibliotherapy), where the members of the experimental group showed a lower level of anxiety on a test postural anxiety.

In a study conducted by Al-Hamouri, (1995) that aimed at revealing the effect of treatment using the reading strategy in reducing test anxiety among a sample of Yarmouk University students, Iraq. The student sample numbers were (55) male and female students. The experimental group of students consisted of 28 students (both males and females). This group of students was trained using a booklet that includes information to relieve test anxiety.

The control group consisted of 27 students (both male and female students). The control group did not receive any training, and their results showed a lower level of test anxiety among the experimental group members on the post-test compared to the control group.

Search procedures:

Approach: The researcher used the experimental approach with the design of two equal groups with pre-tests. The experimental and the control groups had the pre and post-tests, to find out the effect of the independent variable on the dependent variable by comparing the



pre-test results with the post-test results. As the independent variable (the teaching strategy) is applied to the experimental group, while the control group was left without guidance, and this can be expressed as follows:

### *Research community:*

The research community was the students of the Faculty of Science and Arts - Northern Border University (2019-2020)

The research sample:

The research sample reached 30 students who were selected after applying the test anxiety scale and they obtained the highest marks on the scale after that. Then, the students were divided randomly into two groups. An experimental group was exposed to the teaching strategy consisted of 15 students and the control group was not exposed to the teaching strategy of 15 Student too.

Statistical means:

The researcher used the statistical package (SPSS) to extract the results of the study.

### *Study tools*

The researcher used two tools in this study; namely the test anxiety measure, and a suggested teaching strategy by the researcher.

1- Richard Driscoll 2000 Westside Test Anxiety Scale

The researcher adopted the "Westside Test Anxiety Scale" prepared by Richard Discoll, (2007) to measure test anxiety after formatting it for the following reasons:

1. It is a scale in which the psychometric properties of the scale are of high reliability and stability.
2. This scale was applied to a variety of samples (adults and adolescents).
3. It has been used in several countries, including the United States of America and Britain.

The Test Anxiety Scale consists of 10 items distributed in two main dimensions:

1- Impotence (poor memory or poor cognitive processing) consists of 6 paragraphs, which are 1, 4, 5, 6, 8, 10.

Anxiety (severe) 4 paragraphs are 2, 3, 7, 9

Method of answering the scale:

The overall score for the scale ranges between (10, 50), considering that the rating is from (1) to (5)

| 1                                    | 2                        | 3                          | 4                           | 5                      |
|--------------------------------------|--------------------------|----------------------------|-----------------------------|------------------------|
| Absolutely,<br>It is not true at all | Slightly,<br>Seldom true | Average,<br>Sometimes true | Frequently,<br>Usually true | Always,<br>always true |

Interpretation of the score on the anxiety test:

\* 1.0 - 1.9 = low anxiety tests.

\* 2.0 - 2.5 = normal or moderate anxiety tests.

\* 2.5 - 2.9 = normal high anxiety tests.

\* 3.0 - 3.4 = reasonably high anxiety from tests (some items with a score of 4 = high anxiety)



\* 3.5 - 3.9 = high anxiety from tests (half or more than half of items with a score = 4 mean high anxiety from tests)

\* 4.0 - 5.0 = very high anxiety (items with a score = 4 mean high anxiety, while a score of 5 means very high anxiety)

### *Scale paragraphs analysis:*

To ensure the validity of the scale paragraphs and its ability to distinguish, the researcher followed two methods:

#### *First: the two extremist groups:*

The scores were ranked in descending order, and then the upper and lower 27% of the scores were selected to represent the two extremes. To calculate the discrimination coefficient for each of the scale paragraphs with the 10 items, while the second test (t-test) was used for two independent samples by the Statistical Package of Social Sciences, (SPSS). The statistically significant t-value was considered as an indicator for distinguishing the paragraphs. Table (1) shows the results of the T-test for all the items in the scale.

Table (1) shows the T-values and the internal consistency coefficient for the scale paragraphs, and when comparing it with the tabular value of (t) at a degree of freedom (10 nd) a level of significance (0.05) and of (1.98), it was found that paragraphs (10) of the test anxiety scale are distinctive.

#### *Second: Internal consistency coefficient:*

The internal consistency coefficient was calculated by finding the correlation of the score of each paragraph with the total score of the scale, using the Pearson correlation coefficient and by employing the statistical bag (spss). The calculated correlation coefficients ranged between (0.541-0.211), and when compared with the tabular value of the correlation coefficient of (0.138) degree, it shows a statistical function at the level of (0.5) and as shown in Table (1).

**Table 1. The results of the T-test for all the items in the scale.**

| Paragraph number | Higher group    |       | Lower group     |       | The computed T-value | Coefficient of consistency |
|------------------|-----------------|-------|-----------------|-------|----------------------|----------------------------|
|                  | Arithmetic mean | SD    | Arithmetic mean | SD    |                      |                            |
| 1                | 3.42            | 0.70  | 2.25            | 1.11  | 10.28                | 0.541                      |
| 2                | 3.38            | 0.64  | 2.35            | 1.06  | 9.63                 | 0.433                      |
| 3                | 3.38            | 0.81  | 2.80            | 0.84  | 5.75                 | 0.420                      |
| 4                | 3.41            | 0.71  | 2.76            | 0.78  | 7.13                 | 0.261                      |
| 5                | 3.33            | 0.69  | 2.90            | 0.91  | 4.36                 | 0.323                      |
| 6                | 3.64            | 0.57  | 3.08            | 0.89  | 6.07                 | 0.265                      |
| 7                | 3.20            | 0.77  | 2.65            | 0.87  | 5.46                 | 0.211                      |
| 8                | 3.120           | 0.793 | 2.759           | 0.945 | 3.039                | 0.316                      |
| 9                | 3.24            | 0.75  | 2.69            | 0.83  | 5.63                 | 0.521                      |
| 10               | 3.21            | 0.73  | 2.66            | 0.81  | 5.78                 | 0.422                      |

Degree of freedom to discrimination = 108, Significance level = 0.05, Tabulated  $t^*$  = 1.98

### *Psychometric properties:*

***Virtual validity:***

To verify the validity of the tool, it was submitted to a group (10) of experts in educational and psychological sciences, to verify Virtual validity. All the paragraphs had an agreement of more than 90% of the experts, and, thus the tool was validated for the measurement.

***Stability:***

The researcher verified the stability of the test anxiety scale by the Reliability Test-Retest method, where the researcher performed the test on the same sample three weeks after the first test. It was found that the reliability coefficient according to the Person Correlation Coefficient between the scores of the first and the second test was 0.86, and this indicates that the scale has very high stability.

***Stability by half segmentation:***

Reliability was extracted by the half-on segmentation method. The correlation coefficient was (0.773), and when corrected by the Spearman-Brown equation, the stability reached (0.872).

***2- Teaching Strategy:***

The results of the experiment made clear the most important problems that lead to test anxiety were identified. The paragraph with an average of (3) scores or less was adopted as an adaptive problem. In light of the assumption, the needs were accordingly identified. The indicative program was submitted to a group of experts and specialists in the field of educational and psychological counseling to ensure the appropriateness of the goals and activities used and the time required to achieve the goals aimed at addressing test anxiety for students of the Faculty of Science and Arts - Northern Border University.

The strategy revolves around how to prepare for the study and increase motivation and determination to continue studying and increase the rate of work by improving focus and memory and using methods that lead to effective review during the study and also providing treatment techniques to overcome test anxiety. The strategy consists of nine sessions (weekly sessions). The first session was applied in a collective way to find out the most important academic problems that all students face. Starting from the second session until the last session, it was applied on an individual basis. The strategy sessions are as follows in detail:

***Pre-test:***

The pre-test was taken by 30 students from the Education Department of the College of Sciences and Arts - Northern Border University.

***Parity between the two research groups:***

Although the students of the experimental and control groups were selected randomly, the researcher worked out to achieve parity between the experimental and control groups to increase the accuracy of some intruding variables that could affect the results of the experiment. The researcher used statistical parity in controlling these variables which were:

***1- Equalization in test anxiety***

To find out the significance of the differences between the arithmetic means, the T value was calculated for the two independent samples. The value which was calculated (1.19) was smaller than its tabular value of (2.763) at the degrees of freedom (28) and the level of significance (0.01). This indicates the existence of random differences between the two groups in test anxiety, indicating their equivalence, Table (2).



**Table 2: for parity between the control and experimental groups in test anxiety**

| Group        | Sample size | Arithmetic mean | SD   | DF | T value    |                  |                  |                  |
|--------------|-------------|-----------------|------|----|------------|------------------|------------------|------------------|
|              |             |                 |      |    | Calculated | Tabulated (0.05) | Tabulated (0.01) | Tabulated (0.01) |
| Experimental | 15          | 35.86           | 2.35 | 28 | 0.0786     | 2.048            | 2.763            | 3.674            |
| Control      | 15          | 34.66           | 3.10 | 28 | 0.0786     | 2.048            | 2.763            | 3.674            |

The results showed that the arithmetic mean of the control group is (20.25) years, with a standard deviation of (1.54). The arithmetic mean of the experimental group is (21.88) years with a standard deviation of (1.66). Where its calculated value reached (1.45), which is smaller than its tabular value of (2.02) at a degree of freedom (28) and a level of significance (0.01). Table (3) This indicates the existence of random differences between the two groups in the age variable, which indicates their equivalence.

**Table 3: Random differences between the two groups in the age variable**

| Group        | Sample size | Arithmetic mean | SD   | T value    |           | DF | Sig. |
|--------------|-------------|-----------------|------|------------|-----------|----|------|
|              |             |                 |      | Calculated | Tabulated |    |      |
| Experimental | 15          | 74.85           | 10.5 | 0.376      | 2.76      | 28 | NS   |
| Control      | 15          | 72.16           | 11.5 | 0.376      | 2.76      | 28 | NS   |

Achievement level for the two groups (general average for the previous academic year)

The scores of the students of the experimental and control groups were obtained. The researcher found that the average scores of the experimental group were (74.85) with a standard deviation (10.5) and the average scores of the students of the control group were (72.16), with a standard deviation (11.5). Using the T-test for two independent samples, it was found that (Table 4) The difference between the mean scores of the two groups was not statistically significant because the calculated value (t) reached (0.376), the tabular value of (t) at the degree of freedom (28), and the statistical significance (0.01) is (2.76), and this means that the two groups were equivalent in the variable (Academic achievement).

**Table 4: The T-test between the mean scores of the experimental and control groups (for academic achievement)**

| Group        | Sample size | Arithmetic mean | SD   | T value    |           | DF | Sig. |
|--------------|-------------|-----------------|------|------------|-----------|----|------|
|              |             |                 |      | Calculated | Tabulated |    |      |
| Experimental | 15          | 74.85           | 10.5 | 0.376      | 2.76      | 28 | NS   |
| Control      | 15          | 72.16           | 11.5 | 0.376      | 2.76      | 28 | NS   |

## CONCLUSION

The results of the research showed that the students of the experimental group who were exposed to the program based on the proposed instructional strategy had decreased test anxiety in their statistical significance, compared to the control group students who were not exposed to the proposed teaching strategy according to the results of the statistical hypotheses which showed a clear change in reducing test anxiety among students of the group. The test anxiety did not change for the control group according to the calculated values and showed the

presence of statistically significant differences in favor of the experimental group after applying the proposed teaching strategy. These results can be explained through the following:

- 1- The appropriateness of the duration of the implementation of the program based on the proposed teaching strategy, the time of the sessions and group meetings, as well as what the experimental group showed in terms of understanding the truth of what they feel and the need to change or amend it, which had helped them to overcome many of the difficulties and situations that cause them anxiety, fear and confusion that They were suffering from it before the test, during and after the performance of the test, and following the positive result of the proposed teaching strategy reached by the study.
- 2- The setting up the treatment plan by the researcher in a manner commensurate with the age of the students in addition to the researcher himself applying the proposed teaching strategy, which was built on scientific foundations that included lectures, activities, and events that have proven effective in reducing test anxiety, as well as determining the duration of the sessions and the period for their application. The extent of students' understanding of its vocabulary and its effect helped them to alleviate their problems after issuing their evaluation judgments on the topics of the sessions directly and logically.
- 3- The proposed teaching strategy has an effective impact on students' awareness of themselves and their enlightenment of reality, in organizing their experience, enhancing self-confidence, activating self-motivation, the ability to take responsibility for the difficult tasks, and teaching them basic skills in recall and reality-organizing skills.

#### *Study recommendations:*

In light of the researcher's findings, he came up with some recommendations that could contribute to reducing students' levels of anxiety during the test, and these recommendations include the following:

- 1- The necessity of working to enhance students' self-confidence, as well as strengthening their ego, and rejecting negative self-talk by teaching college students to be frank in their speech and to freely express their desires and have the courage to reject any topic that requires them to show their opinions.
- 2- The necessity of paying attention to educational and psychological counseling in the College of Education, and working out to establish a psychological counseling unit to deal with students' problems (both psychological and the Academy).
- 3- Holding training and counseling sessions that would contribute to training students to face test anxiety by providing international models and teaching them the best methods for studying and preparing for the period of exams (both periodic and final exams).
- 4- Providing an appropriate university environment in the college and departments in a way that contributes to reducing anxiety in general among students and giving them more reassurance.

#### *Suggestions:*

- Conduct a similar study on university students at a university other than the Northern Border University and compare their results with the results of the current study.





- Conduct more studies that deal with a segment of university students with attention to the variables related to their personality and academic achievement (self-confidence, academic achievement, social shyness, intelligence, mental health)
- Find more studies about test anxiety among other groups of society in light of variables and factors related to increasing test anxiety to find solutions to it.

## ACKNOWLEDGMENTS

Alaa Ahmed Hasan Elgendy is supported by the research grant No (8478-SAR-2019-1-10-F) Deanship of Scientific Research, Northern Border University, Arar, KSA.

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