Fakulti Sains Kognitif dan Pembangunan Manusia

The Relationship Between Exam Anxiety, Students' Attention, and Academic Performance in Students

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**THE RELATIONSHIP BETWEEN EXAM ANXIETY, STUDENTS' ATTENTION, AND
ACADEMIC PERFORMANCE IN STUDENTS**

LOVIANA LENA ANAK BAUL

This project is submitted in partial fulfilment of the requirements for a Bachelor of Science with
Honours (Cognitive Science)

Faculty of Cognitive Sciences and Human Development

UNIVERSITI MALAYSIA SARAWAK

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The project entitled 'The Relationship Between Exam Anxiety, Students' Attention, and Academic Performance in Students' was prepared by Loviana Lena Anak Baul and submitted to the Faculty of Cognitive Sciences and Human Development in partial fulfillment of the requirements for a Bachelor of Science with Honours (Cognitive Science).

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# ABSTRACT

**The Relationship Between Exam Anxiety, Students' Attention, and Academic Performance in Students**

This research is conducted to investigate the relationship between exam anxiety, students' attention, and academic performance in students. The samples of study involved are 50 male and 50 female participants from different Universities in Malaysia. This study is a quantitative study that utilizes questionnaires adopted from a study which measure the level of exam anxiety which is Cognitive Test Anxiety Scale (CTAS) – 2nd Edition by Thomas, Cassady & Finch (2016) and for the attention the researcher using the questionnaire entitled Mindful Attention Awareness Scale (MAAS) by Brown and Ryan (2003). Spearman Correlation, Independent sample t-test and One Way Anova was adopted to test the hypotheses of the study. The findings showed that there was a significance relationship between exam anxiety, students' attention, and academic performance in student. However, no gender and year of study found difference in level of exam anxiety, and it showed that there is no significant correlation between variables.

*Keywords:* exam anxiety, students' attention, academic performance, gender, year of study differences

# Chapter 1: Introduction

## 1.0    Introduction

There is a lot of stress associated with tests and exams. Fear of failure and evaluation can be so strong that it can interfere with attention and performance. Exam anxiety influences both the student and the instructor, as well as the student's perception of his or her own performance. There is a lot of evidence that shows how exam anxiety affects students' attention and performance. Exam anxiety is defined as nervousness, tension, and apprehension caused by the impending administration of an exam or test. Students' academic performance, particularly during final exams, can be influenced by their mental state. Anxiety about taking an exam has a negative impact on students' attention and concentration, which in turn has a negative impact on their academic performance. Most of us have experienced exam anxiety as students at some point in our lives. In fact, most of us have had it happen frequently, if not on a regular basis. Exam anxiety has been a source of concern for many students, as it has the potential to negatively impact their exam performance. It may also prevent them from concentrating on the exam, which may have an impact on their academic performance.

## 1.1    Background of Study

Exam anxiety is an emotional phenomenon that refers to the negative thoughts and feelings that occur in the days and weeks preceding an exam or other type of formal assessment. It can affect people of all ages, but it is most common in young adults. It is linked to increased autonomic arousal, which includes an increase in heart rate, muscle tension, shortness of breath, dizziness, nausea, and chills. When compared to other age groups, college students are at a higher risk of academic stress and anxiety. In fact, college students have a higher average stress level than the general population, which can lead to a variety of issues, including poor academic performance.

Anxiety is an emotional state characterized by tense feelings, worried thoughts, and physical changes such as increased heart rate and sweating. It is frequently triggered by stress, but it can also be triggered by specific situations or events. Anxiety can also be defined as the fear of future harm or misfortune (American Psychiatric Association, 2013). Although anxiety is a normal

reaction to stressful situations, it can progress to disorder status when it interferes with daily activities (American Psychiatric Association, 2013).

Thinking about taking an exam can interfere with a person's ability to learn the material. In fact, even if the exam is held after class, these thoughts can have a negative impact on a student's performance in class. This is known as "test anxiety," and it is a common issue for students of all grade levels. Test anxiety can impair academic performance and cause problems with concentration, attention, and sleep.

## 1.2    Problem Statement

Anxiety is a common feeling that consists entirely of fear and paranoia, and so it usually happens whenever a person thinks that the occasion is a potential danger to themselves or their own self-esteem. Anxiety could also be a state or a trait, based on how long it lasts. Anxiety impedes normal thought processes. Everything just insists on taking a gentle stance to the substance but instead of interacting with it. Anxiety is a normal emotional state that everyone experiences. Students had difficulty in their research findings and seem to be stressed and worried because once attending classes or attempting to make important life decisions. There seems to be evidence in the literature of a negative relationship between anxiety and student success, as well as between anxiety and the realization of essential emotional and cognitive consequences among students learning education. (Jegede, Alaiyemola, & Okebukola, 1990).

Students' anxiety is mostly generated by their life experiences, as well as the assumptions and assumptions they create as a result of those experiences. They are frightened of failure, yet they might also have an unreasonably high self-esteem. They may have had poor academic experiences in life and assume that exam anxiety learning will offer them a similar disempowering learning atmosphere. Everyone is apprehensive when faced with a huge exam. Exam anxiety, on the other hand, might be so intense for certain students that it prevents them from studying and learning. A student struggling with exam anxiety, for example, may feel so intimidated by the idea of an imminent exam that they completely skip preparing. Instead, they may find it difficult to focus and remember what they have learnt in class. Originally, there were no variations in cognition between participants with maximum and minimum test anxiety. In high-test-anxious subjects, however, a rise in anxiety symptoms (due to an upcoming exam) was shown to activate

attentional bias. High test-anxious participants demonstrated an attentional preference towards test-threat phrases when dealing with low test-anxious respondents who did not provide information about an upcoming exam.

According to Huberty (2009), anxiety affects students' behavior, cognition, and physiology. High-risk testing, for example, can be extremely difficult for students who are anxious. Anxious students may also suffer from depression, which can interfere with their ability to concentrate during or before exams. He suggests that educators and parents are also involved and collaborate to assist students in knowing how to manage and overcome anxiety. Exam anxiety affects the majority of students who have had expertise with examinations and the proper education system. As a result, they have challenges and suffer from worry, which hinders their learning in a new context. Exam anxiety is a common fear associated with exams that can significantly impact a student's ability to pay attention and perform well on a test. Attention and academic performance are highly correlated with exam anxiety, making it difficult for students to separate the two.

Anxiety about exams is a negative response to appraisal. It is the most serious problem that students encounter in their education (Dinga et al., 2018). Exam anxiety is an emotional disorder in which pupils feel anxious and distressed while taking an exam. The goal of this research would be to see how exam anxiety, attention, and academic achievement interact. In Malaysia, particularly in the current situation, there is a paucity of research into the issue of exam anxiety among students, as well as the causes of it, which has an impact on university students. The current study will investigate the various factors, such as gender, year of study, and Cumulative Grade Point Average (CGPA), that cause exam anxiety in students, interfering with their attention and academic performance during their studies.

**1.3    Objectives**

In this research, the purpose of the study is needed to elaborate and should be assessed because it is to identify the relationship between exam anxiety affects attention and academic performance among university students. The objectives of this study as followed:

1.  To identify the relationship between exam anxiety and academic performance.

2.  To identify the relationship between academic performance and students' attention.

3.  To examine differences in terms of exam anxiety between genders.

4.  To examine the relationship between exam anxiety and year of study.

**1.4    Research Questions**

The researchers also supply the research questions for the survey in this assignment, which the students must complete. The current study poses the research questions about how exam anxiety affects attention and academic performance among university students:

1. What is the relationship between exam anxiety and academic performance?

2. What is the relationship between academic performance and students' attention?

3. Is there a connection between exam anxiety and gender?

4. Is there a difference between exam anxiety based on year of study?

## 1.5　Hypothesis

Here, in light of the study's objectives, the following hypotheses have been formulated:

Hypothesis 1: There is no relationship between exam anxiety and students' academic performance (CGPA)

Hypothesis 2: There is no relationship between students' academic performance (CGPA) and students' attention.

Hypothesis 3: There is no difference in terms of exam anxiety between genders.

Hypothesis 4: There is no difference in exam anxiety based on year of study among students.

## 1.6　Conceptual Frame

**Independent Variables**

**Dependent Variables**

| Exam Anxiety | → | Academic Performance (CGPA) |
| Students' Attention | → | |

**Dependent Variables**

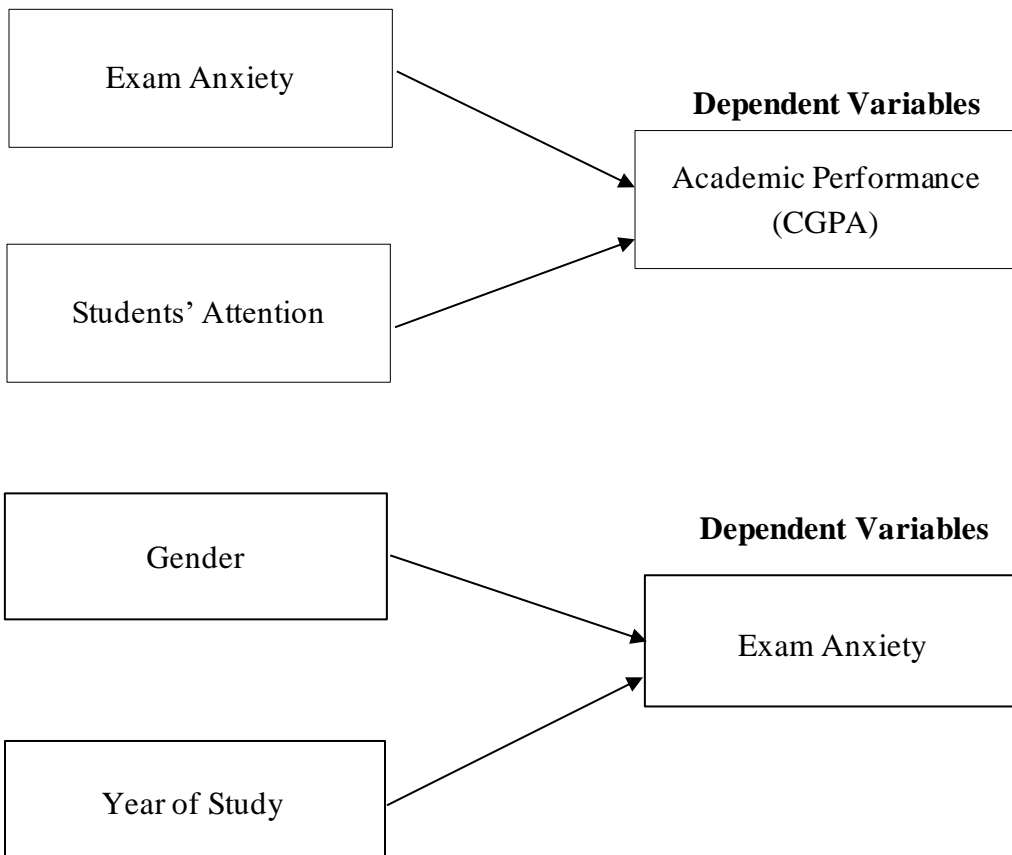| Gender | → | Exam Anxiety |
| Year of Study | → | |

**Figure 1:** The Conceptual Frame of The Relationship Between Exam Anxiety, Students' Attention, and Academic Performance in Students and The Differences Between Gender, Year of Study and Exam Anxiety

## 1.7 Significant of the Study

Exam anxiety is a psychological condition that can occur in students, particularly when they are about to take a major test or exam. Aside from anxiety, there is also a physical condition that can occur when a person is under stress, whether real or imagined. The physical state is known as the "fight-or-flight" response. It causes changes in the body to assist it in dealing with danger. The study looked at the connection between exam anxiety and attention span in university students. Anxiety, particularly anxiety about academic performance, has been shown in studies to have a negative impact on attention. Exam anxiety is defined as a person's feelings of tension, apprehension, or fear when confronted with tests or other evaluative situations in which one's performance is critical. Anxiety is usually intense, is temporary, and often has a specific cause.

It is critical to comprehend why we need to be aware of exam anxiety. To begin with, it is a widespread issue in our society that can affect people of all ages. Second, it has been demonstrated that people who suffer from exam anxiety do not perform as well as those who do not. Third, it is critical to understand the effects of exam anxiety in order to find ways to manage it and assist students in managing their stress in order to perform well on exams. Furthermore, exam anxiety is a type of test anxiety that manifests itself during the exam. It is more than simply not feeling prepared or knowing how to respond to a question. It is a constant, overwhelming, and frequently irrational fear of failing the test. The contributing factors to this anxiety are not always completely obvious, but they are frequently associated with particular events in the past, such as unpleasant experiences with previous tests or poor grades. Students who are struggling with exam anxiety are more likely to struggle with attention.

Exam anxiety research among students allows researchers to investigate the effects of the stress that comes with academic performance. The fear that one will not be able to perform well on the exam is at the heart of exam anxiety. According to research, cognitive techniques such as

self-talk can help people become more confident in their ability to perform well on an exam, thereby reducing their fear. The goal of this study is to see if students who use these techniques experience a reduction in exam anxiety. These students are more likely to experience a loss of concentration and, as a result, academic difficulties. Exam anxiety can have a negative impact on academic performance and attention among university students depending on a variety of factors.

## 1.8 Definitions of Terms

### 1.8.1 Conceptual Definitions

#### I. Exam Anxiety

Exam-taking anxiety has been studied for at least 70 years. Salend (2012) defines "high levels of tension, anxiety, and uncertainty during testing that significantly impair students' ability to perform effectively and badly impact their social-emotional and behavioral development as well as their feelings about themselves and education" (Salend, 2012, p. 23). It was originally restricted to the testing phase, but it has now been broadened to encompass both study material and achievement tests (Cassady & Finch, 2014). Examination or anxiety is a common and usually reasonable stress reaction that disrupts focus and happens previously before, throughout, and occasionally after exams. When exam anxiety is intense, lasts much longer, and impairs academic achievement, it becomes a problem.

#### II. Academic Performance

According to Zeidner (1998), is a multifaceted phenomenological, physiological, and behavioral response associated with the possibility of negative repercussions or failure on an examination or other analogous evaluative circumstance. Academic achievement is defined as achievement as assessed by standardized educational abilities or knowledge assessments (Steinberg, 2008).

### III.    Attention

Their ability to perceive unpleasant feelings related with the test-taking process, as well as their greater use of test-taking tactics, are suggested to be the causes of selective attention discrimination. According to Schutz et al., (2002), the findings demonstrated indications of attentional bias among nervous pupils.

### 1.8.2 Operational Definitions

Anxiety is conceptually defined in this study as an adolescent's experience of distinct anxiety symptoms before, during, and after an examination. Anxiety will be assessed using a collection of questions that include academic accomplishment, self-reflection on concentration, exam anxiety perception, and test anxiety practices. The Cognitive Test Anxiety Scale (2nd Edition) by Thomas, Cassady, and Finch was used in this investigation (2016). The Cognitive Test Anxiety Scale—2nd Edition is a 20-item questionnaire designed to evaluate cognitive indicators of test anxiety throughout the learning test cycle, including preparation and performance. Meanwhile, the tools that will be used to measure the attention is the Mindful Attention Awareness Scale (MAAS) developed by Brown and Ryan (2003). The results will be used to assess academic performance, and the data will be assessed and analyzed using the Statistical Packages for Social Sciences (SPSS) version.

### 1.9 Summary

As a summary for chapter one, it involved the introduction, background of study, problem statement, objective of the study, research hypothesis, conceptual framework, significance of study, and limitation of study and definition of terms

# Chapter 2: Literature Review

## 2.0    Introduction

This chapter begins with an overview of some literature pertaining to the study which is related to the topic of the study which is exam anxiety affects attention and academic performance among university students. Only after analyzing the literature and performing research on that topic can one take a step in the wrong direction. Any research that does not include such a review is equivalent to constructing a structure without a foundation. A review of related literature can aid the researcher in keeping up to date on current knowledge in the field or area where the research will be undertaken. Review of the literature is the first step in a researcher's study project. It leads the researcher through the study process and helps to avoid duplication of effort. It directs the researcher in the right direction.

## 2.1 Discussion of issues related to the topics

### 2.1.1 Exam Anxiety and Academic Performance

Examinations and physical examinations at all stages of education, particularly at the lower level, have long been seen as a significant and strong decision-making tool in our competitive culture, with people of all ages being judged on their accomplishments, talents, and capabilities (Habibullah & Ashraf, 2013). Inadequate achievement, on the other hand, is classified as a performance that is assessed to be within an expected standard even by the examinee and others (Mekonnen, 2014). Exam anxiety and educational achievement is a study topic with important implications for higher education. In particular, the impact of exam anxiety on student learning has been a topic of keen interest. While much remains to be discovered in the field, a significant amount of research has begun to emerge. This literature review will summarize the current state of the research in this area.

There is a paucity of research on the connection between anxiety and academic achievement. Students with generalized technophobia or specific online course fears have trouble learning, putting off taking online courses or assessments, and also have lower overall academic accomplishment. To the best of our knowledge, the association between learning fears and course

performance is little studied. This was mentioned in the context of quantitative anxiety and achievement (Macher et al., 2012). Apart from that, anxiety-induced impairments in cognitive efficiency include identity, general concern, thinking about course assignment performance, strategizing on how to deal with missing tasks, calculating grade scenarios, and meeting final assignment deadlines (Mathews, 2000). This diminished attention efficiency is caused by inadequate sleeping, improper diet, as well as other behavioral and social issues.

As a consequence, researchers predict that test anxiety will have a major impact on pupils' academic performance. According to several studies, test anxiety and student performance have an inverse association. (Hong & Karstensson, 2002; Onyeizugbo, 2010; Abulghasemi, 2009). They also claim that worry causes intrusive thoughts unrelated to the test, which prevents students from properly concentrating on it. Learning failure is the result of all of this disjointed thinking. Other researchers, on the other hand, consider that anxiety is caused by students' lack of ability rather than the factors indicated. Furthermore, exam performance is used to assess a student's success, although the optimum performance criterion is the sum of the academic achievement of students across all topics taken.

Other experts disagree, believing that test anxiety has little bearing on academic achievement (Cheraghian, 2007). As a result, test takers may be anxious that their performance is being closely scrutinized and analyzed (Cheraghian et al., 2008). It is necessary to have a low degree of stress, but it can be so complicated that it limits test performance and leads to behavioral disorders, low self-confidence, and poor academic achievement. Due to the obvious evaluation and testing, some people despise studying and schooling (Moadeli & Ghazanfari, 2005). The accumulation of anxiety will not aid the student's performance; instead, it will have a negative effect on their academics (Oluoch et al., 2018). Several of the psychiatric problems that students encounter before a test include restlessness, strange body movements, difficulties concentrating, insomnia, exhaustion, muscle spasms, abdominal discomfort, and tremors (Habibullah and Ashraf, 2013). Exam anxiety affects accomplishment alongside other characteristics such as desire to learn, ability to profit from formal education, and gender, as evidenced by the reasoning stated above and the outcomes of the studies.

Furthermore, their own self-assurance shone a light on the darkness of worry, which had a major impact on single exam grades and GPAs. If test anxiety has a short-term impact, it is usually manageable, but if it has a long-term impact, it becomes a major problem that is difficult to manage. (Cassady & Johnson, 2002; Barrows et al., 2013). Johnson and Ray (1999) investigated the impact of cognitive anxiety on attentiveness and educational achievement among university students in a study. Although some research on anxiety and achievement have been conducted, the overwhelming majority of them will have focused on general academic accomplishment, tests, and specialized actual content such as statistics. Towards the best of knowledge, there has been no evidence on the effects of anxiety in learning contexts. Exam anxiety seems to have a substantial influence on student learning as a result. While the effects of anxiety are well-documented, little is known about how academic achievement affects anxiety.

### 2.1.2 Exam Anxiety and Students' Attention

In a range of cognitive tasks, anxiety has been linked to cognitive interference (MacLeod, 1996). High-test-anxious people experience more intrusive thoughts and perform worse on tests than low-test-anxious people (Blankstein et al., 1989). In tests of free (associative) recall of memorized material, test-anxious people regularly perform lower (Hembree, 1988). Among these responses, the psychological impacts on attentional control have risen in popularity. Attentional bias is a term that describes the process of paying attention. Giving closer attention to frightening stimuli than to neutral stimuli (Schutz et al., 2002; Schutz et al., 1992). Anxiety patients were found to see even seemingly harmless environmental cues or neutral events as potentially harmful. However, a growing amount of evidence suggests that anxiety can also contribute to enhanced focus and attention.

Furthermore, Eysenck (as cited in Dutke & Stober, 2001) provided one theory regarding the link between high levels of exam anxiety and low cognitive performance. According to Eysenck, a limitation in cognitive processing causes the reduced cognitive performance of extremely test-anxious individuals. In test scenarios, these people have task-irrelevant thoughts, such as fears and worries about self-evaluative aspects of loss, which take up some of their working memory capacity. Given the paucity of knowledge on the impacts of test anxiety and its major impact on the field of education, the present study looked into whether high-test-anxious people

would have cognitive deficits in attention and/or memory. According to Eysenck's perceived stress interference model, high-test-anxious individuals would have irrelevant ideas, which would completely dominate cognitive functioning, resulting in a reduced level of recall.

According to Banich (2007), attention is a nervous system function that allows an individual to focus on an immediate need among many stimuli. Class participation, keeping up with the class, and examinations are examples of processes in which attention negatively affects the student in the school environment. Nuc & Enol (2002) mentioned that the main feature of attention problems is the slowness of the irreversible and ongoing attention period, as well as unease and nervousness observed in behaviour patterns and cognition due to a lack of supervision to prevent them. Anxiety disorder is the most common concurrent diagnosis with attention deficit (Biederman, 2005; Gokçe et al., 2015; Karaman et al., 2013; Kavakc et al., 2011; Kavakci et al., 2014; Spencer et al., 2007).

Other elements that drive learners to be concerned, according to Sarason (1980), are their competence, task difficulty, the dread of earning failing grades, and a lack of test preparation. Students who are nervous, on the other hand, had little control over their focus. He also states that there is significant proof that evaluation stimuli have a negative impact on highly test-anxious people's performance on complex tasks. The task becomes easier as this influence becomes weaker. Gaudry and Spielberger (1971) seem to agree on the task's complexity. According to their findings, high-anxious people fared better on basic activities than low-anxious subjects, but they performed worse on difficult tasks than low-anxious subjects. The relationship between academic performance and students' attention has been long debated. Academic performance has been widely accepted as a reliable indicator for predicting students' success in school, including grade point average (GPA), standardized test scores, and class rank (Short et al., 1976). However, research over the past decade has increasingly pointed to the importance of students' attention in academic achievement.

Some students, on the other hand, grow worried during exams that demand individuals to enhance their abilities in unfamiliar ways. Many students, for example, become anxious when they realize that they will be required to complete essay assessments. Oral exams can be stressful for some people. Students may experience anxiety as a result of a variety of assessments