

Effectiveness Of A Collective Psycho-Educational Program in Reducing Test Anxiety And The Psychological Stress of COVID-19

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Article Info

Article History

Received:
April 29, 2021

Accepted:
July 26, 2021

Keywords :

Collective Psycho-Educational Program, Test Anxiety, Psychological Stress, COVID-19

DOI:

10.5281/zenodo.5137847

Abstract

Anxiety is a feeling that forms part of life. It is a dynamic aspect that affects personality development, and psychological stress is a feature of our current age. Technological and industrial progress, bad economic conditions, epidemics and diseases, particularly the rapid widespread of COVID-19 in various countries and the subsequent horror caused among international communities, have led to an increase in anxiety and psychological stress. The present research aims to investigate the effectiveness of a collective psycho-educational program in reducing test anxiety and the psychological stress of COVID-19 among secondary school students. A quasi-experimental approach was employed. The study sample included 25 students who were regarded as one experimental group to achieve the research objectives. The research results revealed differences in students' arithmetic average scores on the Scales of Test Anxiety and Psychological Stress in favor of post measurement, which indicates the effectiveness of the used program in reducing students' test anxiety and psychological stress. In light of these results, the two researchers recommend the use of the proposed program at different academic stages.

Introduction

The rapid spread of COVID-19 in Jordan in particular and in the world has led to the closure of all educational institutions. This closure was in compliance with the World Health Organization's instructions, implemented by the National Committee for Epidemics, and the decisions of the Ministry of Defense. These instructions and decisions included comprehensive and partial quarantine, wearing masks and gloves, keeping social distance and emphasis on using sterilizers to protect students, teachers, and employees from being infected by the virus (Holmes et al., 2020). Consequently, the Ministry of Education introduced the Distance Learning technology, which include synchronous electronic learning and virtual education via educational websites and electronic platforms on the TV and via the Internet, in order to continue the educational process; maintain students' right to learn while being healthy, safe, and sound; and provide them with hope to achieve their future ambitions.

General Secondary Certificate Examination (GSCE) is the last stage of school education before joining university or college. To take this test, a student is supposed to successfully pass 10 years of basic education and two years of secondary or vocational education. Because of the exceptional circumstances of the COVID-19 pandemic, the Jordanian Ministry of Education has decided to divide the total marks of the GSCE into two semesters: 65% for first-semester courses and 35% for second-semester courses. This decision was taken upon the following condition: to comply with the health protocol by conducting test sessions while wearing masks and gloves and using sterilizers to keep students, teachers and employees health safe. This protocol relieved the intensity of anxiety among students and their families (Shawash, 2020).

Nonetheless, it made others feel frustrated, particularly the students, who were accustomed to receiving private tutorials or joining private educational centers. The circumstances caused by the virus created unprecedented, unusual conditions for the students, who as a result, felt confused, anxious, and worried. This is in addition to the fact that the GSCE exacerbates students' anxiety, since this examination is considered a decisive matter for Jordanians. This weakens their performance and may even lead to their failure. Several studies, such as the one by Al-Zoubi (2019), indicate that students' test anxiety is considerably high.

Anxiety is considered as a psychological phenomenon that is common among people. It is a daily experience for an individual at all stages of age. Some people regard it as one of the main variables in personality theories (Murad, 2021). This has led to researchers' much attention of anxiety to identify its concept, types, sources, and causes. One type of anxiety is test anxiety. It is connected with situations of assessment and appreciation. Since tests are an indispensable means for specifying students' performance and progress and achieving the objectives of the educational process. Educators and parents have paid particular attention to offer all facilities and instructions to learners to enable them to limit test anxiety levels and consequently, increase their academic achievement (Abdel-Khaleq, 2000).

Test Anxiety is a type of anxiety related to test situations. Such situations cause the feelings of fear and great distress (Bourne, 2005). It is one of the problems faced by students; it appears as soon as teachers announce test dates. A student's anxiety leads to a negative effect on his/her ability to concentrate and remember, followed by bad effects on cognitive, emotional, behavioral, and physiological aspects such as low motivation and low achievement. The two researchers think that students will suffer from GSCE because of its great role in educational process. Its results are considered as a scale of preference among students and a basis for transfer to stages of tertiary education, post-graduate studies, social prestige, and their self-assurance.

Al-Katayba and Al-Saud (2009) and Al-Bawab (2006) indicate that test anxiety is a psychological issue that hinders a student from achieving desired success. Psychological aspects in general and test anxiety in particular play an essential role in determining students' future career because such factors may lead them to fail their exams and expose them to several psychological pressures which affect their academic ambitions. As a result, one cannot deal correctly with learning and exams. Murad (2020) believes that when one fails to use some defensive means to reduce psychological stress, one shows certain emotional symptoms such as anxiety, tension, frustration, and rapid excitement.

Both researchers believe that test anxiety is the disorder experienced by a student during test time due to psychological stress surrounding him/her; this makes him/her feel confused, not concentrated, and unable to retrieve information, hence resulting in failure. Bourne (2005) lists physical symptoms that students are exposed to when they suffer from high test anxiety, such as increased heart rate, sweating, trembling, chest pain, headache, stomach disorder, dizziness, chill or fever, fatigue, muscle cramps, and sleeping problems in addition to emotional effects like fear or horror, feeling of depression, sorrow, boredom and nightmares.

The anxiety phenomenon is affected by several factors, including environmental and social factors as well as the circumstances and events faced by an individual in life (Johnson et al., 2002). These circumstances in general and those of the COVID-19 pandemic in particular coupled with psychological pressures of fear of infection, home quarantine conditions, and electronic learning have placed students, parents, and teachers in exceptional new unusual conditions.

Jain and Rubino (2012) define test anxiety as a psychological state associated with fear and expectation; it is a transitional case that affects some students before and during tests, followed by tension, intense reaction, and negative mental obsession overlapped with the learners' required concentration during the test; this negatively affects mental tasks in a test situation.

The psychological stress faced by a student in his/her school, family, university, or society represents undeniable indicators. The inability to deal with psychological stress leads to several psychological disorders such as anxiety and depression. Psychological Stress represents the situations, events, and difficulties faced by an individual that hinder him/her from achieving his/her aims, negatively affecting his/her level of psychological and social adjustment (Abu Habib, 2010).

Askar (2000) defines psychological stress as a group of internal and external sources of pressures exposed by an individual in his/her life, resulting in several negative effects of psychological stress. Abdullah (2004) classifies negative effects of psychological stress as follows:

1. Physiological effects: loss of appetite, high blood pressure, disorder of blood circulation, increase of blood adrenalin, and so on;

2. Psychological effects: fatigue, exhaustion, boredom, low tendency to work, depression, and anxiety;

3. Social effects: withdrawal, social boycotting, inability to bear responsibility, and failure to do assignments;

4. Behavioral effects: trembling, speech disorder, change in facial expressions, and the act of blaming others; and

5. Cognitive effects: incapability of concentration and attention, bad organization and planning, overlap of ideas, and so on. Abu Bakr (2018) specifies some strategies for facing psychological stress:

1. Knowledge and problem solving instead of denial and escape;

2. Social support versus religious confrontation;

3. Cognitive confrontation versus emotional confrontation;

4. Strategy of withdrawal and avoidance; and

5. Strategy of inconvenient behavioral customs.

Cohen (2005) lists a group of strategies for facing psychological stress:

1. Rational thinking: logical thinking to identify anxiety sources and causes related to psychological stress.

2. Imagination: one may resort to think of the future and imagine what will happen.

3. Denial: denying and ignoring pressures and sources of anxiety as if they did not happen.

4. Problem solving: one may use new and creative ideas to face pressures.

5. Humor: dealing with psychological stress through a sense of humor to overcome it.

6. Come-back to religion: performing worships as a source of spiritual and emotional support to face and overcome stress.

Nasser (2012) lists the following techniques for dealing with test anxiety:

1. Organized protection: offering stimuli that gradually causes anxiety, such as students' exposition to situations similar to test ones.
2. Cognitive treatment: specifying ideas that lead to anxiety and modifying them as logical or illogical.
3. Group counseling: discussing with students about the problems following test anxiety; thus, students exchange their experiences in facing test situations.
4. Anxiety as a natural reaction to pressure: anxiety can be considered a positive element when it increases a student's motivation.

Salem (2016) conducted a study on 297 students of Education College, Hail University. The study indicated a positive correlation between test anxiety and psychological stress and a negative correlation between test anxiety and students' academic achievement. Several studies indicate the effectiveness of a proposed counseling program in reducing secondary students' test anxiety (Absam, 2012; Abu Azab, 2008; Abu Hassouneh, 2015; Badawi, 2018; Nasser, 2012). Prato & Yuacha (2013) aim to identify the effect of a muscular relaxation-based training program on reducing test anxiety, results showed that training program was ineffectiveness in reducing anxiety level among the experimental group members. Goldenberg, Floyed & Moyer (2013) indicate classic music ineffectiveness in reducing undergraduate students' test anxiety level and performance. Certain studies, like Sayhi (2012), reveal that school, family, as well as social and economic stresses are the most prominent causes of students' test anxiety.

Most results of the previous studies show a positive correlation between test anxiety and psychological stress exposed by students. They also indicate that anxiety forms a state of comprehensive tension affecting mental processes such as attention, concentration, remembrance, and information retrieval.

The Current Study

In natural circumstances, students of GSCE are usually terrified of these exams that determine their future career. However, in the academic year 2019/2020, after the widespread of COVID-19, exams have become a concern for students, especially due to the new unusual features of exam forms and layout. In addition to the state of horror and confusion among those students due to the prevalent virus, the Ministry of Education attempts to relieve their anxiety and psychological stress in this decisive year since this exam has a paramount importance. Although the ministry has, through media and social media sites, emphasized that all these matters in such current exceptional circumstances will be taken into consideration, students are still afraid of their final exams. Therefore, the present research attempts to design a collective psycho-educational program to reduce students' test anxiety and psychological stress in the light of this widespread virus which has a powerful unprecedented impact on different aspects of life.

Hypotheses

1. There are statistically significant differences ($0.05 \geq \alpha$) among the students of experimental group concerning the test anxiety level in both pre-test and post-test to be attributed to the psycho-educational program.
2. There are statistically significant differences ($0.05 \geq \alpha$) among the students of experimental group regarding the psychological stress level in both pre-test and post-test to be attributed to the psycho-educational program.

Aim of the Study

Generally, the world has never witnessed more influential challenges to education than those presented by the COVID-19 pandemic. Besides, the inability to predict this disease has represented a significant challenge to the capability of educational systems in several countries. This has resulted in closing different educational institutions to combat the infection widespread among students. This study aims to design a psycho-educational program for an important category in society—students taking the General Secondary Certificate Examination—to identify the causes of test anxiety and psychological stress, preventing them to reduce students' test anxiety and psychological stress and overcoming their bad psychological state due to the pandemic.

Limitations

The results of the study are determined by the validity and reliability of the tools used. For instance, the study sample was limited to the second agricultural secondary school/Shoubak secondary school in the second semester 2019/2020.

Methodology

The quasi-experimental approach with one experimental group was employed because it relies on the investigation of a phenomenon as it is in reality through pre- and post-application of the research tools to the experimental group.

Participants

The research population consists of 35 second-grade students from Alshobak Agricultural High School in the second semester 2019/2020, who agreed to participate in this study. The research sample consists of 25

students who obtained the highest scores on the two following scales: the Test Anxiety Scale (TAS) and the Psychological Stress Scale (PSS).

Measurements

Test Anxiety Scale (TAS)

The TAS, designed by Al-Yami (2018) on Jordanian environment, was developed to consist of 36 items. Each item was given a gradual five-point weight (“very large,” “large,” “medium,” “small,” “very small”). In order to verify the scale’s validity, it was distributed to a group of experienced educators. The validity of the scale was calculated by estimating the coefficient of correlation between each item and the scale total score. The correlation coefficients ranged from 0.47 to 0.78 and were all statistically significant. The scale reliability was verified through the split-half method (0.89) and internal consistency one (0.87).

Psychological Stress Scale (PSS)

The PSS, developed by Dukhan and Al-Hajjar (2006), was used. It comprised 60 items. Each statement was provided with a gradual three-point weight (“always applicable,” “sometimes applicable,” “rarely applicable”). The scale validity was calculated by estimating the coefficient of correlation between each item and the scale total point. The correlation coefficients ranged from 0.41 to 0.73 and were all statistically significant. The scale reliability was verified through test-retest and internal consistency. Table (1) shows the Reliability coefficients for scale dimensions and their total score.

Table 1: Reliability coefficients for scale dimensions and total score

Stress	Number of Items	Test-Retest	Internal Consistency
Family	11	0.80	0.85
Financial	11	0.77	0.82
Academic	9	0.75	0.81
Personal	9	0.81	0.84
Social	10	0.81	0.87
University environment	10	0.80	0.89
Total	60	0.87	0.90

Collective Psycho-Educational Program (CPEP)

It is a process of interaction between an expert trainer and trainees. It includes a group of information, experience, skills, and different activities offered to individuals during a specific period to help them reduce test anxiety and psychological stress. After reviewing the research relevant literature (Abu Habib, 2010; Askar, 2000; Nasser, 2012), the program was designed based on the fact that an individual is a social human being with psychological needs and that he/she is controlled by social standards. Perhaps the most important feature of the Collective program is that the participants learn to discuss what bothers them and what concerns them. The program included 12 counseling sessions: each session was 60 minutes long, with two sessions per week.

The general objectives of the program were determined. Each of its sessions involved a set of methods, procedures, activities, and homework as well as a set of skills and methods necessary to reduce the levels of test anxiety and psychological stress among the participants. These sessions developed the participants’ communication skills and provided them with opportunities for interaction in addition to activities to enhance their self-confidence and to deal with test anxiety, psychological stress, and coping strategies. In order to ensure the program’s validity, it was distributed among a group of specialists in educational psychology and psychological guidance, and experts in counseling, therapeutic, and preventive programs. The program sessions were modified based on the reviewers’ recommendations.

Procedures

1. The collective psycho-educational program was reviewed by expert specialists. The program included 12 counseling sessions. Each session was 60 minutes long, with two sessions per week.
2. The research two scales—the TAS and the PSS—were developed; their points of validity and reliability were verified.
3. The two scales were applied to the 35 students who participated. Then, the research one experimental group comprised the selected 25 students achieving the highest points on both scales.
4. The collective psycho-educational program was applied to the experimental group students for six weeks (two sessions per week). The two researchers were trainers.
5. After the end of the program, the two researchers reapplied the research two scales to the research sample.

Results and Discussion

First Hypothesis: There are statistically significant differences ($0.05 \geq \alpha$) among the students of experimental group concerning the test anxiety levels in both the pre-test and post-test to be attributed to the psycho-educational program. For program effectiveness, Wilcoxon Test with Z significance was

administered to identify the differences in the average points of the students' responses to the Test Anxiety Scale in the pre-test and the post-test. Table (2) shows the test findings.

Table 2: Wilcoxon's test results identifying the differences in the average points of the participants to the Test Anxiety Scale in the pre-test and the post-test

Scale	Sample Type	Sample size	Mean	SD	Mean Difference	Z Value	Sig.
Test anxiety	Pre-Test	25	2.70	0.19	0.54	-4.384	0.000*
	Post-Test	25	3.24	0.18			

The findings show that the Z value of the collective psycho-educational program used for training the research sample on this scale in general reached (-4.384). The significance level was (0.000), a statistically significance of ($0.05 \geq \alpha$). This indicates that there are statistically significant differences among the research sample in terms of test anxiety level in the pre-test and post-test in favor of the post-test, hence reducing test anxiety level after the program completion. This reveals the positive effect of using the research program and its effectiveness, which is due to the fact that the program included some knowledge, skills, and life experiences defining the concept of anxiety, its causes, and negative effects.

The program also demonstrated the techniques and strategies used in preventing test anxiety. For example, students were exposed to situations similar to the test ones, experience was exchanged among learners to face the test situation regarding anxiety as a natural reaction and a positive element which should increase students' motivation. Besides, some sessions included training on relaxation skill and the acquisition of psychological comfort, positive self-talk, and the development of problem-solving abilities. During the program, some entertainment techniques were used to remove the research sample's negative reactions, thus reducing reaction tension and test anxiety level. The program sessions, including certain strategies and skills, helped to reduce test anxiety level among the experimental group members.

Second Hypothesis: There are statistically significant differences ($0.05 \geq \alpha$) among the students of experimental group concerning the psychological stress level in both pre-test and post-test to be attributed to the psycho-educational program. For program effectiveness, Wilcoxon Test with Z significance was administered to identify the differences in the average points of the students' responses to Psychological Stress Scale in the pre-test and the post-test. Table (3) shows the test findings.

Table 3: Wilcoxon Test results identifying the differences in the average points of the participants to Psychological Stress Scale

Stress	Sample Type	Sample size	Mean	SD	Mean Difference	Z Value	Sig.
Family	Pre-Test	25	2.56	1.36	0.60	-2.402	0.016*
	Post-Test	25	3.16	1.11			
Financial	Pre-Test	25	4.12	2.13	1.78	-3.721	0.000*
	Post-Test	25	5.90	1.70			
Academic	Pre-Test	25	3.40	2.0	0.73	-2.220	0.026*
	Post-Test	25	4.13	1.51			
Personal	Pre-Test	25	2.56	1.40	0.84	-2.829	0.005*
	Post-Test	25	3.40	0.91			
Social	Pre-Test	25	4.11	2.10	1.49	-3.320	0.001*
	Post-Test	25	5.60	1.80			
School Environment	Pre-Test	25	3.41	1.90	0.79	-2.236	0.025*
	Post-Test	25	4.20	1.63			
Total Mark	Pre-Test	25	3.36	0.71	0.64	-4.138	0.000*
	Post-Test	25	4.0	0.65			

The results show the Z value for all six types of stress reached (-2.402, -3.721, -2.220, -2.829, -3.420, and -2.236) in sequence. They also show that the significance level ranged from 0.000 to 0.026. This indicates that there are statistically significant differences ($\alpha \leq 0.05$) in psychological stress levels among the research sample in both pre-test and post-test in favor of the post-test, attributed to the collective psycho-educational program.

The findings show that the Z value of the collective psycho-educational program used for training the research sample on this scale in general reached (-4.138). The significance level was (0.000), a statistically significance of ($0.05 \geq \alpha$). Therefore, there are statistically significant differences in the research sample behaviors in favor of the post-test. As a result, students' psychological stress level was reduced.

This reveals the effectiveness of using the research program, which is due to the fact that it included various strategies for facing psychological stress, such as rational thinking strategies, search for sources and causes of stress, and denial of stress or its avoidance. In addition, some sessions included training on the

strategy of using new and creative ideas for facing and solving problems. The researchers attribute this result to the program sessions that included the use of humor when dealing with psychological stress. Students were trained to deal with stress types simply with a sense of humor and positive reactions in addition to the strategy of spiritual commitment which includes performing religious rituals as a source of spiritual and emotional support. All these session strategies contributed to an increase in students' ability to face psychological stress and consequently, a decrease in stress levels after completion of the program.

Recommendations

In light of the findings of the current study, we recommend conducting training programs on the techniques required for students to face test anxiety and psychological stress of the GSCE at high schools. We further recommend reinforcement of the role of the educational-psychological guide to help students suffering from negative effects due to test anxiety and psychological stress and to improve students' activities such as sport and entertainment, as well as cultural, scientific, and artistic activities. This, in turn, reduces their psychological stress by changing the atmosphere of study from test stress and anxiety to relaxation and humor, encouraging the discharge of their physical and intellectual energy.

Conclusions

For ages, psychologists have realized the importance of investigating the correlation between test anxiety and psychological stress. Students' mental capabilities decrease in situations that are full of pressure and assessment such as test situations and distance learning circumstances imposed by the COVID-19 pandemic. In such conditions, test anxiety is regarded as one of the types of general anxieties that appear in specific situations related to test situations and assessment in addition to the psychological stress exposed to by the students due to home quarantine and complete self-reliance in learning, which makes them feel more worried.

In all stages of life, individuals are exposed to pressing situations and severe effects resulting from several sources such as home, society and surrounding circumstances. Secondary students are no stranger to such difficult situations and the pandemic. All these factors form one of the sources of psychological stress faced by students at this stage.

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