



NEAR EAST UNIVERSITY
INSTITUTE OF GRADUATE STUDIES
GENERAL PSYCHOLOGY PROGRAM

**THE RELATIONSHIP BETWEEN EXAMINATION ANXIETY,
COPING MECHANISMS, AND ACADEMIC PERFORMANCE
AMONG UNIVERSITY STUDENTS**

GOSHGAR MURSALZADE

MASTER'S THESIS

NICOSIA
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THESIS SUPERVISOR
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NICOSIA
2021

ACCEPTANCE/APPROVAL

We as the jury members certify the “**The Relationship Between Examination Anxiety, Coping Mechanisms, And Academic Performance Among University Students**” prepared by the Goshgar Mursalzade defended on 04/February/2021 Has been found satisfactory for the award of degree of Master.

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DECLARATION

I Goshgar Mursalzade, hereby declare that this dissertation entitled ‘The Relationship Between Examination Anxiety, Coping Mechanisms, and Academic Performance Among University Students’ has been prepared by myself under the guidance and supervision of Dr.Gloria Manyeruke in partial fulfilment of The Near East University, Graduate School of Social Sciences regulations and does not to the best of my knowledge breach any Law of Copyrights and has been tested for plagiarism and a copy of the result can be found in the Thesis.

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ABSTRACT

THE RELATIONSHIP BETWEEN EXAMINATION ANXIETY, COPING MECHANISMS, AND ACADEMIC PERFORMANCE AMONG UNIVERSITY STUDENTS

This study aimed to investigate the relationship between examination anxiety, coping mechanisms, and academic performance among Near East University students in the Turkish Republic of Northern Cyprus. The study also targeted to explore the impacts of some demographic indicators such as age, gender, employment, and year of education on examination anxiety and coping. 352 students from various faculties at Near East University participated in the study. Employing survey methodology and convenient sampling strategy the study revealed several findings. The findings showed that there is a significant negative correlation between academic performance and examination anxiety. This is congruent with findings of previous studies, which asserted that this may be linked to significant worry and intrusive thoughts that prevent focusing on an exam. Only one dimension of coping was revealed to be correlated with academic performance. Task orientation and preparation dimension of coping was found to be positively correlated with academic performance, indicating that when students prepare for exams and concentrate well, they become successful in exams. Furthermore, the results indicated that examination anxiety and task orientation and preparation predict academic performance. It was also revealed that there are significant gender differences regarding exam anxiety and coping, which may be linked to gender roles in societies. The study recommends that in order to achieve higher performance, students must understand the power of positive coping mechanisms and develop successful coping strategies, which will help them define the source of anxiety and encourage them to reduce it rather than simply avoiding it.

Keywords: Examination anxiety, coping mechanisms, academic performance

ÖZ

ÜNİVERSİTE ÖĞRENCİLERİ ARASINDA SINAV KAYGISI, BAŞA ÇIKMA MEKANİZMALARI VE AKADEMİK PERFORMANS ARASINDAKİ İLİŞKİ

Bu çalışma, Kuzey Kıbrıs Türk Cumhuriyeti'ndeki Yakın Doğu Üniversitesi öğrencilerinde sınav kaygısı, başa çıkma mekanizmaları ve akademik performans arasındaki ilişkiyi incelemeyi amaçlamaktadır. Çalışma ayrıca yaş, cinsiyet, istihdam ve eğitim yılı gibi bazı demografik göstergelerin sınav kaygısı ve başa çıkma üzerindeki etkilerini araştırmayı hedeflemiştir. Çalışmaya Yakın Doğu Üniversitesi'nin çeşitli fakültelerinden 352 öğrenci katılmıştır. Veriler anket yöntemiyle toplanmış olup katılımcılar uygun örnekleme yöntemi ile seçilmiştir. Bulgular, akademik performans ile sınav kaygısı arasında anlamlı bir negatif korelasyon olduğunu göstermektedir. Bu bulgu bir sınava odaklanmanın endişe ve istem dışı düşüncelerle bağlantılı olabileceğini ileri süren önceki çalışmaların bulguları ile tutarlılık göstermektedir. Başa çıkmanın yalnızca bir boyutunun akademik performansla ilişkili olduğu ortaya çıkmıştır. Başa çıkmanın görev yönelimi ve hazırlık boyutunun akademik performansla pozitif ve anlamlı bir şekilde ilişkili olduğu görülmüştür. Bu da öğrencilerin sınavlara hazırlandıklarında ve iyi konsantre olduklarında sınavlarda başarılı olduklarını göstermektedir. Ayrıca sonuçlar, sınav kaygısının, görev yöneliminin ve hazırlığın akademik performansını tahmin ettiğini göstermiştir. Bulgular ayrıca toplumsal cinsiyet rolleriyle ilişkilendirilebilecek bir bulgu olarak sınav kaygısı ve başa çıkma konusunda önemli cinsiyet farklılıkları olduğunu ortaya koymuştur. Çalışma, daha yüksek performans elde etmek için, öğrencilerin olumlu başa çıkma mekanizmalarının gücünü anlamaları ve başarılı başa çıkma stratejileri geliştirmeleri gerektiğini önermektedir; bu, kaygının kaynağını tanımlamalarına ve basitçe kaçınmak yerine onu azaltmaya teşvik etmelerine yardımcı olacaktır.

Anahtar Kelimeler: Sınav kaygısı, başa çıkma mekanizmaları, akademik performans

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ABBREVIATIONS

APA	American Psychological Association
ATT	Attention Training Technique
CGPA	Culmulative Grade Point Average
COPEAU	Coping with Pre-Exam Anxiety and Uncertainty
DAI	Differential Performance Stress Inventory
EEG	electroencephalogram
FAA	Federal Aviation Administration
FIRAS	Foreign Language Reading Anxiety scale
GCSE	General Certificate of Secondary Education
GIE	generalized internal\external frame of reference
GSACS	German Adaptation of the Strategic Approach to Coping Scale
MSSQ	Medical Student Stressors Questionnaire
PACPR	parental academic conditional positive regard
RTT	Responses to Tests
SAT	Scholastic Achievement Test
SEM	Structural Equation Model
SRPLAQ	Self-Regulation Profile of Learning Activity Questionnare
STA	State Test anxiety
TAI	Test Anxiety Inventory
TAI-G	German Test Anxiety Inventory
TAS	Test Anxiety Scale
TME	tripartite model of emotions
TTA	Trait Test Anxiety
WTAS	Westside Test Anxiety Scale

CHAPTER 1

INTRODUCTION

Recent research shows that exam anxiety has turned into a big obstacle for students today and it has a negative influence on students' academic performance. A large proportion of the student body experience exam anxiety (Ang and Huan, 2006). Exam anxiety is a kind of anxiety that prevents the effective use of the learned information during the exam and leads to a decrease in success (Duty et al., 2016). Exam anxiety is strongly related to the meanings that the individual attributes to the exam, the image created in the mind related to the exam, references to the situation after the exam and the importance given to the gains to be obtained after the exam. Restlessness, distress, fear of failure, unwillingness to work, nausea, chills, dry mouth, internal distress, sweating, sleep disturbances, abdominal pain are the physical symptoms associated with exam anxiety (Cassady and Johnson, 2002). On the other hand, impaired attention and concentration (Inangil et al, 2020), decreased self-confidence, and insufficient and worthless vision are common cognitive symptoms of exam anxiety (Cassady and Johnson, 2002).

Exam anxiety is misleading as it contains unrealistic expectations. It unconsciously makes the student be unable to control his own behavior. In addition, teachers and parents' expectations may increase the examination anxiety that students experience (Otterpohl et al., 2019). Parents' demands and expectations make students to work harder before and during exam time and it generates a higher level of anxiety among them. Families should give trust and responsibility, care and positive feedback to students to help them reduce exam anxiety. They should be attentive and avoid comparing

individuals with their peers in conversations about the exams. Sharing emotions with the family and empathy are important elements to deal with examination anxiety. Students should be loved unconditionally in this respect.

Research on examination anxiety have been conducted since 1950s (Sarason and Mandler, 1952). Examination anxiety research has become increasingly important nowadays as the importance of exams on students' future life and careers has significantly increased over the years. This has made students spend increased effort on exams and undertake long and stressful exam preparation which exhaust them (Ang and Huan, 2006).

Previous research has separated different dimensions of examination anxiety, but the bi-dimensional model of Liebert and Morris (1967) has been mostly used among researchers. According to this model, examination anxiety represents itself in two separate dimensions, which are cognitive and emotional or physiological. The cognitive dimension refers to provoking thoughts about poor performance and negative evaluation of their performance by others. The emotional or physiological dimension refer to reflections such as upset stomach, headache or sweating that students experience before and during exams.

A number of anxiety reduction strategies have been identified in the previous literature. These vary from different coping strategies that students develop to techniques such as music therapy, aromatherapy and massages (Shapiro, 2014). Coping strategies are actively used by students to reduce or completely get rid of exam anxiety. Research on coping strategies or mechanisms has developed since the mid-1980s and is still a favorite theme in anxiety research. Throughout decades, several forms of coping mechanisms have been proposed such as problem-focused coping, emotion-focused coping, and so on. In some studies a broader classification of coping strategies are used which include adaptive coping and maladaptive coping strategies (Turner et al., 2012).

This study will investigate impacts of examination anxiety and coping strategies on academic performance. Furthermore, the impact of several demographical variables such as gender, employment, age and year of

education on examination anxiety and coping will also be assessed. Findings of this study will help students, parents, and teachers to understand sources of exam anxiety and its influence on students' academic performance and develop adequate measures to negate its negative consequences.

1.1 Statement of the Problem

Exam anxiety might sound a minor problem that students face. However, study findings show that exam anxiety is more or less felt by majority of students, whether they are primary school students or postgraduate students (Ang and Huan, 2006; Hutchings, 2015). Exam anxiety can cause severe problems for students, ranging from strong physical problems to mental disturbances, which in turn negatively affects academic performance of students (Mashayekh & Hashemi, 2011). In addition, exams and tests have crucial importance for students' future life and careers nowadays, and when the problem is not properly dealt with, it can have severe negative consequences for students' future life and career (Hutchings, 2015). Hence, the problem is actually more severe than it might seem and its negative impacts can be mitigated by understanding the relationship between exam anxiety, coping mechanisms, and academic performance.

1.2 Aim of the Study

The study aims to look for the relationship between coping mechanisms, examination anxiety and academic performance. Besides the main aim, the study will also look for answers to the questions below:

1. Are there any gender differences regarding exam anxiety and coping mechanisms of students?
2. Is there any relationship between demographic factors - employment, age, year of study, and examination anxiety and coping mechanisms used by the students?

1.3 Significance of the study

After a thorough review of the literature it became clear that despite a large number of studies have been conducted on exam anxiety and academic performance (Cassady and Johnson, 2002; Rezazadah and Tavakoli, 2009;

Thomas et al., 2017; Kusturica et al., 2019) studies linking exam anxiety and coping mechanisms together to exam performance are not many. Furthermore, studies conducted among students in Turkish Republic of Northern Cyprus that question exam anxiety and performance relationship are rare, if none. Moreover, although the role of employment on academic performance has been well-researched before (Hawkins et al., 2005; Nonis & Hudson, 2006; Rochford et al., 2009), studies investigating the role of employment on exam anxiety and coping are not many. Therefore, this study will enlarge the scope of the previous literature, examining the anxiety-performance relationship in new settings. Students, parents, and lecturers will all benefit from this study. Students will understand what the sources of exam anxiety are and how anxiety can be managed effectively to achieve higher academic performance. Families and lecturers, on the other hand, will be informed about their roles and duties to help students overcome anxiety and succeed in their academic performance.

1.4 Limitations of the study

- The first limitation involves employing convenient non-probability sampling strategy rather than random probability sampling. Due to the ongoing pandemic, assigning participants randomly and reaching them was a challenge, and would be time-consuming.
- The second limitation of the study lies in the measurement of academic performance by the CGPA. Employing the GPA or even a standardized exam would better represent academic performance as the CGPA is a broader and more general measurement of academic performance.

1.5 Definitions

- Anxiety: anxiety is a state of mood that is accompanied by expectations about possible future negative events (Barlow, 2004).
- Examination anxiety: Exam anxiety is a combination of bodily, phenomenological, and behavioral responses that are associated with negative expectations about possible results of exam failure or a similar situation where performance is evaluated (Zeidner, 1998).

- Academic performance or achievement refers to those skills and abilities that enable students to be successful in academic environment and society (Lindholm-Leary and Borsato, 2006).
- Coping mechanisms are types of behaviors that students develop as a response to personal interpretations of threats in the academic environment (Fletcher and Cassady, 2010).

CHAPTER 2

LITERATURE REVIEW

This chapter includes the previous literature related to exam anxiety, coping, and academic performance. Examination anxiety as a concept and its definitions in the previous literature will be described first. Then findings of previous studies about causes of exam anxiety, anxiety reduction methods, and coping strategies will be presented. After that, studies dealing with academic performance and its relationship with examination anxiety will be presented in detail.

2.1 Examination Anxiety: Concept and definitions

Anxiety is one of the most common elements of human behavior. It is a situation that the body shows several physiological responses to a negative situation, depending on the severity of a threatening situation. Sometimes anxiety appears as a temporary emotional state at different intensity levels over time. This situation is accompanied by unpleasant feelings such as sadness and discomfort, emerged as a result of central nervous system stimulation. Nicaise (1995) states that the body physically arouses while experiencing anxiety and different consequences occur as a result, such as excessive sweating and more frequent heart beating. Feeling of inadequacy and other cognitive distortions might occur as well. Exam anxiety is a form of such situational anxiety (Inangil et al., 2020).

Exam anxiety is often associated with discomfort or fear of a negative phase (Zeidner, 1998). Stimulation of the autonomic nervous system triggers certain physical symptoms of exam stress, such as increased heart rate, blood pressure, and higher skin temperature. Physical symptoms such as Cortisol, immunoglobulin-A and alpha-amylase generation in response to academic

processes have been well researched in the literature (Ouda et al., 2016). Some indicators of mental dimension of exam stress are hopelessness, fear, anxiety, attention control problems, cognitive discomfort and so on. These factors mostly result in poor performance (Duty et al., 2016; McCaffrey et al., 2009; Onyeizugbo, 2010).

Spielberger (1983) stated anxiety to be an immediate but temporary emotional experience with immediate cognitive effects. Anxiety represents itself with feelings of worry and discomfort when particular events occur. A sense of anxiety can emerge at different moments and in different environments and it affects performance of whoever experiencing it differently. Some people experience anxiety more than others. Interestingly, anxiety sometimes motivates some individuals to achieve better performance, it certainly disrupts the performance of others by preventing their mental channels that support performance excellence. Exam anxiety or test anxiety is a concept and a phenomenon that certainly depends on a character of examinees.

Anxiety manifests itself in several biochemical changes in the brain and the body including an increase in adrenaline which makes your heart to beat faster and reduction in dopamine a pain preventing brain chemical. In turn, it generates significant discomfort that causes your body to show fight or flight response (Mashayekh & Hashemi, 2011).

Exam anxiety should not be confused with other attention distracting conditions which results in poor academic performance on a particular test. It is possible that having the mind busy with thoughts such as the death of someone close can distract the focus of the examinee and cause them to show a worse performance in a test. Exam anxiety can manifest itself in such situations when you freeze between questions when you normally know the answers (Inangil et al., 2020).

Exam anxiety is not only an important psychological factor, but also a biological and social factor that affects students' academic performance. Varying levels of anxiety might affect performance in different scenarios. For instance, although a milder level of anxiety results in creativity and

development in students, a higher level of stress, on the contrary can cause students to suffer from attention deficit, shorter periods of concentration losts, reduction in learning and in academic achievement (Inangil et al., 2020).

Exam anxiety is also widely regarded in the literature as test anxiety. Test anxiety is a type of performance anxiety that emerges in situations where there is pressure to do very well. Performance anxiety might emerge when trying to sing solo on stage or enter an important venue. Like other forms of performance anxiety, test anxiety can be associated with abdominal pain, headache, high tension and sometimes trembling and sweating while waiting for the test to start. Even fainting can be experienced by students with really strong exam stress (Mashayekh & Hashemi, 2011).

Test anxiety is generally linked to poor testing skills which results from reduced confidence and morale. Sarason (1984) claimed that a person with test anxiety can experience worry, insecurity, and self-doubt when their performance is under appraisal. These factors makes the taken task less interesting and results in lower performance. Importance of tests on students and their future careers are crucial in some countries. Many students report the biggest source of stress in their lives to be academic load such as homework and exams. According to some studies, exam anxiety heightens between grades 2 and 4, remains stable-high in middle and high school period, and reduces relatively at university. Performance anxiety can reduce career choices and quality of living conditions, if not treated correctly. Therefore, exam anxiety must be recognized as a serious academic challenge and must be fought against it (Mashayekh & Hashemi, 2011).

Gender differences in test anxiety has been a favorite theme for many researchers and majority of such studies have found that female students feel a higher level of test stress than their male counterparts (Szafranski et al., 2012).

Talking about examination or test anxiety, State Test anxiety (STA) and Trait Test Anxiety (TTA) can be distinguished. STA, the temporary emotional state experienced in a specific situation can be distinguished from the TTA as a stable personal tendency to perceive situations as threatening. STA can be

understood as a dynamic temporal process that increases as the exam approaches. Students do not know exactly what they will face on the exam and are therefore increasingly worried. They are faced with the stress of the upcoming exam, constraints and threats from parents and teachers. Thus, anxiety increase as the duration of the exam decreases (Zeidner, 1998). During the week before the exam, anxiety, distraction and tension, discomfort and related factors cause a significant increase in Test Anxiety (Raffety et al. 1997). While test anxiety sometimes makes it easier for some students to perform, it is often disruptive and causes performance to drop.

Ang and Huan (2006) state that in Hong-Kong, Singapore and Taiwan upper class high school students feel significant worry and stress about entrance to the exam exams. Stress levels further peak because of the expectations of parents and teachers. Recently the same phenomenon is observed among students in Great Britain and the USA. Hutchings (2015) shows that today in many countries test results have significant impact on students' future careers. Increasing importance of exams for students is reflected in academic studies as well. Between 2010 and 2017, 31% increase was observed in published examination anxiety research. Some of the influencing variables and the theoretical understanding of test stress have also been reshaped in last decades (Sommer & Arendasy, 2014).

Rarely some authors found positive effects of exam stress on students. Struthers et al. (2000) explored the relationship between exam anxiety and academic performance and they found that problem-focused coping skills and motivation of students increase as a result of exam anxiety, which subsequently affect the academic performance positively.

Liebert and Morris (1967) investigated exam stress, differentiating worry and emotionality dimensions of it. Later scholars have extensively developed this differentiation and have researched cognitive and physiological aspects of exam anxiety. Chin et al. (2017) assert that cognitive factors affecting exam anxiety have been more broadly researched than physiological factors such as dizziness and aches. The authors also state that as previous literature shows, exam anxiety doesn't have significant impact on students' academic

performance. Only up to 10% variation in exam grades can be attributed to exam anxiety (Karatas et al, 2013). In short, exam anxiety is only one of the several factors that can affect performance.

Zeidner (2007) asserts that test anxiety manifests itself in three broad categories, which are cognitive factors, autonomic reactivity dimension and behaviorality dimension. To be more specific, the cognitive dimension includes worry about performance, while autonomic reactivity refers to somatic anxiety. The behavioral response dimension generally reflects coping behavior of test participants.

Several conceptual models have been developed handling the cognitive dimension of test anxiety such as Wells and Matthews's (1994) self-regulatory executive function model. These model presume that worry is generated through self-regulatory efforts guided by self-knowledge and this leads to more severe emotional distress. Wells (1995) developed a metacognitive model, of which the main assumption was occurrence of worry in two stages. In the early stage individuals assume that worrying is good and it has positive benefits. In the later stage they worry because they start to think negatively, assuming that worry is already uncontrollable and dangerous. The literature on exam anxiety has long identified that exam anxiety is largely accompanied or coexist with other forms of anxiety and depression. For instance, King et al. (1995) found that students who show high levels of exam stress are more prone to be exposed to hopelessness and depression, while students experiencing lower levels of anxiety show less exposure to them. Herzer et al. (2014) found that high levels of trait anxiety and social fears are observed in students with higher levels of test anxiety rather than students with lower levels of test anxiety. Klein et al. (2005) assert that the tools that measure depression and anxiety in exam anxiety studies tend to measure both of them, which leads to the lack of discriminant validity. However, majority of these studies have identified a clear-cut negative relationship between anxiety and depression and academic variables (Fletcher et al., 1997). Negative affect is common for both depression and anxiety. Negative affect is a well-used concept in tripartite model of emotions (TME), together with two other concepts, positive

affect and physiological hyperarousal. The TME model and its components have been well researched with regard to academic performance. For instance, Rogaten and Moneta (2017) found that positive affect and previous academic performance can predict future performance and this prediction is in the direct form. On the other hand, Owens et al. (2012) found that negative affect can negatively influence academic performance in an indirect way.

The relationship between exam anxiety and academic performance has been studied repeatedly. Studies show that sometimes feelings of anxiety and fear arise that disturb the student a lot and negatively affect his or her performance and cause sharp stress and leave the student in a very difficult situation. Demands of teachers, family and relatives are important factors for students to be successful in the exam. In addition, these demands and pressures affect students' anxiety. Exam anxiety is so high and disturbing among some students that they seek professional support to help them cope with exam anxiety. Students' mastery of test anxiety enhances their sense of self-worth and also helps improve results. The use of techniques such as breathing and relaxation is very important in combating exam anxiety and causes increased clarity of mind.

2.2 Sources of Exam Anxiety

The previous literature has identified various sources of exam anxiety. Some studies have found that exam anxiety is linked to family and marital patterns, early paren-child relationships and parental academic conditional positive regard (Oishi & Sullivan, 2005; Otterpohl et al., 2019). In one study Weiner and Carton (2012) found that individuals who have perfectionism tendency are exposed to examination stress higher than individuals without this trait. However, literature findings cannot fully explain the relationship between perfectionist traits of coping mechanisms and test anxiety (Arana & Furlan, 2016).

2.3 Exam anxiety among university students and anxiety reduction methods

Adaptation to the university lifestyle largely depends on the students' ability to adapt to a learning environment that requires more autonomy before

examinations (Karabenick & Zusho, 2015). For most students, the pressure to perform well on exams can cause extreme exam anxiety, leading to fatigue and with it burnout. This situation is particularly noticeable among first year students (Hunt & Eisenberg, 2010). Most researchers investigating high fatigue in this category of students report that personality traits, coping mechanisms, and transition difficulties that can increase attrition (Bassols et al., 2014). Australia's drop-out rate has worsened since 2009, and performance pressure is certainly among the reasons for this. Yıldırım et al. (2016) showed that the strongest exam-related anxiety factors for university students include exam preparation, taking the exam, and anxiety felt for being evaluated.

It has been empirically tested and proved that therapeutic interventions are efficient in managing exam anxiety. Radcliffe et al. (2011) found out that disclosing emotions and writing about stressful experiences several times may help dealing with anxiety. Another anxiety diminishing factor is self-affirmation, according to Sherman et al. (2009).

Inangil et al. (2020) state that several techniques have been proposed so far to mitigate exam anxiety. Among them, techniques such as music therapy, cognitive therapy, emotional freedom techniques and breath-related techniques have been tested on students to see if they are effective to diminish anxiety. Hypnotherapy and aromatherapy are among mostly researched methods to relieve exam anxiety as well (Shapiro, 2014). Another practise to lower anxiety among students is progressive muscle relaxation technique. Zargarzadeh and Shirazi (2014) applied progressive muscle relaxation technique to Iranian students and found that it is an effective method to reduce level of exam stress. Prato and Yucha (2013) investigated another method called biofeedback-assisted relaxation training and found that it effectively impacted breathing and heart rate of students but did not reduce the Spielberg Test anxiety scores of the participants significantly. Some researchers examined lavender and rosemary essential oils to reduce anxiety in students (Kutlu et al., 2008; McCaffrey et al., 2009). Lai et al. (2008) assessed the effect of Lento music on examination anxiety reduction

among nursing students. The authors conclude that Lento music is effective at anxiety reduction among nursing students.

2.4 Coping with Examination Anxiety

Coping with exams and exam-related situations is a widely discussed issue in exam anxiety research. Coping strategies and mechanisms help students cope with the anxiety experience before and during exams and it might also change or remove conditions or generators of exam anxiety. Coping has been defined as a person's "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" by Lazarus and Folkman (1984). Fletcher and Cassady (2010) state that coping strategies are some kinds of behaviors that are used as a response to students' personal interpretations of academic threats. Cassady and Boseck (2008) claim that students develop positive and negative emotional responses, establish new goals, and employ different coping strategies against negative situations.

Previous studies have shown different results regarding gender differences in the use of coping strategies. Shek (2005) showed that males are more prone to use internal coping strategies. In other word, males mostly use their own power to cope with negative situations while females are more prone to use external coping strategies such as seeking social support. Palus et al. (2012) and Krajewski and Goffin (2005) showed that women seek social support than men. Nelson and Burke (2002) associate it with gender role specialization, stating that the role of women in societies is nurturing and emotional which allows them "care about people, express their feelings, and seek social support". On the other hand, men are mostly associated with their action skills, planning, and competitiveness (Burke, 2002) and use problem focused coping strategies predominantly (Liang et al., 2009). Martinez et al. (2019) found that gender differences were significant in seeking social support and meaning-focused coping strategies. They found that support-seeking was mostly employed by females while meaning-focused coping was mostly used by males.

Coping strategies have been classified in different ways in the literature such as active behavioral responses including problem-focused coping; escaping from the stressor such as avoidance coping; and reinterpretation of situation or disposition of emotions such as emotion-focused coping (Austin et al., 2010). Previous studies have also differentiated between adaptive and maladaptive coping strategies. Empirical findings reveal that adaptive coping strategies such as problem-focused coping helps students solve perceived problems more effectively and achieve higher academic performance (Sasaki and Yamasaki, 2007). Adversely, maladaptive coping strategies such as emotion-focused coping or avoidant coping results in negative performance (Turner et al., 2012).

Problem-focused coping addresses the stressor and is associated with a positive state or mood. Problem focused coping makes people feel stronger and accomplished. Emotion focused coping, on the other hand, aims to stabilize and reduce negative emotions and stress. Seeking social support and avoidance are emotion focused coping strategies. Meaning-focused coping as a different type of coping is mentioned in the recent literature, where meanings of events are cognitively managed (Folkman & Moskowitz, 2004). This strategy also targets achieving and regulating positive emotions as it is suggested that positive emotions have substantial importance in adaptation (Folkman, 2008). Stöber (2004) separated three dimensions of coping strategies, which were task orientation and preparation, seeking social support, and avoidance.

Generally, findings suggest that high test anxiety levels are mainly linked to emotion-focused and avoidance coping components of coping mechanisms. Furthermore, test anxiety is associated with problem-focused coping such as task preparation by some studies, including Kondo (1997). Röhrle et al. (1990) found that while worry and emotionality were linked to higher levels of emotion-focused coping, feelings of competence were accompanied by lower levels of emotion-focused coping. Feelings of competence were also associated by higher levels of social withdrawal.

2.5. Factors Affecting Academic Performance

While exam anxiety may seem like a minor problem to some, higher anxiety levels can lead to academic failure in students. Depending on the students' perception of test difficulty, different levels of test anxiety may occur in different periods and in different exams. At the same time, based on various clues and predictions about the difficulty level of the exam at the beginning of the test, the perceived anxiety level may differ from the anxiety level that students perceive during the test time. There are two widely referred theoretical models in exam anxiety research that explain the channels through which exam anxiety results in poor academic performance. These are Cognitive Interference Model and the Additive Model of Test Anxiety. The first model suggests that high exam anxiety generates intrusive thoughts during the exam which restrict students' ability to concentrate on the exam and it leads to lower performance. On the other hand, the second model suggests that lower exam performance is a result of combination of trait test anxiety which makes students perceive exams as threatening and situation-specific variables including lower self-confidence and unpreparedness for the exam (Zhang & Henderson, 2014).

Substantial body of research has investigated many other factors that affect academic performance apart from anxiety and coping such as physical activity, self-efficacy, experience, part-time employment, and so on. Resaland et al. (2016) investigate impact of physical activity on academic performance of school children using cluster-randomized controlled trial method. They find weak impact of physical activity on students academic success in general, but the impact is approved on students with with the lowest academic results. Hence, the authors assert that combination of physical activity and learning may benefit students with poor results. Physical activity can improve academic performance of students through several channels, such as improving cognitive functions-attention, concentration and working memory (Rasberry et al., 2011; Fedewa & Ahn, 2011; Mura et al., 2015). Trudeau and Shephard (2008) examine how physical education and physical activity at schools affect academic performance of students, employing a quasi-experimental research design. They find that devoting one

more hour to physical activity per day doesn't influence primary school students' academic performance negatively. At the same time the study reveals that stealing some time from physical education programmes and adding it to academic and curricular subjects do not result in higher academic performance, but on the contrary, can affect students' health negatively.

The impact of cognitive ability and conscientiousness on academic performance has been studied by several researchers. These works are reviewed in Poropat's (2009) study. Rosander et al. (2011) examine roles of personality traits and general intelligence on prediction of academic performance in different school subjects. They found strong correlations between general intelligence, conscientiousness, extraversion and neuroticism facets and academic performance. They also find that agreeableness and academic performance don't show any association.

Part-time employment among students has significantly increased during the last decades. Hunt et al. (2004) assert that 10% increase was recorded in paid employment among students of one university in the UK between 1999-2001. Student employment has grown in Ireland, the USA and Australia as well (Darmody & Smyth, 2008; Hall, 2010). Hall (2010) also finds that the number of students' working hours have also increased substantially between 1994 and 2006 in Australia. Although several advantages of paid employment among students may be mentioned such as improvement in financial situation, increased self-confidence, and skills development (Polidano & Zakirova, 2011; Robotham, 2009), negative consequences of it should not be overlooked. These negative consequences include higher stress levels (Robotham, 2009), less leisure time and social activities (Manthei and Gilmore, 2005), missing classes (McKechnie et al., 2005), and so on. In a broader sense it affects academic performance negatively, although a few studies have found positive effects of paid employment on academic performance (Dundes & Marx, 2006), majority of studies have found adverse results (Hawkins et al., 2005; Nonis & Hudson, 2006). Rochford et al. (2009) investigate the relationship between part-time employment and academic performance among nursing students based on a cross-sectional survey methodology. The authors found that the number of

hours that nursing students work in a week predicts course performance, grades and college experience. Findings revealed that more work hours negatively affected all three indicators. They also assert that not the job itself but the number of working hours deteriorate students' academic performance. Another finding of the study was that personal and professional development of students were not negatively affected by part-time employment. Hunt et al. (2004), Salamonson and Andrew (2006) also assert that term-time employment negatively affects academic achievement. Several underlying causes have been proposed so far such as missed lectures and late submission of assignments. Oakey et al. (2003) show that tiredness after work prevents students attend lectures and distracts their attention from academic work. Salamonson et al. (2012) investigate impacts of term-time paid work on nursing students' academic performance. They state that part-time employment is highly common among nursing students, despite its negative effects being recognized by them. Their results prove that term-time employment is a negative predictor of their academic performance measured by their final year GPA.

School environment is also a significant predictor of academic performance. Korir and Kipkemboi (2014) examined the impact of school environment on academic performance of Kenyan students. The study findings demonstrated that there is a significant relationship between school environment, peer influence, and academic performance of students. Muleyi (2008), and Adeyemi (2010) found that teachers affect academic performance of students. Although peer influence is widely believed to have impacts on academic performance and achievement, Kirk (2000) stated that not many studies had proved it in the academic field. Sacerdote (2001) found that higher performance is achieved when students are surrounded by peers who are unusually strong in academic sense.

Samaha and Havi (2016) investigated the impact of smartphone addiction on satisfaction with life mediated by stress and academic performance. The study found that smartphone addiction risk and academic performance are negatively associated. However, a positive correlation was found between academic performance and satisfaction with life. Several studies have

examined negative association between cellphone usage and academic performance (Judd, 2014; Karpinski et al., 2013). In addition, Rosen et al. (2013) found that smartphone multitasking negatively affects academic performance. Karpinski et al. (2013) found that usage of social networking negatively affects academic performance. Some studies found that using Facebook and text messaging affects college GPAs negatively when these are done while schoolwork or attending classes (Junco & Cotten, 2012). Giunchiglia et al. (2020) investigated the relationship between social media use and academic performance. Their study confirms a negative association between social media usage and academic performance.

Bakar et al. (2010) investigated the association between achievement motivation, attitude and academic performance among Malaysian students. They found that achievement motivation, attitudes towards learning together with peer influence are all predictors of academic performance. Mahyuddin et al. (2009) also found a positive relationship between academic performance and achievement motivation. Papanastasiou (2000) showed a positive correlation between mathematics achievement and students' attitude for mathematics.

Pekrun et al. (2009) investigate the impact of achievement goals and achievement emotions on academic performance, constructing a theoretical model. The relationship between achievement goals and academic performance has been vastly researched in the literature in different settings. Tanaka and Yamauchi (2000) and Urdan (2004) proved that performance-approach goals can be positive predictors of performance results. Adversely, some studies indicate that performance avoidance goals are mainly negative predictors of academic performance (Vansteenkiste et al., 2004; Wolters, 2004).

Turner et al. (2009) investigated impacts of self-efficacy, parenting styles and achievement motivation on academic performance. Self-efficacy has been found to positively influence success of individuals, in particular conquering fear, academic performance, standing in the face of difficult transitions, and so on (Chemers et al., 2001). Pajares (1996) found a significant positive

correlation between academic performance and academic self-efficacy among college students. Chemers et al. (2001) found that academic self-efficacy is a strong predictor of academic performance.

Turner et al. (2009) differentiated three types of parenting styles, namely authoritative, permissive, and authoritarian. Authoritative parenting style is characterized by “high levels of nurturance, involvement, sensitivity, reasoning, and encouragement of autonomy”. Parents make decisions for their children and direct their activities using reasoning and discipline. Permissive style refers to a style where minimal punishment and non-controlling behavior prevails. “Parents characterized as authoritarian exhibit highly directive behaviors, high levels of restriction and rejection behaviors, and power-asserting behaviors (Turner et al., 2009). Reitman et al. (2002) and many others agree that authoritative parenting style much positively influences academic performance rather than other styles, as it fosters demandingness and responsiveness. The study results of Turner et al. (2009) showed similar findings with the previous literature. A positive association was identified between authoritarian parenting style and academic performance. Supportiveness and warmth were found to be significant aspects of parenting styles that play important roles in academic performance of students. Furthermore, higher academic self-efficacy was found to be positively associated with students’ GPAs. In other words, this finding proves that the more a student believes that he or she will be successful in his or her studies, the more likely he or she will actually succeed. Otterpohl et al. (2019) investigated how parental motivation can affect students’ test anxiety. They state that parental academic conditional positive regard (PACPR) is a social strategy whereby students get affection, esteem, and attention from their parents when they achieve something big and study hard at school. Although it is well-intended, it may have significant negative effects on students such as test anxiety. The authors empirically prove this hypothesis and further assert that this relationship is mediated by contingent self-esteem.

2.6 Related Studies

Many studies have investigated the impact of examination anxiety on academic performance using different tests for anxiety and different measurements of academic performance such as scores on standardized tests, grades, grade point average (GPA) and CGPA. Kahan (2008) compared the academic performance of groups of students with high, moderate, and low test anxiety and showed that students with high and low test anxiety exhibited lower academic performance. At the same time, the same study found that students with moderate exam stress performed best. A moderate level of anxiety triggers students to work harder and take more responsibility to achieve their goals, and this level of anxiety generally helps people to live a more successful life. As Zeidner (1998) pointed out, “test-anxious students tend to be easily distracted on an exam, experience difficulty in comprehending relatively simple instructions, and also have difficulty organizing or recalling relevant information during the test”.

Burnham and Makiengo (2018) explored factors that impact students' examination and non-examination performance. Among those factors they focused on achievement goals, language skills, and exam completion speed. The results showed that test anxiety and avoidance goals are negatively associated with exam performance whereas there is a positive correlation between exam performance and study effort, performance approach goals, and English language skills.

Cassady and Johnson (2002) explored how cognitive test anxiety affects academic performance of students. The authors used the Scholastic Aptitude Test among 168 undergraduate students. They assert that gender differences were not strong with regard to exam performance. They found cognitive test anxiety to be negatively related to examination scores. The results also showed that moderate levels of physiological arousal were associated with higher exam performance levels.

Kusturica et al. (2019) explored connections between substance use, exam anxiety and academic performance among Bosnian-Herzegovinian students. First-year university students attended in this study and they were divided

into two groups based on cross-sectional and ad-hoc questionnaire. The results showed that anxiety scores were negatively associated with last exam grade but positively associated with coffee, energy drinks and nicotine consumption. However, consumption of coffee, energy drinks and nicotine was not found to be strongly related to enhancing exam performance.

Sung et al. (2016) investigated individual differences with regard to association between test anxiety and learning achievement, using two anxiety-performance relationship models, namely the motivational enhancement model and the cognitive interference model. 1931 Taiwanese ninth-grade students constituted the sample of the study. The authors found that there was no significant gender difference with regard to the correlation between anxiety and achievement but girls experienced higher anxiety levels. Furthermore, a positive correlation was recorded between anxiety and achievement among the lower-achieving students while a negative correlation was found between those variables in the higher-achievement group.

Thomas et al. (2017) investigated impacts of emotional intelligence and test anxiety on undergraduate students' academic performance. The results indicated that cognitive test anxiety and use of emotion-focused coping strategies were significant predictors of students' long-term academic outcomes.

Putwain and Daly (2013) indicate coping styles and resilience to academic stress to play the same mediating role, while Cassady and Johnson (2002) show procrastination as a mediatory variable between exam anxiety and performance.

Rezazadah and Tavakoli (2009) found that there is a significant negative relationship between academic performance and exam anxiety. They also found a significant gender difference regarding test anxiety and state that females reported more test anxiety levels than males. They link it to a fact that females are affected by pressure much more than males. Onyekuru and Ibegbunam (2014) also found a significant negative relationship between anxiety and academic performance. Trifoni and Shahini (2011) investigated

the impact of exam anxiety on academic performance and found that exam anxiety negatively affects achievement, motivation, and concentration of students. Yousefi et al. (2010) found that there is a significant negative relationship between exam anxiety and academic achievement among Iranian students.

Ahmad et al. (2018) examined the relationship between test anxiety and academic achievement among undergraduate students in Pakistan, and found an inverse relationship between them. Balogun et al. (2017) investigated the relationship between test anxiety and academic performance among undergraduate students in Nigeria, and the moderating role of achievement motivation in this relationship. Their findings showed that there is a negative correlation between exam anxiety and performance, and it is significantly moderated by achievement motivations. Eum and Rice (2011) investigated the association between cognitive test anxiety, among other factors, and academic performance measured by GPA and a word list recall test. The authors found an inverse association between cognitive test anxiety and both performance indicators. Yazdani (2012) examined the relationship between test anxiety and performance in female nursing students in Iran and found that there is a significant negative relation between them. He also found that employment negatively impacts performance. Mamasseh (2013) investigated how gender, test anxiety, and perceived self-concept influences academic performance. He found that high test anxiety leads to poorer academic performance. Núñez-Peña et al. (2016) investigated gender differences in test anxiety and its influence on academic achievement among undergraduate psychology students in Barcelona. Their findings showed that females reported higher levels of test, mathematics, trait, and expected anxiety than males, but it didn't affect lower academic performance in female students. Okorodudu and Ossai (2004) found a negative but insignificant relationship between exam anxiety and academic performance. Also, their results showed that gender and the course of study (e.g. math, biology) don't significantly influence this relationship.

The relationship between coping strategies and academic performance has also been widely researched. Thomas et al. (2017) found that the use of

emotion-focused coping strategies was negatively correlated with long-term academic performance. Vizoso et al. (2018) showed that adaptive coping and academic performance were positively associated, whereas a negative correlation was found between maladaptive coping and academic performance. Adaptive coping led to increase in academic vigor, commitment, and absorption, which in turn improved academic performance. Saadu and Adesokan (2013) and Schellenberg and Bailis (2016) state that there is an association between adaptive coping strategies and academic performance. MacCann et al. (2011) found a negative association between maladaptive coping strategies and academic success.

Yazon et al. (2018) found a significant relationship between coping strategies and academic performance. Kadhiravan and Kumar (2012) showed that undergraduate students can improve their academic performance using coping strategies. Aun et al. (2011) stated that coping increase class participation and persistence, strengthens their "self" and make their learning experience positive. Sullivan (2010) and Safree and Dzulkifli (2009) examined coping strategies in undergraduate students. Mahajan (2010) found that undergraduate students employ emotional coping strategies mostly in the first of education whereas they use problem-focused coping strategies towards the end of their studies.

CHAPTER 3

METHODOLOGY

This chapter will explain the methodology of the study. Data collection and analysis procedure will be focused on, explaining the research design, sampling methods, and tools and materials.

3.1 Research Design

This study has a quantitative research design. Correlational research model was employed in the study. Correlational research model is used to look for relationships between variables, and it enables predicting future patterns based on present knowledge (Asamoah, 2014). A survey questionnaire was designed and distributed among students and the results of their responses were analyzed using SPSS statistical software. The survey questionnaire included three sets of questions which included demographic or personal questions, questions regarding examination anxiety and questions related to coping mechanisms.

3.2 Population and Samples

The population of this study were the students of Near East University. Convenient sampling strategy was applied in this study. Convenient sampling method is a type of non-probability sampling where samples are taken from population that are available and easy to reach, when random sampling is not possible (Dörnyei, 2007). Convenient sampling is also called availability sampling as samples are selected primarily based on their availability. As the study was conducted during the COVID-19 pandemic, participants had to be contacted online. As the response rate for online questionnaires is low, convenient sampling would facilitate the collection of data from various sources. The questionnaire was prepared in the English Language and

therefore it was distributed among those students that studied in English-language departments or spoke and understood English. Although around 400 students filled in the questionnaire, responses of 352 respondents were deemed valid. Around 50 responses mostly contained missing responses in more than one category, some respondents had already graduated at the time of filling in the questionnaire, and some respondents were not students of Near East University. All of those responses were excluded from the analysis.

Among 352 students 222 were male (63.1 % of total samples) and 130 were female (36.9 % of total). With regard to level of education, descriptive statistics showed that 265 (75.3%) Bachelor's degree students and 87 (24.7%) Master's degree students attended the study. Employment statistics was also obtained from students. 259 (73.6 % of total) students stated that they were unemployed when they responded to the questionnaire while only 93 students (26.4 % of total) responded as being employed at that time.

Table 1.

Descriptive Statistics

	Demographic information	N	%
Gender	Male	220	62.5
	Female	132	37.5
Level of Education	Bachelor's degree	265	75.3
	Master's degree	87	24.7
Work	Employed	93	26.4
	Unemployed	259	73.6

Countries of origin were asked to participants as well. Mostly represented countries were Nigeria (64 students), Turkey (51 students), Jordan (28 students), Azerbaijan (17 students), Pakistan (17 students), Syria (17 students), Palestine (15 students), TRNC (14 students), Kenya (10 students), and Zimbabwe (10 students). The analysis of departments showed that students from Architecture, Business Administration, Civil Engineering, CIS,

General Psychology, International Relations, Law, Medicine, Nursing, Tourism and Hotel Management departments were mostly represented. Analysis of the year of study variable showed that 4th year students mostly attended the study.

Participants' ages ranged from 17 at minimum to 49 at maximum. The mean age was 23.87 while the median age was found to be 23. The analysis of CGPA statistics of participants showed that mean CGPA is 2.91 while the median is 3.00. Minimum CGPA stated was 1.00 while the maximum was 4.00.

3.3 Materials and Measurement of Variables

Several demographic or personal questions were asked to participants first, during the data collection process such as their ages, gender, CGPA, country of origin, etc. Overall, the scales used in the study include:

3.3.1 Demographic Scale

This scale was developed by the researcher and included questions regarding the demographic background of participants. The scale was composed of 8 questions regarding participants' age, gender, country of origin, department/faculty, level of education (graduate/undergraduate), year of education, employment status and the CGPA (Culmulative Grade Point Average) as a measure of Academic Performance.

3.3.2 Examination anxiety

Examination Anxiety variable was measured using Examination Anxiety Scale developed by Gabriel and Bedewy (2013). There are two subscales of this scale which are Somatic Anxiety Subscale and Cognitive and Avoidances Subscale. Students were asked to rate on a 5- point Likert scale from 1= strongly disagree to 5 = strongly agree, with regard to their experience about each item in measuring examination anxiety. Internal consistency reliability for the instrument was 0.82 Cronbach's alfa. 92% agreement was obtained from experts about the relevance of instruments to measure examination anxiety, indicating strong content validity.

3.3.3 Coping

To measure coping mechanisms of students, COPEAU (Coping with Pre-Exam Anxiety and Uncertainty) scale by Stoeber (2002) was employed. As the scale was originally developed in German, English version of the scale adapted by Stoeber (2004) was used as reference. This scale has 21 items in total, collected under three subscales which are namely Task Orientation and Preparation, Seeking Social Support, and Avoidance subscales. The author indicates that “with Cronbach's alphas between 0.75 and 0.87, all COPEAU scales displayed satisfactory reliability”.

3.4 Data Collection Procedure

After the preliminary positive assessment of the Ethics Committee the survey questionnaire was distributed among the students of Near East University in Turkish Republic of Northern Cyprus during December 2020. Before the survey was administered necessary permissions were obtained by the authors of the scales used in the survey. As the study was conducted during the COVID-19 pandemic, most students continued their education online. Hence, the survey was distributed online, using Google Forms. Collected responses were later transferred to Microsoft Excel datasheet for initial filtering. Data collection procedure involved directly reaching students via email or social media platforms such as Facebook and Instagram and reaching out to different faculty members who helped to distribute the survey among their students. Participants were not paid or offered incentives for filling in the questionnaire. A participant information sheet and a consent form was included in the survey before participants answered the questions.

3.5 Data Analysis Procedure

Data was analyzed in SPSS statistical software. First of all, descriptive statistics of participants were obtained, and normality of data was examined using skewness and kurtosis indicators. Detailed data properties are illustrated in the table below:

Table 2.
Data Properties

Variable	N	Minimum	Maximum	Mean	Std Dev	Skewness		Kurtosis	
						Statistics	Std.Error	Statistics	Std.Error
ExaminationAnxiety	352	12.00	60.00	35.5341	9.97598	-0.137	0.130	-0.457	0.259
Coping	352	32.00	126.00	81.5142	15.54003	-0.404	0.130	1.261	0.259
Cognitive	352	5.00	25.00	14.8324	4.52631	-0.124	0.130	-0.568	0.259
Somatic	352	7.00	35.00	20.7017	6.26838	-0.141	0.130	-0.501	0.259
Task	352	7.00	42.00	31.7813	6.88368	-0.869	0.130	0.842	0.259
Social	352	7.00	42.00	26.0767	8.04739	-0.255	0.130	-0.400	0.259
Avoidance	352	7.00	42.00	23.6563	7.21928	0.112	0.130	-0.150	0.259

The values of skewness and kurtosis indicate that the data for all variables are normally distributed. George and Mallery's (2010) suggestion of acceptable levels of skewness and kurtosis was referenced, which asserts that if values of skewness and kurtosis range between -2 and +2, data can be considered as normally distributed. Therefore, parametric tests were employed to analyze the research questions of the study. First of all, Pearson's correlation test was used to examine the association between exam anxiety, coping, academic performance, age, and year of education. Next, the parametric ANOVA test was conducted to check if exam anxiety and coping are experienced differently among different CGPA groups. Finally, the independent t-test was employed to examine if different genders and employment groups experience exam anxiety and coping differently.

CHAPTER 4

RESULTS

This chapter includes the results of the data analysis. The analysis of the main research question will be demonstrated first. Initially, correlation test results between exam anxiety, coping, and academic performance will be presented, and the ANOVA and the regression analysis results will be provided after the correlation test results. After the results of the main research question, the table showing the results of the second research question-gender differences in anxiety and coping mechanisms will be analyzed. Finally, the results of the analyses for the last research question, which includes the relationship between anxiety, coping, and socio-demographic variables-employment, age, and year of education will be presented.

To begin with the first research question, the table below shows correlation test results between exam anxiety, coping mechanisms, and academic performance. The table also includes correlation results for two demographic variables-age and year of education, which will be discussed later in this chapter.

Table 3.

Correlations between examination anxiety, coping, CGPA, and demographic variables-age and year of education

	Examination Anxiety	Cognitive	Somatic	Task	Social	Avoidance	Age	CGPA	Year of education
Examination r		0.894	0.946	0.146	0.242	0.055	-0.161	-0.161	0.082
Anxiety p		0.000**	0.000**	0.006**	0.000**	0.301	0.002**	0.002**	0.126
Cognitive			0.700	0.142	0.227	0.043	-0.145	-0.132	0.023
			0.000**	0.008**	0.000**	0.425	0.006**	0.013*	0.672
Somatic				0.129	0.220	0.057	-0.151	-0.161	0.114
				0.015*	0.000**	0.285	0.004**	0.002**	0.033*
Task					0.360	0.025	0.013	0.202	0.037
					0.000**	0.637	0.815	0.000**	0.486
Social						0.299	-0.085	-0.035	0.115
						0.000**	0.111	0.513	0.031*
Avoidance							-0.102	-0.093	0.056
							0.056	0.081	0.292
Age								0.231	-0.014
								0.000**	0.798
CGPA									-0.251
									0.000**
Year of education									

p<0.05* p≤0.01**

Pearson's correlation test results show that there is a significant negative correlation between the CGPA and examination anxiety scale (p=0.002) and both its subscales-cognitive and avoidances (p=0.013) and somatic anxiety (p=0.002). Task orientation and preparation subscale was found to be positively and significantly correlated with CGPA (p=0.000), examination anxiety (p=0.006), somatic anxiety (p=0.015), and cognitive anxiety (p=0.008). No significant correlation was found between Seeking social

support subscale and CGPA. However, This subscale is positively and significantly correlated with examination anxiety ($p=0.000$) and both its subscales- cognitive anxiety ($p=0.000$) and somatic anxiety ($p=0.000$). Finally, no significant correlation was detected between avoidance and CGPA, examination anxiety scale and its subscales.

To assess if examination anxiety and coping are differently experienced by student groups with different CGPA levels, ANOVA parametric test was employed. ANOVA test results are shown in the table below:

Table 4.

Differences between examination anxiety and coping according to CGPA groups

Anxiety and coping	CGPA	N	Mean	F	Df	P
Coping	1-1.99	20	75.5000	1.141	3	0.332
	2-2.99	151	82.1722			
	3-3.49	101	82.0198			
	3.50-4	80	81.1375			
Cognitive Anxiety	1-1.99	20	15.2500	1.641	3	0.180
	2-2.99	151	15.0993			
	3-3.49	101	15.1287			
	3.50-4	80	13.8500			
Somatic Anxiety	1-1.99	20	22.5500	2.334	3	0.074
	2-2.99	151	21.2384			
	3-3.49	101	20.6535			
	3.50-4	80	19.2875			
Task	1-1.99	20	25.6500	7.152	3	0.000**
	2-2.99	151	31.5563			
	3-3.49	101	32.0891			
	3.50-4	80	33.3500			
Social	1-1.99	20	25.4500	0.639	3	0.590
	2-2.99	151	26.5232			
	3-3.49	101	26.3267			
	3.50-4	80	25.0750			

Avoidance	1-1.99	20	24.4000	0.710	3	0.546
	2-2.99	151	24.0927			
	3-3.49	101	23.6040			
	3.50-4	80	22.7125			

p<0.05* p≤0.01**

The null hypothesis of this test assumes that distribution of the dependent variable is the same across the ranks of the independent variable. ANOVA test results show that only task orientation and preparation subscale (p=0.000) shows significance. It means that students with different CGPA groups got significantly different task orientation and preparation scores. In addition, it is clear from the table that highest achieving group show the highest task orientation and preparation scores.

Besides correlation analysis, regression analysis was also conducted to reveal any casual relationship between exam anxiety, coping, and academic performance. Firstly, it was found that only examination anxiety and task orientation and preparation variables show significance. Therefore, multiple regression analysis was conducted between examination anxiety, task orientation and preparation, and CGPA to assess how these variables predict academic performance. The multiple regression results between examination anxiety and CGPA are shown below:

Table 5.

Regression analysis summary for examination anxiety, task orientation and preparation, and CGPA

Variable	B	β	T	P
Constant	2.676		14.734	0.000**
Examination Anxiety	0.021	0.23	4.433	0.000**
Task	-0.012	-0.195	-3.743	0.000**

Dependent variable: CGPA

p<0.05* p≤0.01**

The table demonstrates that both examination anxiety ($p=0.000$) and task orientation and preparation ($p=0.000$) are significant to predict academic performance. Taken together, 77% of variation in CGPA can be explained by exam anxiety while task orientation and preparation accounts for around 80% of variation in academic performance.

Below the independent t-test results showing gender differences in anxiety and coping are provided.

Table 6.

Gender differences in exam anxiety and coping

	Male			Female			T	P
	N	Mean	Std Dev	N	Mean	Std Dev		
Ex. Anxiety	220	34.0000	9.72921	132	38.0909	9.89290	-3.795	0.000**
Cognitive	220	13.9636	4.45767	132	16.2803	4.27725	-4.792	0.000**
Somatic	220	20.0364	6.14725	132	21.8106	6.33436	-2.592	0.010**
Task	220	30.5000	7.06234	132	33.9167	6.01911	-4.826	0.000**
Social Support	220	24.7136	8.13330	132	28.3485	7.38989	-4.199	0.000**
Avoidance	220	23.7136	7.01628	132	23.5606	7.57180	0.192	0.848

$p < 0.05$ * $p \leq 0.01$ **

Independent t test results indicate that there are significant differences among male and females students with regard to examination anxiety scale ($p=0.000$) and its subscales-cognitive and avoidance ($p=0.000$) and somatic anxiety subscales ($p=0.010$). Furthermore, significant differences were found between male and female students with regard to task orientation and preparation ($p=0.000$) and seeking social support ($p=0.000$) subscales of the coping scale. No significant gender difference was detected with regard to avoidance subscale of the coping scale ($p=0.848$).

Table 7 below shows employment-based differences in anxiety and coping.

Table 7.*Differences in exam anxiety and coping based on employment*

	Employed			Unemployed			t	P
	N	Mean	Std Dev	N	Mean	Std Dev		
Ex. Anxiety	93	35.1828	10.25644	259	35.6602	9.89051	-0.395	0.693
Cognitive	93	14.7527	4.84242	259	14.8610	4.41676	-0.198	0.843
Somatic	93	20.4301	6.25612	259	20.7992	6.28199	-0.487	0.627
Task	93	30.4086	7.48947	259	32.2741	6.59855	-2.255	0.025*
Social Support	93	26.8925	7.97205	259	25.7838	8.06944	1.140	0.255
Avoidance	93	24.4194	7.65751	259	23.3822	7.05053	1.189	0.235

p<0.05* p≤0.01**

Independent t-test results indicate that being employed or unemployed doesn't significantly affect anxiety or coping, except task orientation and preparation subscale of coping (p=0.025).

Pearson's correlation test results between age, anxiety and coping are shown in Table 3. The results showed that age and subscales of coping are not significantly correlated. However, a negative and significant correlation was found between age and examination anxiety (p=0.002) and both of its subscales-cognitive and avoidances (p=0.006) and somatic anxiety (0.004).

Finally, correlation test results between year of education, anxiety and coping variables revealed there are significant positive correlation relationships between year of education and somatic anxiety (p=0.033), and seeking social support (p=0.031).

CHAPTER 5

DISCUSSION

This study examined the relationship between exam anxiety, coping, and academic performance. The relationship between examination anxiety, coping, and several other factors, such as gender, age, year of study, and employment were also examined.

The findings show that there is a significant negative correlation between academic performance and the Examination anxiety scale and both its subscales. There may be several reasons for this. One general interpretation is that anxiety impairs working memory during preparations for exams which in turn diminishes cognitive resources to perform exam-related tasks (Owens et al., 2012). Another possible reason is intrusive thoughts caused by examination anxiety which are not related to the exam and prevents students from concentrating on exams and this leads to lower performance. Hong and Karstensson (2002), Morosanova et al. (2020), and DordiNejad et al. (2011) also report a negative correlation between academic performance and exam anxiety. Studies of Cassady and Johnson (2002) and Thomas et al. (2017) found a negative correlation between CGPA and cognitive dimension of examination anxiety. Chin et al. (2017) found no significant relationship between physiological component of examination anxiety and academic performance. Studies report that it is mainly the cognitive dimension of exam anxiety that impacts performance negatively and not the somatic or emotional dimension. However, considering that mostly 4th year students attended in this study and this is the final year for most of undergraduate students, they could report a high level of somatic anxiety. Correlation

between year of study and somatic anxiety is another finding of the study which will be interpreted more in-depth later.

The results of the study reveal that task orientation and preparation subscale of coping was significantly correlated with both CGPA and examination anxiety. In general, better preparedness and concentration on exams results in higher academic performance. According to Devonport and Lane (2006), academic success depends on investing high efforts which is enabled through coping with negative emotions and other barriers. With regard to the association between exam anxiety and task orientation and preparation, Stöber (2004) found a significant correlation between task orientation and preparation and worry or cognitive dimension of examination anxiety and links his findings to previous literature findings. Struthers et al. (2000) also found that examination anxiety is associated by higher levels problem-focused coping. They state that it is because problem-focused coping strategies are directed to mitigate or change the stressful event.

Importantly, regression analysis results demonstrated that both examination anxiety and task orientation and preparation strongly determine academic performance. The results showed that both factors showed significant relationship with academic performance. Cohen et al. (2008) states that focusing on the task and setting clearly defined goals predict academic performance. Regression results between academic performance and anxiety, however, contradicts with Karatas et al. (2013) who found that only up to 10% variation in exam grades can be attributed to exam anxiety.

In addition, findings indicate that task orientation and preparation significantly differ among different CGPA groups, indicating that task orientation scores are significantly higher for high-achievers and very low for low-achievers. This is a reasonable finding, considering that high-achieving students continuously work on exams and spend effort to keep their grades high. On the contrary, low-achieving students get low grades mostly because they don't or can't prepare for exams well and it may continue over the whole duration of studies.

No significant correlation was found between seeking social support subscale of Coping and CGPA, meaning that whether or not students talk to others or get support of them does not strongly affect their academic performance. However, this finding contradicts with findings of Putwain et al. (2016) who found social support to be associated with lower academic performance.

More so, seeking social support subscale is positively correlated with Examination anxiety and both its subscales, implying that students need and ask for support of others more when they experience higher anxiety levels. Stöber (2004) also found a significant correlation between seeking social support and worry dimension of exam anxiety among males. In addition, it is widely accepted by many researchers that emotion-focused coping strategies such as seeking social support are mostly associated with low academic performance (Ader & Erkin, 2010; Cohen et al., 2008).

There is no significant relationship between avoidance subscale of coping and CGPA. Avoidance is a type of perceived shield that protect students from negative emotions. MacCann et al. (2011) also found that there is an association between avoidant coping and poorer academic performance. The reason why the association between avoidance and CGPA is weak maybe linked to the fact that among coping mechanisms, task orientation and preparation is still the key predictor of student performance, as regression results showed. It is much more influential on determining poor or high academic performance than other types of coping, including avoidance and seeking social support.

No significant correlation was detected between Avoidance and Examination Anxiety scale and its subscales which implies that turning to other activities to avoid thinking about exams doesn't reduce the anxiety level of students significantly. This is not in line with findings of Thomas et al. (2017) who found a moderate correlation between cognitive test anxiety and avoidance coping strategies. Stoeber (2004) also reported a significant correlation between avoidance and worry component of exam anxiety.

The findings indicated that there are significant differences among male and females students with regard to Examination Anxiety scale and its both

subscales; Task Orientation and Preparation and Seeking Social Support subscales of the Coping scale. The results show that females experience a higher level of anxiety than males. The findings of this study align with findings of Cassady and Johnson (2002), Chin et al. (2017) and Morosanova et al. (2020). These authors also report that female students experience examination anxiety more than male students. Devine et al. (2012) asserts that it may be because female students are more willing to admit their anxiety as expression of emotions by female is a socially accepted phenomenon in most societies while expression of emotions by males are not mostly welcomed. Coping-related gender differences are also reported by Stoeber (2004) and Palus et al. (2012). The latter author found that females are more prone to seek social support rather than men and thus, coping strategies of females are more influenced by their interpersonal relations and social environment. Nelson and Burke (2002) state that the role of women in societies is nurturing and emotional which allows them to “care about people, express their feelings, and seek social support”, whereas men are mostly associated with their action skills, planning, and competitiveness (Burke, 2002).

The study also revealed that being employed or unemployed doesn't significantly affect exam anxiety and coping, except task orientation and preparation subscale of coping. Mean scores of the unemployed students were significantly higher than those of the employed students with regard to task orientation and preparation. It can be explained as the unemployed students having more time to focus on exams and prepare well. On the contrary, as working hours constitute a large part of the day for the employed students, being employed costs them less free time to prepare for and concentrate on exams. This finding is significant as majority of studies handling exam anxiety and coping, do not examine how employment affects these variables.

Age and subscales of coping were found to be insignificantly correlated. On the contrary, a negative significant correlation was found between age and examination anxiety, and its both dimensions. This negative correlation shows that examination anxiety reduces as students get older. Students get

better cognitive and physical control over examination anxiety as they get older and they learn how to cope with it. It confirms findings of Chemers et al. (2001) who found that academic self-efficacy positively affects academic performance as students learn how to stand against negative situations. The finding of our study contradicts, however, with the findings of DordiNejad et al. (2011) who found a positive correlation between age and examination anxiety.

Finally, a significant positive correlation was found between year of education and somatic anxiety subscale of the examination anxiety scale. Adversely, Kebede et al. (2019) found that first-year medical students in Ethiopia experience higher exam anxiety than 6-th year medical students. The significant positive relationship found in this study may be linked to a fact that towards the end of education undergraduate students try to get high grades to be able to graduate, and graduate students prepare for their Master's theses, which increases the responsibilities of students and the difficulty level of their work that may result in higher levels of somatic anxiety.

Furthermore, year of education and seeking social support were found to be positively correlated. It is a novel finding of this study, which is not reported in previous studies, to the best of author's knowledge. It indicates that students ask for more help and emotional support from their family, friends, and peers towards last years of the university. It may be linked to higher anxiety that students experience towards graduation, as mentioned above. Another reason that contributes to this relationship may be the strengthening ties between peers and friends, as time goes by.

No significant correlation was found between year of education and task orientation, avoidance coping, cognitive and avoidance subscale of examination anxiety and overall exam anxiety. Previous literature reports mixed results in this regard. Similarly, Dordinejad et al. (2011) found a similar result-no significant relationship between semester of education and examination anxiety. However, Moreira de Sousa et al. (2018) found that average anxiety rises in the last two years of education of Portuguese non-medical students.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

This chapter summarizes the main points of the study. Implication of the study findings for practice and further research areas are also indicated in this chapter.

6.1 Conclusion

To sum up, this study investigated the relationship between examination anxiety, coping mechanisms and academic performance among university students. Furthermore, impacts of several demographical factors such as age, year of education, gender, and employment on examination anxiety and coping were assessed. The scales employed in the study to measure examination anxiety and coping allowed to separate these scales into different subscales or dimensions and this allowed to conduct a more in-depth analysis. It was an important point as the previous literature indicated that different dimensions of exam anxiety and coping may be associated with certain variables in different manners. For instance, it had already been claimed by earlier studies that cognitive dimension of examination anxiety affects academic performance much more significantly than emotional dimension of it. Hence, conducting the analysis based on subscales allowed to obtain more detailed and well-grounded findings.

The results of the study confirmed findings of the previous literature which showed that examination anxiety affects academic performance negatively, as intrusive thoughts don't let students concentrate on the exam well. However, academic performance interacts with the dimensions of coping differently. A positive significant correlation was found between academic performance and task orientation and preparation. Furthermore, the results

revealed that both exam anxiety and task orientation predict academic performance, as focusing on the task and setting clearly defined goals are the strongest positive factors determining performance, while cognitive functions impaired by examination anxiety contribute to poor academic performance.

The significant impact of gender differences was found on examination anxiety and coping, mainly due to the gender roles in society. Employment was found to have a significant impact only on task orientation and preparation dimension of coping, as employed students have less time and energy to spend on preparations for exams. Examination anxiety and its both dimensions showed a positive significant correlation relationships with task orientation and preparation and seeking social support dimensions of coping.

Finally, a significant positive correlation was revealed between year of education, somatic anxiety and seeking social support, which may be due to increasing responsibilities and difficult lessons that make students ask for help from families and friends. The findings pointed to a significant negative correlation between age, examination anxiety, and both of its subscales, as students grow older, they learn how to control anxiety.

6.2 Recommendations

The findings of this study can be applied to help students improve their academic performance. First of all, the study found a significant negative association between academic performance of students and examination anxiety. Hence, we recommend that in order to achieve higher performance, students should learn how to mitigate exam anxiety. Secondly, we found that task orientation and preparation impacts academic performance positively. Therefore, instead of avoiding thinking about exams and turning the attention to other activities, students have to prepare well for exams, concentrate on them and postpone other activities until completing exams. Furthermore, the results showed that unemployed students are able to prepare for exams better. Thus, we recommend that employed students should understand its negative impacts on their studies and should mitigate this negative affect. A better work-study balance can be achieved in several ways, including

decreasing a number of working hours in a week or getting jobs where they will still have opportunity to study, such as working at libraries.

6.2.1 Further Research Areas

This study and most other studies use a broad or general understanding of academic performance. Therefore, there is a need for studies which examine the impact of examination anxiety on exams in different faculties and in certain subjects. In addition, studies investigating the relationship between exam anxiety and coping should also increase. More so, the impact of employment on examination anxiety and coping requires further investigation.

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ANNEXES

APPENDIX 1

Examination Anxiety Scale (Gabriel & Bedewy, 2013)

The questions below reflect different dimensions of examination anxiety on the run up to exams. Students rate each questions on a 5- point Likert scale based on their own perceptions and experiences. (From 1= strongly disagree to 5 = strongly agree)

a) Cognitive and avoidances Subscale

1. I am afraid of failure when I go to the exam

1.Strongly disagree 2.Disagree 3. Neither agree nor disagree 4.Agree
5.Strongly agree

2. I do not have confidence in myself to pass

1.Strongly disagree 2.Disagree 3. Neither agree nor disagree 4.Agree
5.Strongly agree

3. Even when I'm well prepared for the exam, I feel anxious about it

1.Strongly disagree 2.Disagree 3. Neither agree nor disagree 4.Agree
5.Strongly agree

APPENDIX 2

COPEAU (Coping with pre-exam anxiety) scale (Stoeber, 2002)

Students respond to items on a six-point scale ranging from “definitely not true” (1) to “definitely true” (6).

a) Task-Orientation and Preparation

1. I think about how I can best prepare for the exam.

- | | | |
|------------------------|---------------------|--------------------|
| 1. Definitely not true | 2. Largely not true | 3. Not quite true |
| 4. A little true | 5. Largely true | 6. Definitely true |

2. I concentrate on how I'm going to deal with the exam and, if necessary, let other things slide.

- | | | |
|------------------------|---------------------|--------------------|
| 1. Definitely not true | 2. Largely not true | 3. Not quite true |
| 4. A little true | 5. Largely true | 6. Definitely true |

3. I cut back on my leisure time to prepare for the exam.

- | | | |
|------------------------|---------------------|--------------------|
| 1. Definitely not true | 2. Largely not true | 3. Not quite true |
| 4. A little true | 5. Largely true | 6. Definitely true |

APPENDIX 3

Permit from Prof. Adel Gabriel to use Examination Anxiety Scale

Gmail X ? ⚙️ ☰ 

1 of 1 < >

GOSHGAR MURSALZADE <20184136@std.neu.edu.tr> Mon, Aug 31, 2020, 7:34 PM ☆ ↶ ⋮
 to gabriel ▾

Dear Prof. Adel Gabriel,

I am writing to you to get your permission to use the Severity of Examination Anxiety Scale that you have developed with Mrs. Delia Bedewy in 2013 in my Master's thesis. I have indicated details of my research and how I am going to use the instrument developed by you in the attached document. Firstly, I would like to congratulate you on devising such a useful instrument. Also, I am very hopeful to get a positive response from you to use this instrument in my research study. Looking forward to hearing from you soon.

Kind regards,
 Goshgar Mursalzade



Adel R Gabriel <gabriel@ucalgary.ca> Tue, Sep 1, 2020, 8:51 PM ☆ ↶ ⋮
 to me ▾

Hi Goshgar
 You may use our anxiety scale on your project

Adel Gabriel

APPENDIX 4

Permit from Joachim Stoeber to use COPEAU scale

Gmail ? ⚙ ☰ 

1 of 1 < >

GOSHGAR MURSALZADE <20184136@std.neu.edu.tr> Mon, Aug 31, 2020, 8:12 PM ☆ ↶ ⋮
to stoeber, j.stoeber ▾

Dear Prof. Joachim Stoeber,

I am writing to you to get your permission to use the COPEAU Scale that you have developed in my Master's thesis. I have indicated details of my research and how I am going to use the instrument developed by you in the attached document. Firstly, I would like to congratulate you on devising such a useful instrument. Also, I am very hopeful to get a positive response from you to use this instrument in my research study. Looking forward to hearing from you soon.

Kind regards,
Goshgar Mursalzade

 **Permission Letter ...**

Joachim Stoeber <J.Stoeber@kent.ac.uk> Tue, Sep 1, 2020, 5:29 AM ☆ ↶ ⋮
to me ▾

Permission granted. Good luck with your research :)!

Bibliography

Goshgar Mursalzade was born in 12 September 1996, in Azerbaijan. He studied his Bachelor's degree at Baku State University, at the department of Social Psychological Service in Education. He commenced his Master's degree studies at Near East University, at the department of General Psychology in October 2018. Goshgar is an avid reader of psychology. He has participated in several psychology-related seminars, conferences, and internships in Azerbaijan. He is also one of the co-founders of Student Psychological Association at Baku State University.

Ethics Committee Approval



18.12.2020

Dear Gloria Manyeruke

Your application titled “**The effect of examination anxiety and coping mechanisms on academic performance among university students**” with the application number YDÜ/SB/2020/873 has been evaluated by the Scientific Research Ethics Committee and granted approval. You can start your research on the condition that you will abide by the information provided in your application form.

Assoc. Prof. Dr. Direnç Kanol

Rapporteur of the Scientific Research Ethics Committee

Note:If you need to provide an official letter to an institution with the signature of the Head of NEU Scientific Research Ethics Committee, please apply to the secretariat of the ethics committee by showing this document.

PLAGIARISM REPORT

GOSHGAR MURSALZADE

ORIJINALLIK RAPORU

% 15	% 8	% 10	% 6
BENZERLIK ENDEKSI	İNTERNET KAYNAKLARI	YAYINLAR	ÖĞRENCİ ÖDEVLERİ

BİRİNCİL KAYNAKLAR

1	Yao-Ting Sung, Tzu-Yang Chao, Fen-Lan Tseng. "Reexamining the relationship between test anxiety and learning achievement: An individual-differences perspective", Contemporary Educational Psychology, 2016 Yayın	% 1
2	core.ac.uk İnternet Kaynağı	% 1
3	kar.kent.ac.uk İnternet Kaynağı	% 1
4	www.tandfonline.com İnternet Kaynağı	% 1
5	krishikosh.egranth.ac.in İnternet Kaynağı	<% 1
6	Submitted to Istanbul Medipol Üniversitesi Öğrenci Ödevi	<% 1
7	muse.jhu.edu İnternet Kaynağı	<% 1