UNIVERSITI PUTRA MALAYSIA

ASSOCIATION BETWEEN DEPRESSION, STRESS, ANXIETY AND ACADEMIC STUDENTS IN UNIVERSITI PUTRA MALAYSIA

RAZAN MANSOUR ALABDALI

ASSOCIATION BETWEEN DEPRESSION, STRESS, ANXIETY AND ACADEMIC STUDENTS IN UNIVERSITI PUTRA MALAYSIA

RAZAN MANSOUR ALABDALI

BACHELOR OF NURSING

UNIVERSITI PUTRA MALAYSIA

SEPTEMBER 2022

ASSOCIATION BETWEEN DEPRESSION, STRESS, ANXIETY AND ACADEMIC PERFORMANCE AMONG INTERNATIONAL STUDENTS IN UNIVERSITI PUTRA MALAYSIA

By
RAZAN MANSOUR ALABDALI

Thesis submitted in fulfilment of the requirement for the degree of Bachelor of Nursing from Faculty of Medicine and Health Sciences, Universiti Putra Malaysia.

ASSOCIATION BETWEEN DEPRESSION, STRESS, ANXIETY AND ACADEMIC PERFORMANCE AMONG INTERNATIONAL STUDENTS IN UNIVERSITI PUTRA MALAYSIA

Razan Mansour Alabdali, Parameseveary A/P L.Subramaniam, Ruthpackiavathy Rajen Durai

ABSTRACT

Introduction: Mental health is influential and essential for people of all ages and it is a key component of a person's ability to function. International university students are at high risk of having mental health issues due to the factors they are facing including a new environment and low income. Depression, stress, and anxiety are common among international students and might result in affecting their academic performance. **Objective:** To determine the association between depression, stress, anxiety, and academic performance among international students at Universiti Putra Malaysia. **Methods:** a cross-sectional survey study was carried out among undergraduate international students. 320 undergraduate international students was selected using the convenience sampling method. Participants completed a questionnaire that contains two parts about socio-demographics, depression, anxiety, and stress scale. **Result:** 54.2% of the respondents were from 21-24 years old, most of them are female 52.1%, and 47.9% are male, majority their financial status is RM4,849 and below 54.8%, the majority are in the third year 30.2%, CGPA 39.6% have CGPA From 3.1 - 3.5. The depression level was moderate, mean score 6.7, the anxiety level is severe with mean score 7.1, the stress level is mild with mean score 8.1, The results showed there is no significant association between depression with academic performance anxiety with academic performance, and stress with academic performance, where all p-value < 0.05. Also, there is no significant association between depression, stress, anxiety, and demographic data (age, gender, financial status, and year of study), where p-value > 0.05. **Conclusion:** The result obtained in this study showed that there is no significant association between depression, stress, anxiety, and academic performance among undergraduate international students at the university.

Keywords: Depression, Stress, Anxiety, Academic performance, international students

ACKNOWLEDGEMENT

All praises and gratitude to Allah for blessing me in my study. Secondly I would like to express my gratitude to my supervisor Ms.Paramesevary A/P L.Subramaniam and also my co-supervisor, Dr. Ruthpackiavathy A/P Rajen Durai for their patience, teaching, guidance and support throughout the journey of doing this thesis. Without their kind care and scientific based supervision, I would not be able to accomplish this research.

My Deepest thanks, love and gratitude are to my parents Mr. Mansour Alabdali and Mrs. Nourah Alsharif and my siblings Rose, Yazeed and Ziyad for their endless prayers, love and for giving me full moral support to complete my degree.

Last but not least, I like to thank those who were, directly and indirectly, contributing to the completion of the thesis. Your kindness, involvement, and cooperation are highly appreciated.

DECLARATION BY STUDENT

I hereby confirm that:

- This thesis is my original work; quotations, illustrations and citations have been duly referenced;
- This thesis has not been submitted previously or concurrently for any other degree at any other institution;
- Intellectual property from the thesis and copyright of thesis are fully- owned by Universiti Putra Malaysia, as according to the Universiti Putra Malaysia (Research) Rules 2012;
- Written permission must be obtained from the supervisor and the office of Deputy Vice-Chancellor (Research and Innovation) before the thesis is published (in the form of written, printed or electronic form) including books, journals, modules, proceedings, popular writings, seminar papers, manuscripts, posters, reports, lecture notes, learning modules or any other materials as stated in the Universiti Putra Malaysia (Research) Rules 2012;
- There is no plagiarism or data falsification/fabrication in the thesis, and scholarly integrity is upheld as according to the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) and the Universiti Putra Malaysia (Research) Rules 2012. The thesis has undergone plagiarism detection software

---

RAZAN MANSOUR ALABDALI

Matric number: 199485

Date: 12/10/2022

DECLARATION BY MEMBERS OF SUPERVISORY COMMITTEE

This is to confirm that:

- The research conducted and the writing of this thesis was under our supervision;
- Supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Ms.Parameseva ry A/P L.Subramaniam

Supervisor

Department of Nursing

Faculty of Medicine and Health Science Universiti Putra Malaysia

Date: 19/10/2022

PhD. Ruthpackiavathy A/P Rajen Durai

Co-supervisor

Department of Nursing

Faculty of Medicine and Health Science Universiti Putra Malaysia

Date: 19/10/2022

Table of Contents

List of Figures

List of Tables

List of APPENDIXES

List of abbreviation

WHO	:World Health Organization
H_o	: Null hypothesis
JKEUPM	: Jawatankuasa Etika Untuk Penyelidikan Melibatkan Manusia
SPSS	: Statistical Package for the Social Sciences
DASS	: Depression Anxiety Stress Scales
UPM	: Universiti Putra Malaysia
CGPA	: Grade Point Average

CHAPTER 1

INTRODUCTION

1.1 Background

Mental health is crucial at all stages of life, including childhood, adolescence, and adulthood. According to the World Health Organization (WHO), mental health is a state of well-being in which an individual realizes his or her own abilities, can cope with the everyday stresses of life, can work productively and is able to contribute to his or her community. Moreover, health defended as "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." (WHO, 1948).

In 2018 Research has stated that starting college represents a transition period in young people's lives that comes with additional mental health risks due to a number of psychological, social, and emotional changes that occur (Kiekens et al., 2018). Language challenges, financial difficulties, difficulty adjusting to a new educational system and social conventions, and homesickness all faced by international students. these elements can affect mental health (Koo & Nyunt, 2020). In 2019, ACHA-NCHA II which is a research survey recognized nationally both in the US and Canada for college students regarding their smoking habits, mental health issues, and other related health topics, revealed that the level of mental health problems experienced by university students has been increasing by 5-10% btween 2011 and 2019. According to these survey results, the top three factors that negatively impact post-secondary students' academic performance are related to their mental health (stress, anxiety, and depression). Therefore, they reported that student well-being is related to academic success and of these

Canadian higher-education students, 14.2 percent were international students who represented a significant population (American College Health Association, 2019). According to a study conducted in Japan showed that, the incidence of depressive symptoms among overseas students was 37.1%, which was greater than the 29% among domestic students (nguyen et al., 2019). More than a third of Ethiopian university students have been identified as suffering from some form of mental illness (Dachew, Bifftu, Anlay & Wassie, 2019). This study reveals that university students are a high-risk group for mental health disorders, and that early care is required to avoid developing mental health disorders (Dachew, Bifftu, Tiruneh, Anlay & Wassie, 2019). Stress has been shown to cause depression and anxiety, which have a detrimental impact on students' well-being (Schönfeld, Brailovskaia, Zhang & Margraf, 2019).

Mental health issues are key indicators of college dropout and academic achievement and the occurrence of mental disorders during this critical period of development has profound consequences on academic outcomes role impairment such as dysfunctional relationships and inability to work or attend class (Mortier et al., 2020). International students' mental health status can influence their academic performance and might result in mental health problems such as depression, anxiety, and suicidal ideations (Minutillo et al., 2020). Depression, anxiety, and stress are all quite common among university international students, and they appear to be getting worse (Lei et al, 2016).

1.2 Problem Statement

Malaysia is a well known country for international students worldwide. The United Nations Educational, Science and Cultural Organization (UNESCO) rated Malaysia one of the top 10 post-secondary education options for overseas students. Depression, anxiety, and stress are all extremely commonplace among foreign university students, and they appear to be worsening (Lei et al, 2016).

A study was conducted in Universiti Kebangsaan Malaysia (UKM) demonstrated a significant incidence and severity of depression, anxiety, and stress among international students, with more than half experiencing mild to severe levels of psychological distress. Anxiety appeared to be the most common, with more than two-thirds of the students experiencing anxiety distress (Ismail & Kahwa, 2020). Also, the general prevalence of depression, anxiety, and stress among international students at Universiti Kebangsaan Malaysia (UKM) was 58.9%, 71.8%, and 53.9% respectively (Ismail & Kahwa, 2020). International students' mental health status can influence their academic performance and might result in mental health problems such as depression, anxiety, and suicidal ideations (Minutillo et al., 2020). Depression, anxiety, and stress are extremely frequent among university students, and their prevalence appears to be increasing. These psychological problems have an impact on their wellbeing, which can interfere with international students' healthy adaptation and coping with their new environment. (Clough et al., 2018).

Few studies have been done about international students in the Malaysian context. Amongst university populations, there is a high reported burden of mental health especially between international students which is a significant public health issue that, if not addressed, can be increasing health, social and economic implications within the host universities (Kotera et al., 2020). Care should be given to international students since they come from

different cultures and environments to increase their awareness about mental illness (Ismail & Kahwa, 2020).

1.3 Significance of the study

The author is an international student and had faced some challenges with the new environment. This study had been chosen to explore the mental health status of undergraduate international students studying at Universiti Putra Malaysia (UPM). This study also investigated the association between depression, stress, anxiety, and academic performance among international students. The mental health of international students in Malaysia has received little attention from researchers. Being depressed can delay these students from achieving their goals. Understanding the experience of these international students has very important implications for both the students and the institution of higher learning. can be used to raise awareness of this population's unique mental health status and address the gaps existing in recognizing the mental health needs, outcomes intended to support international students.

1.4 Research questions

i. What is the level of depression, stress, anxiety among international students at Universiti Putra Malaysia?

ii. What is the score of academic performance among international students at Universiti Putra Malaysia?

iii. Is there any association between level of depression, stress and anxiety with academic performance among international students at Universiti Putra Malaysia?

iv. Is there any association between level of depression, stress, anxiety and academic performance with socio-demographic characteristics among international students at Universiti Putra Malaysia?

1.5 Research Objective

1.5.1 General Objective

The general objective of this study is to determine the association between depression, stress, anxiety, and academic performance among international students at Univesiti Putra Malaysia.

1.5.2 Specific Objectives

i. To determine the socio-demographic characteristics of the respondents.
ii. To determine the level of depression, stress, anxiety among international students at Universiti Putra Malaysia.
iii. To determine the score of academic performance among international students at Universiti Putra Malaysia.
iv. To examine the association between level of depression, stress and anxiety with academic performance among international students at Universiti Putra Malaysia.
v. To examine the association between level of depression, stress, anxiety and academic performance with socio-demographic characteristics among international students at Universiti Putra Malaysia.

1.6 Hypothesis

1.6.1 Null Hypothesis

Ho1: There is no significant association between the level of depression, stress and anxiety with academic performance among international students at Universiti Putra Malaysia.

Ho2: There is no significant association between level of depression, stress, anxiety and academic performance with socio-demographic characteristics among international students at Universiti Putra Malaysia.

1.7 Definition of Terms

1.7.1 Conceptual Definition

- **Depression**

Depression is a common mental disorder. Presents with a depressed mood or loss of interest or delight, tiredness, guilt or feeling weak Self-esteem, sleep disturbance or loss appetite, poor focus (Choi et al., 2020).

- **Stress**

A physical, mental, or emotional factor that causes physical or mental stress (Pascoe et al., 2019).

- **Anxiety**

Is a sensation of dread, fear, and disquiet. It could cause sweat, feel anxious, tension, and have a tachycardiac (Spielberger, 2022).

- **International students**

Who are admitted by a country other than their own, usually under special permits or visas, for the specific purpose of following a particular course of study in an accredited institution of the receiving country (Ma & Zhao, 2018).

1.7.2 Operational Definition

- **Depression, stress and anxiety**

This section will determine the association between depression, stress and anxiety with international student's academic performance.

- **International students**

The undergraduate international students at UPM were selected for this study to determine the association between depression, stress and anxiety with academic performance.

CHAPTER 2

LITERATURE REVIEW

2.1 Depression

More than 264 million people worldwide have depression. It can be characterized by constant sadness or lack of interest or pleasure in previously rewarding or enjoyable activities. People who suffer from depression can have difficulties in sleeping and losing appetite, feel fatigued and have poor focus. Depression contributes significantly to the global burden of disease, and it is the leading cause of disability worldwide is depression. The effects of depression can be long-lasting or repetitive and can seriously influence an individual's capacity to work and carry on with a satisfying life. College students are much more likely to experience depression than the general population, and young adults also are recognized to showcase depressive signs often. The pooled suggest occurrence rates are anticipated to be between 23 and 35%, with prevalence rates ranging from 10 to 84.5% globally (Ibrahim, 2019). According to Rotenstein et al., those rates increase by 0.2% annually. It is concerning due to the fact depression could have instant and long-time period implications, together with suicidal thoughts or attempts, poor educational achievement, and decrease job overall performance after graduation.

Estimating the prevalence of depression at 16.4% among French university students [FUS] (Kokou-Kpolou et al., 2020). Almost 2% of the entire population in Malaysia, aged 16 years or more had current depression. therefore, several studies had been done to estimate the prevalence of depression among college understudies. According to a study, international students face a higher risk of developing mental health problems such as depression and anxiety due to adjustment problems (Liu et al., 2016). A study

carried out in Japan indicated that the prevalence of depressive symptoms among international students was 37.1%, which was higher than that of domestic students at 29% (Nguyen et al., 2019).

2.2 Stress

Stress is a restlessness condition that a person who suffers from physical or mental conflicts (Adam et al., 2020). Stress happens when people have interactions with their environment that are perceived as exceeding their coping ability and negatively affecting their life. when there are demands or strains made on a person or the environment it will cause stress which is caused by nonspecific body response mechanism towards. A stressor is generally perceived as a circumstance that potentially triggers a pressure response in individuals (Lukman, 2019). In general, stress can be classified into two general classifications of eustress and distress. The positive stress, with wellbeing and benefit behavior, is eustress as. Research has revealed that individual performance can be improved by a moderate level of stress and it can add to positive feelings showing that being stressed does not continuously prompt adverse results. On the other hand, when demands exceed the individual's ability to cope, stress or negative pressure is increases (Tung Li et al., 2016). Stress can decrease the health behavior, an elevate depression and it often seen as a contributor to problematic disorders. prevailing stress cannot only occur in the workplace but can also occur in the family, society, economy, including education. In addition, students will have an impact on academic achievement if they unable to control the level of stress. (Kamal & Ismail, 2021). In Malaysia, 37.7% of undergraduate students experienced stress, with one in three experiencing heavy stress, this was an evidence of the elevation of stress in the transition to the university (Yee, 2018).

2.3Anxiety

Anxiety is a body's normal response as a result of feeling worried, fearful, and stress about what is to come (Quek et al., 2019). It is normal to feel anxiety at times, however when it it includes intense, persistent, and excessive fear and anxiety, it can be exacerbated and lead to an anxiety disorder and distress syndromes. People can experience other physiological symptoms of anxiety including fatigue, dizziness, headaches, nausea, abdominal pain, heart arrest, and many other syndromes. Anxiety can also affect concentration, focus, and perceptual-motor function (Runswick et al., 2018). All of these symptoms are important domains that affect international universities students' academic performance. A high level of anxiety affects not only academic performance, but it can also lead to poor health and causes many other harmful effects such as suicide with depression. A study among international students in a United States university revealed that 45% of the students had depressive symptoms, while 24% were suffering from anxiety (Shadowen et al., 2019). Influencing factors can affect the mental health and well-being of international students such as language barrier, unpreparedness, low income, low academic performance, and severe anxiety (Ogunsanya et al., 2018).

2.4 Relation of depression, stress, anxiety and academic performance

Mental health is important to the growth and development of the entire academic community. As academic achievement is of vital importance to the growth and progress of each student. There are some elements of depression and anxiety that affect the mental health and academic achievement of students. Mental health can be conceptualized as an emotional well-being influenced by the elements of depression, anxiety and stress. One study found a relationship between mental health and depression, anxiety, stress and academic achievement (Gulshan, 2018). Several studies have proven that a large percentage of university students complain of deteriorating mental health. The most commonly reported combinations of symptoms are anxiety and insomnia, followed by social dysfunctions and physical symptoms. Depression is statistically more common in unrelated people, anxiety and insomnia are statistically more common in women than in men, and statistically less common in doctoral students in public universities than in technical universities. Educating young people in mental health self-awareness is also of particular importance (Matthews et al., 2021). Several recent studies have also found that there is a significant impact of the COVID-19 pandemic on mental health, which is reflected in anxiety, depression, and academic performance of students worldwide. The results of these studies indicated that nearly half of the respondents suffered from moderate to very severe levels of depression, stress and anxiety. and that there is a relationship between severe negative mental health states and students' academic performance (Jhoselle et al., 2021). High levels of depression and anxiety symptoms affected a large proportion of university students. Whereas students with scores above the cut-off for potential MDD or potential GAD have poor academic performance. Depressive symptoms predict a cumulative average in the last semester suggesting a causal relationship. Thus, there are a range of negative effects of emotional difficulties on students' academic achievement and chances of success (Suheir, 2020). Academic performance,

resilience, depression, anxiety, and stress are positively correlated among college students. Academic performance is also more predictive of depression, anxiety, and stress in college students, while depression alone is more predictable through resilience (Ahmed, 2015).

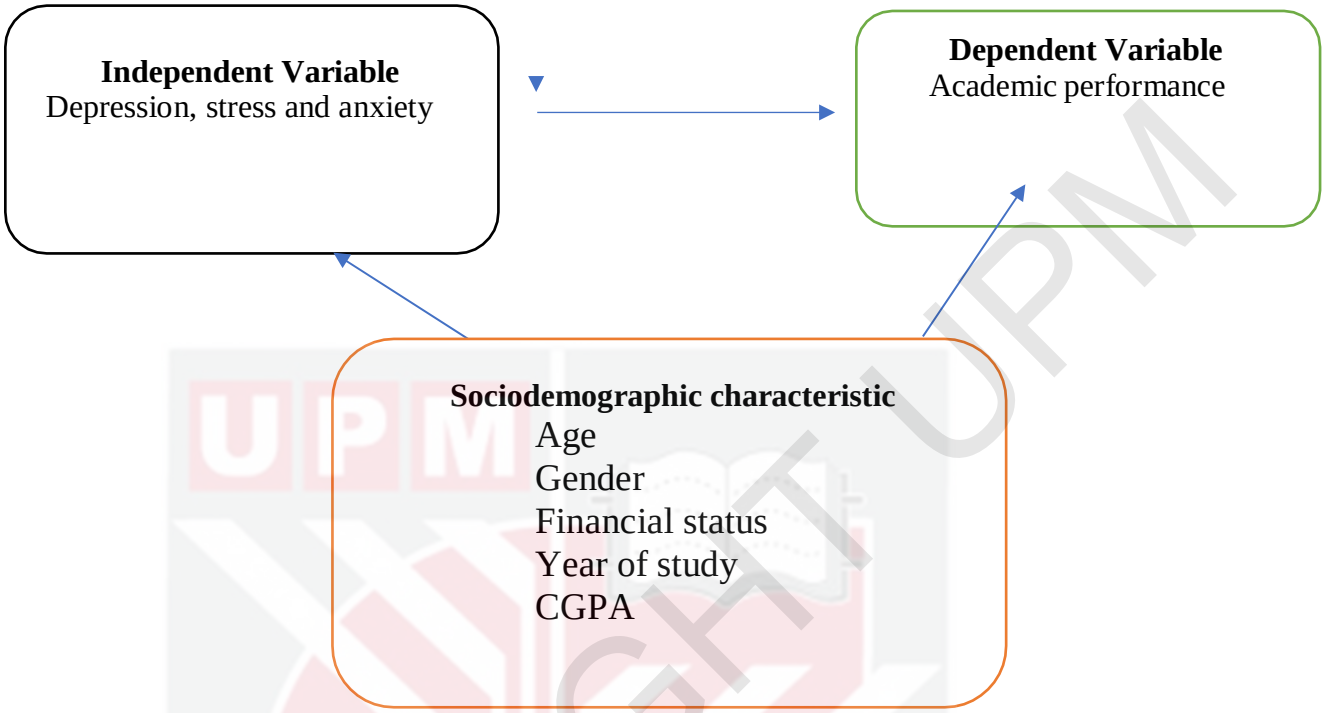
2.5 Relation of depression, stress, anxiety and academic performance with socio-demographic characteristic

The overall prevalence of depression, anxiety and stress among health professions students is significantly high. There is a high prevalence of symptoms of depression, anxiety and stress among students. The rate of depression and anxiety is also higher among veterinary students followed by students of dentistry, medicine and pharmacy although there is no significant difference between students of different health professionals (Shivananda, 2021). Depression was related to sex and BMI while anxiety was only related to sex. Depression is also positively correlated with anxiety. Depression and anxiety are common among college students who live in a disaster-prone area. Gender plays an important role only in the presence of anxiety (Marthuinis, 2018). Contact with confirmed COVID-19 patients is an important indicator of depression. Gender and marital status are associated with anxiety. Healthcare workers who interact with patients suspected of having COVID-19 experience reduced depression and stress (Shivananda et al. 2021). Levels of depression are influenced by different demographic characteristics that include gender, occupational status, and housing. One study found that female students experienced significantly higher levels of depression than males. The

tendency of females to experience higher levels of depression was explained by differences in sexual roles, gender differences in coping or gender differences in response to stress. Satisfaction with financial position and residence was one of the important variables that affected students' depression. Students with higher levels of financial satisfaction had lower DASS scores than students who were dissatisfied with their financial situation. that student who were not happy with hard living showed relatively higher levels of depression. Dissatisfaction with living arrangements puts great pressure on students (Abu Bakr, 2019). One study found that anxiety disorders are common in the general population around the world. It constitutes a significant proportion of the global burden of disease and is expected to be the second most common cause of disability by 2020. Prevalence of anxiety was significant in senior years students with respect to their age, economic and housing status as well as related to their academic performance indicating that students with sociodemographic factors Low and their families. Academic problems will experience higher levels of anxiety than those who are in good sociodemographic status and do not have academic problems (Mohammed, 2017). One of the most important studies to examine is whether sociodemographic factors have an impact on perceived stress and preferred coping strategies of students enrolled in undergraduate nursing studies. I have found that a large number of students currently enrolled in an undergraduate nursing course may experience a moderate amount of stress. Furthermore, participant demographics may have influenced

perceived stress and the use of coping strategies. Diversity in background may contribute to increased pressure on some students, who may have migrated alone, without family and support networks (Nerissa, 2021). Females are more anxious than males, while males are more depressed than females. The results also indicated a positive relationship between achievement and anxiety, while a negative relationship was found with depression (Lama, 2011). One study also found that freshmen are the most depressed, graduate students are the most stressed, and women are more likely to have depressive symptoms. Students enrolled in the higher school years are the least depressed and least stressed. Perceived stress is significantly positively correlated with depression and negatively in a strong correlation with the number of credit hours earned. More than half of students experience heightened anxiety and consume alcohol, coffee, sweets or cigarettes during stressful academic periods (Magdalena Iorga, 2018). Anxiety is one of the most prevalent and dangerous issues among university students, especially female students. While there is an increasing prevalence of depression among male students during college (Gao Wenjuan, 2020).

2.6 Conceptual Framework



Depression, stress and anxiety will be the independent variable of this study as it will contribute to the dependent variable which is academic performance. Therefore, the researcher will find out the association between independent variable and the dependent variable. Besides that, socio-demographic characteristics include age, gender, financial status, year of study and CGPA will be considered as the potential confounders of the study. Next the researcher will also find out the association between potential confounders and independent variable as well as the association between potential confounders and the dependent variable.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter will discuss the methods that were implemented for this study include study design, study location, study sampling, sample size, sampling method and participants criteria, instruments used, pre-test, validity, reliability, data collection process, analysis of data and ethical consideration

3.2 Study Design

This study is cross-sectional and it conducted to investigate the association between depression, stress, anxiety and academic performance among international students at Universiti Putra Malaysia. Also, is quantitative research which is a systematic investigation that needs to gather quantifiable data and perform statistical and mathematical to be analyzed (Bhat, 2018). Cross-sectional study measures the outcome and exposure in the study participants at one specific point in time. is a type of observational study design (Setia, 2016). Next, this type of study is suitable to examine the relationship between disease or other health-related state and other variables of interest over a short period of time. Hence, it is appropriate to be implemented in this study to determine the association between depression, stress, anxiety, and academic performance among international students at Univesiti Putra Malaysia.

3.3 Study Location

This study was conducted at Univesiti Putra Malaysia. It is a government university that was focused on agricultural sciences. However, since the year 1997, extended to wide, range of scientific research and education including medicine, engineering, computer science, biotechnology, etc. Univesiti Putra Malaysia located in Serdang, District of Petaling, Selangor.

3.4 Study Sampling

3.4.1 Study Population

The population that was involved in this study are the undergraduate international students who are studying in Univesiti Putra Malaysia.

3.4.2 Study Duration

The duration of the study was around 9 months (December 2021 to August 2022). While the estimated duration for data collection was around 2 weeks from 3rd August 2022 to 17th August 2022.

3.5 Sample Size Estimation

Determining sample size is an essential step in planning health and psychological studies. Determining the optimal sample size for a study ensures sufficient power to discover statistical significance and reach accurate results. It is costly to use too many study participants, and if the study is weak, it will be statistically inconclusive and may make the entire protocol a failure. The sample should be large enough so that the effect of the expected size of scientific significance is also statistically significant. At the same time, it is important that the study sample not be too large as an effect of little scientific significance is nonetheless statistically detectable. Sample size is also important for economic reasons, as a small study can be a waste of resources because it may not produce useful results while a large study uses more resources. The common goal of survey research is to collect data that is representative of the population. The researcher uses the information collected from the survey to generalize the results from a sample drawn to a population, within the limits of random error. The sample size formulas and procedures used for categorical data are very similar, but there are some differences. Assume that the researcher presets the alpha level at 0.05, plans to use a relative variable, sets the acceptable level of error at 5%, and estimates the standard deviation of the scale as 0.5. The Cochran sample size formula for categorical data is presented. Hence, the researcher needs to determine adequate sample size to avoid those problems. In this study, Cochran's formula was used to estimate the sample size. In 1977, Cochran's

formula was developed, and it is used to calculate the sample size when the population is infinite (Jeffry,2012) (Xiaofeng, 2020) (S.C. Chow,2017) (KP Suresh, 2012):

$$n_0 = \frac{t^2 * (p)(q)}{(d)^2}$$

Where,

n_o = Cochran's sample size recommendation

t = value for selected alpha level of .025 in each tail = 1.96.

(the alpha level of .05 indicates the level of risk the researcher is willing to take that true margin of error may exceed the acceptable margin of error).

(p) (q) = estimate of variance = .25. (maximum possible proportion (.5)

* 1- maximum possible proportion (.5) produces maximum possible sample size). (q = 1 – p)

d = acceptable margin of error for proportion being estimated = .05 (error researcher is willing to except).

(Xiaofeng Wang, 2020) presented more than one formula for

estimating the sample size, each according to the size of the population, whether the sample size is limited or unlimited, and since here the sample size is limited, as well as the variance is unknown. The recommended sample size was calculated based on the maximum variance value of one-half at a confidence level of 95%, and at a standard z-value of 1.96 for two-sided tests. Thus, when applying the equation, we get the recommended sample size, as it appears from the application of the following equation (Xiaofeng, 2020) (S.C. Chow,2017):

.

Cochran's sample size recommendation, $n_0 = \frac{t^2 * (p)(q)}{(d)^2}$

$$n_0 = \frac{(1.96^2)(0.5)(0.5)}{(0.05^2)} = = 3.84.2 \approx 384$$

By relying on the value of the initial sample size, as well as the approximate population size and by relying on Cochran's correction equation (1977), it is possible to estimate the final minimum sample size, taking into account that it represents the minimum, and the more this size increases, the more credible results are provided (James,2001).

$$Minimum\ final\ sample\ size\ , n_1 = \frac{n_0}{1 + (\frac{n_0}{Population})}$$

By relying on published population data, the estimated total number of Undergraduate International students to be recruited in this study is 1894 which is considered to be the population size, N. The final corrected minimum

sample size was.

$$Minimum\ final\ sample\ size, n = \frac{n_0}{1 + (\frac{n_0}{Population})}$$

$$n = \frac{384}{1 + (\frac{384}{1894})} n = \frac{384}{1.20275}$$

$$n = 319.27 \approx 320\ (It\ is\ always\ preferred\ to\ round\ up)$$

Therefore, the minimum number of participants needed for this study is 320 among Undergraduate International students at University Putra Malaysia who meet the eligibility criteria. Due to the short period in collecting the data the number of students responded to the online survey was 96 individuals.

3.6 Sampling Method

The research was based on the convenience sampling method. It is a non-probability sampling method where the researcher selects sample members from only available and easily accessible participants. One of the great advantages of the convenience sampling method, it requires only little or no effort to connect with the different clusters or sub-groups in the population. Instead, the research can gather information from any member can find. In addition, the method is easy to use, and it is very easy to evaluate

sampling error with this method. (Stratton, 2021).

3.7 Participants' Criteria

3.7.1 Inclusion Criteria

- Full time undergraduate international student at Univesiti Putra Malaysia.

3.7.2 Exclusion Criteria

- Undergraduate international student on deferment.
- Undergraduate international student on first semester of study.

3.8 Study Instrument

3.8.1 Questionnaire

The questionnaire that was used in this study was adopted from Lovibond and Lovibond 1995 which is the English version, and it is in the public domain no need for permission.

The questionnaire consists of two parts which are Part A, Part B. Part A is about the socio-demographic characteristic of the respondents. It consists of age, gender, financial status, year of study and CGPA. In Part B, the questionnaire measured the negative emotional states of depression, anxiety and stress.

3.8.2 Scoring System

Part B: Depression, Anxiety, Stress Scales

The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) is a short version of DASS questionnaire and included three self-report scales designed to measure the emotional states of depression, anxiety and stress. Each of the three DASS-21 scales contains 7 items. The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest, anhedonia, and inertia. Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress scale assesses difficulty relaxing, nervous arousal, and being easily upset, over-reactive and impatient. Participants are asked to use 4 points severity/frequency scales to rate the extent to which they have experienced each state during the past week. Scores for Depression, Anxiety and Stress are calculated by summing the scores for the relevant items.

3.9 Pre-test

A pilot study was conducted among international students at the Faculty of Medicine and Health Sciences, UPM. Cronbach's alpha and content validity index (CVI) was carried out to measure the validity and reliability as well as the internal consistency of the questionnaire that was used in this study.

3.10 Validity and Reliability

The questionnaire was considered reliable and consistent because Cronbach's alpha value is between 0.894 and 0.926. The general reliability is 0.967, so the tool has high reliability level. The general rule of thumb is that a Cronbach's alpha of .70 and above is good, .80 and above is better, and .90 and above is best. Therefore, the question will be considered as appropriate if CVI higher than 0.79, the question needs revision and if the CVI is less than 0.70 and the question will be eliminated and will consider as not valid (Rodrigues et al., 2017). Hence, CVI higher than 0.89, the question was considered as appropriate (Zamanzadeh et al., 2015).

3.11 Data Collection Procedure

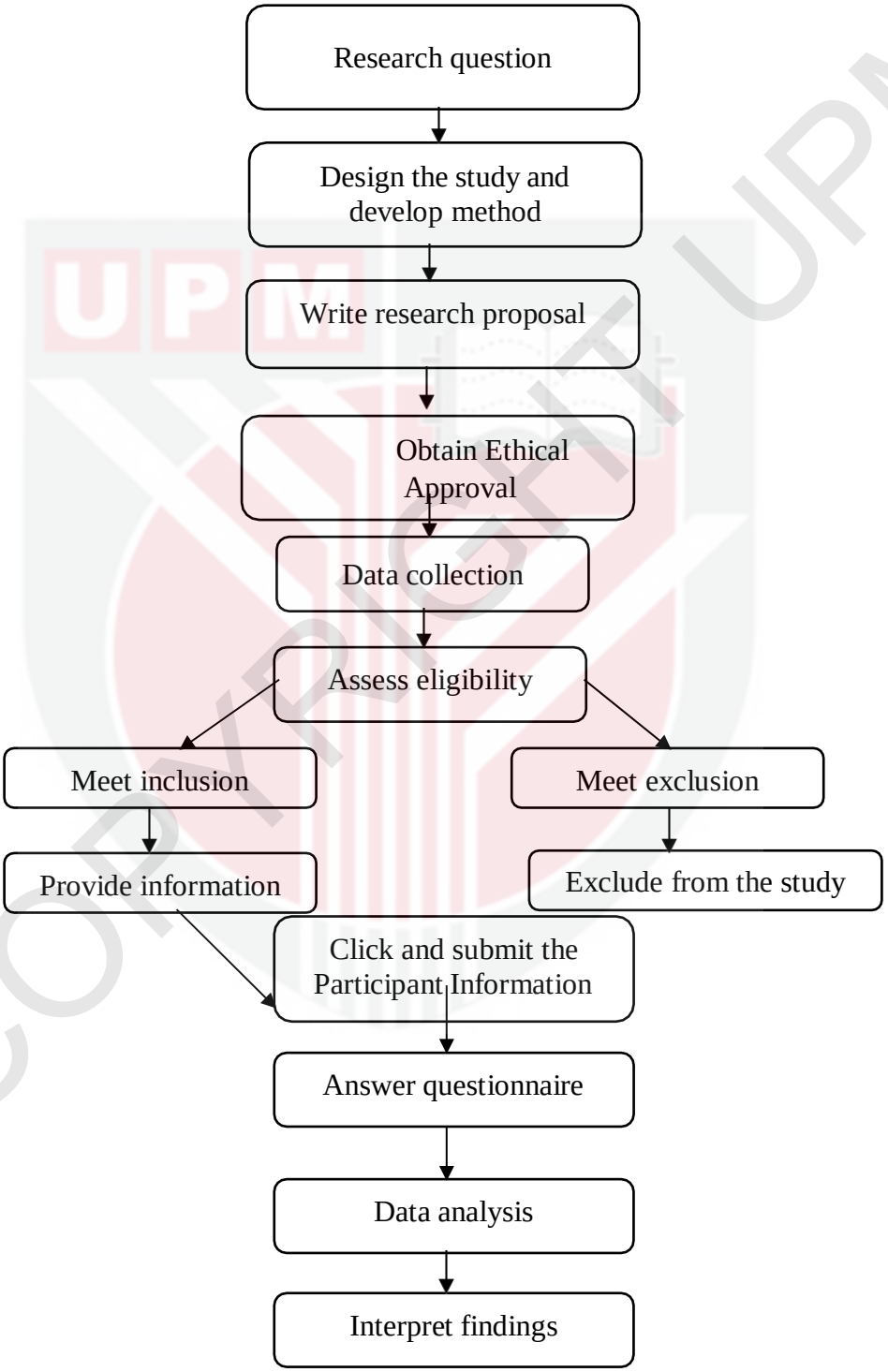
Data collection requires a set of steps, which begins with the end of the study tool design, which is the questionnaire, which was designed to try to answer the study questions, which includes two types of data, one of which represents the metadata of respondents, and the other represents the study variables. Data collection was conducted right after the researcher received the ethical approval of the study. After that, the questionnaire was designed on Google forms on the internet, which achieves many benefits, perhaps the most important of which is the lack of direct meeting with the respondents and thus the lack of possibility of infection due to the epidemic in Malaysia,

and the electronic questionnaire was provided the ability to reach the largest possible number of respondents, which is difficult Access to them through the printed questionnaire, in addition to the fact that the electronic questionnaire through Google Forms provides the final results in the form of Excel pages, which facilitates their transfer to the statistical program used in SPSS data analysis.

The Google Form link was shared after completing the web design to the Undergraduate International students at University Putra Malaysia. The survey was shared via the university's student email and social media such as Facebook and WhatsApp. The Participant Information Sheet was provided on the first page of online survey to ensure that participants meet the inclusion and exclusion criteria for the study, as the participants have to electronically consent by clicking on the button after reading the information and fulfilling all the criteria to express their desire to participate in the study. This was provided for obtaining consent automatically when participants click and submit the questionnaire,

The electronic questionnaire on the next page of the consent page was also included the demographic information of the participants to ensure that the participants meet the inclusion and exclusion criteria for the study. The search also takes into account the conditions of confidentiality, which is considered one of the ethical search criteria by not allowing anyone to view this data, as the data was saved on the electronic researcher’s account, which is a secret account that is secured through Google’s policy. Then, in the

researcher's Google Drive account all answers was saved and updated. All of the data collected was handled carefully to maintain confidentiality.



3.12 Data Analysis

The stage of data analysis comes as a next stage in data collection, and this stage aims to try to answer the research questions by analysing the data collected. Data analysis is based on the use of the Statistical Package for the Social Sciences (SPSS) version 25. All extracted tables will be attached in Appendix B. The data analysis was based on two phases: -

First, Descriptive Statistics. This stage of data analysis includes providing a statistical description of the research variables, whether demographic or basic, where the study sample and its main sections are described in numbers and percentages. Towards the paragraphs and axes of the questionnaire, and this stage of analysis aims to try to answer the research questions related to determining the level of depression, stress and anxiety among international students at University of Putra Malaysia, by relying on the weighted average, which is the participant's answers, in addition to determining the degree of academic performance of the student's at University of Malaysia Putra Malaysia by determining the weighted average level of academic performance for international students.

Second, Statistical Tests**.** Data analysis depends on a set of statistical tests aimed at reaching answers to research questions. The validity and reliability test (Cronbach's alpha) was relied on to determine the validity and reliability of the questionnaire's items and axes. This confirms the credibility of the

paragraphs and axes in measuring what they were developed for. The Pearson correlation coefficient was used to determine the extent to which there is a significant correlation between the level of depression, stress and anxiety and academic performance among international students at University of Putra Malaysia, as well as the Pearson chi-square test to determine the extent to which there is a correlation between the level of depression, stress and anxiety and academic performance with social characteristics. and demographics among international students at University Putra Malaysia. at a significant level of 5%.

3.12 Ethical Consideration

The researcher sent a copy of the proposal to the Jawatankuasa Etika Untuk Penyelidikan Melibatkan Manusia (JKEUPM) to inform them about the study. After getting the approval, the participants that fit with the inclusion and exclusion criteria was given a Participant Information Sheet (PIS) and informed consent form (ICF) which was attached to the questionnaire before participating in the study. Then, the questionnaire and the participation information sheet and informed consent form was distributed to the participants through of Google form and the link was shared via university email and WhatsApp.

Participants was requested to read and understand Participant Information Sheet (PIS) because it contains details about this study. Also, the participants

in this study have the right to withdraw themselves anytime without providing any reason. Next, if participants agreed to participate in the study, they have to submit this form.

The information obtained in this study was strictly confidential and the questionnaire that participants answered was kept in the researcher's Google Drive account and these data will be destroyed permanently after five years of storage. Participant's information such as name, identity card number was not acquired. All data for this study was only be accessed by anyone related to this study which includes researcher, qualified monitors, auditors and governmental authorities.

CHAPTER 4

RESULT

4.1 Response rate

A total of 96 individuals responded to the online survey and all responses were valid to be used and analyzed in this study. Three hundred and twenty respondents were the required sample size, hence the response rate for this study was 30%.

4.2 Sociodemographic characteristics

The total number of respondents of this study was 96. 54.2% of the respondents are from 21-24 years old, 31.35% from 17- 23 years old, 14.6% are 25 years old or above, most of them are female 52.1%, and 47.9% are male. Out of 96 respondents, majority their financial status is RM4,849 and below 54.8%, and who between RM4,850-RM10,959 is 31.3%, and 22.9% more than RM10,960, the majority are in the third year 30.2% , then 27.1% in the second year, 19.8% in the fourth year, and 11.5% in the other study years, about CGPA 39.6% have CGPA From 3.1 - 3.5, 29.2% have CGPA From 3.6 – 4, 22.9% have CGPA From 2.5 – 3, 8.3% have CGPA less than 2.5.

Table 1: Socio-demographic characteristic

		Coun	Table N %
1. Age:	From 17 - 20 years	30	31.3%
	From 21 - 24 years	52	54.2%
	25 years and above	14	14.6%
2. Gender	Male	46	47.9%
	Female	50	52.1%
3. Financial status	RM4,849 and below	44	45.8%
	between RM4,850-RM10,959	30	31.3%
	More than RM10,960	22	22.9%
4. Year of study	First year	11	11.5%
	Second year	26	27.1%
	Third year	29	30.2%
	Fourth year	19	19.8%
	Other	11	11.5%
5. CGPA:	Less than 2.5	8	8.3%
	From 2.5 - 3	22	22.9%
	From 3.1 - 3.5	38	39.6%
	From 3.6 - 4	28	29.2%

4.3 Part B: Depression, Anxiety and Stress Scale - 21 Items (DASS-21)

4.3.1 Depression

The results showed that the depression level is moderate with mean score = 6.7, and the most behavior between the participants is [I found it difficult to work up the initiative to do things] with mean 1.08, then [I was unable to become enthusiastic about anything] with mean 1.02, and the least behavior is [I felt that life was meaningless] with mean 0.84, then [I felt I

wasn't worth much as a person] with mean 0.92. Next, the results for depression level showed that there are 46.9% students with normal level of depression, then 19.8% with moderate level, then 14.6% with extremely severe level, then 13.5% with severe level, then 5.2% with mild level.

Table 2: first domain depression

	N	Mean
[I couldn't seem to experience any positive feeling at all]	96	.93
[I found it difficult to work up the initiative to do things]	96	1.08
[I felt that I had nothing to look forward to]	96	.99
[I felt down-hearted and blue]	96	.95
[I was unable to become enthusiastic about anything]	96	1.02
[I felt I wasn't worth much as a person]	96	.92
[I felt that life was meaningless]	96	.84
Valid N (listwise)	96	

Table 3 depression level categories

levels	Frequency	Percent
Normal	45	46.9
Mild	5	5.2
Moderate	19	19.8
Severe	13	13.5
Extremely Severe	14	14.6
Total	96	100

4.3.2 Anxiety

The results showed that the anxiety level is severe with mean score = 7.1, and the most behavior between the participants is [I was worried about situations in which I might panic and a fool of myself] with mean 1.26, then [I felt I was close to panic] with mean 1.17, and the least behavior is [I felt scared without any good reason] with mean 0.84, then [I was aware of dryness of my mouth] with mean 0.88. Next The results for anxiety level showed that there are 58.3% with normal level of anxiety, then 17.4% with moderate level, then 12.5% with severe level, then 11.5% with mild level.

Table 4: second domain anxiety

	N	Mean
[I was aware of dryness of my mouth]	96	.88
[I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)]	96	.97
[I experienced trembling (e.g., in the hands)]	96	.97
[I was worried about situations in which I might panic and a fool of myself]	96	1.26
[I felt I was close to panic]	96	1.17
[I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)]	96	1.05
[I felt scared without any good reason]	96	.84

Table 5: anxiety level categories

Level	Frequency	Percent
Normal	56	58.3
Mild	11	11.5
Moderate	17	17.7
Severe	12	12.5
Total	96	100

4.3.3 Stress

The results showed that the stress level is mild with mean score = 8.1, and the most behavior between the participants is [I found it difficult to relax] with mean 1.36, then [I found myself getting agitated] with mean 1.24, and the least behavior is [I found it hard to wind down] with mean 0.88, then [I felt that I was rather touchy] with mean 1.01. Next, the results for stress level showed that there are 78.5 % with normal level of stress, then 7.3% with mild level, then 5.2 % with moderate level.

Table 6: third domain stress

	N	Mean
[I found it hard to wind down]	96	.88
[I tended to over-react to situations]	96	1.22
[I felt that I was using a lot of nervous energy]	96	1.22
[I found myself getting agitated]	96	1.24
[I found it difficult to relax]	96	1.36
[I was intolerant of anything that kept me from getting on with what I was doing]	96	1.15
[I felt that I was rather touchy]	96	1.01
Valid N (listwise)	96	

Table 7: stress level categories

Level	Frequency	Percent
Normal	84	87.5
Mild	7	7.3
Moderate	5	5.2
Total	96	100

4.4 The association between depression, stress, anxiety, and academic performance

The results showed there is no significant association between depression with academic performance anxiety with academic performance, and stress with academic performance, where all p-value < 0.05.

Table 8: the association between depression, stress, anxiety, and academic performance

Variable	Statistics	p-value
Depression	-0.198	0.053
Anxiety	-0.117	0.256
Stress	-0.083	0.423

4.5 The association between depression, stress, anxiety, and demographic data

The results showed there is no significant association between depression, stress, anxiety, and demographic data (age, gender, financial status, and year of study), where p-value > 0.05

Table 9: the association between depression, stress, anxiety, and demographic data

Variable	Age		Gender		Financial status		Year of study	
	statistic	p-value	statistic	p-value	statistic	p-value	statistic	p-value
Depression	-0.015	0.886	0.042	0.683	0.034	0.739	0.048	0.640
Anxiety	-.006	0.958	0.107	0.298	-0.025	0.811	0.146	0.157
Stress	0.057	0.584	0.013	0.900	-0.030	0.771	0.162	0.114

4.6 The association between demographic data (age, gender, financial status, and year of study) and academic performance

The results showed there is no significant association between demographic data (age, gender, financial status, and year of study) with academic performance, where p-value > 0.05

Table 10: the association between demographic data (age, gender, financial status, and year of study) and academic performance

Variable	Statistics	p-value
Age	8.620	0.196
Gender	1.909	0.591
Financial status	7.362	0.289
Year of study	17.013	0.149

CHAPTER 5

DISCUSSION

5.1 Socio-demographic characteristics

The study relied on the fact that students in middle age are affected by many stressors like anxiety and depression, so the sample was chosen according to this criterion. The main aim of this study is to identify the correlation between different factors like anxiety, depression, and stress and their effect on the academic performance of selected age groups. The existing study included 96 participants with a higher percentage of the middle age between 21 to 24 years which are similar with research conducted in United Arab Emirates by Suheir in (2020). The majority of the respondents are female 52.1%, which are similar to the studies done by Alzahrani and his colleagues (2020), Iorga and his colleagues (2018), Bisson Iorga and his colleagues (2017), Abdul Lateef and his colleagues (2020). On the other hand, the majority of the respondents are third year 30.2% which are similar to the study done by Abdul Lateef and his colleagues (2020), Iorga and his colleagues (2018). The majority of the respondents their CGPA between 3.1 - 3.5 (39.6%) followed by 3.6 – 4 (29.2%), 2.5 – 3 (22.9%) and less than 2.5 (8.3%).

5.2 Association between the level of depression, stress and anxiety with academic performance

This study agrees with another study that anxiety is higher among academic students. The results showed that the anxiety level is severe with mean score = 7.1 as shown in table 5. The anxiety level is more severe than depression while the stress level is mild among the participant sample. A study conducted in (2018) by Khairunisa showed that, there is a strong positive correlation was found between anxiety level and academic achievement, the correlation indicates the more students felt anxious, the better the achievement in their academic. In the study of (Dawood1 et al., 2013), the results show that Students' academic performance has been observed to be influenced by several factors including anxiety. The main factor that they focused on is anxiety and found that anxiety could affect student academic performance. According to the Yerkes-Dodson Law, when the anxiety level has reached the optimal point, the performance would be declining. The state anxiety of the students in this study might be high. The association of anxiety on academic achievement could be inversing when the anxiety level of students was high or crossed the optimal point. In other words, Too much or too little pressure can lead to decreased performance. The more effort and concentration needed to ensure a student's academic achievement is performed well, the higher the level of anxiety they are experiencing. Also, a study conducted in Malaysia by Vitasari and his colleagues (2010). The results showed that there was a significant correlation between low academic performance among students and anxiety. Same as other studies, Edwin and

his colleagues (2017), Katherine (2017).

The level of depression in this study was moderate mild with mean score 6.7 as shown in table 3 .A study conducted by Sousa and his colleagues (2018), showed that poor academic performance could be associated with depression in students, although no correlation was found. Another study by Diaconescu and his colleagues(2016) showed that depression has correlation with low levels of academic performance. Another study by Reisbig and his colleagues (2012) showed that depression and anxiety negatively impacted students in the academic achievement. According to a study, depressive or anxious symptoms are frequently linked to lower academic self-efficacy, learning capacity, and learning motivation, which may have an impact on students' study progress and final academic results (Grotan et al. 2019). According to another study an individual's learning behaviour, motivation, and task completion may be impacted by negative emotions in daily life. (Flueckiger et al., 2014). According to another study as students' anxiety levels increased, their levels of depression also increased, which resulted in a decline in academic performance. Students who had high levels of anxiety also tended to have high levels of depression, which resulted in poor exam performance (Rahman et al., 2019). On the other hand, according to a study there was no empirical evidence found for the relationship between depression and academic performance (Yusoff et al., 2012).

The results showed that the stress level is mild with mean score 8.1 as shown in table 7. A study conducted by Spivey and his colleagues (2020) found that low academic performance is associated with high level of stress. Another study conducted in UPM by Elias and his colleagues (2011), found that there was a weak negative relationship between undergraduate students' stress level and their academic achievement. A study conducted by Khatake and his colleagues (2022) showed that high levels of stress could lead to poor academic performance among students. According to a study experiencing higher levels of stress during the examination period was found to be associated with poorer average grades (Crego & Diaz, 2015). A study conducted by Yusoff and his colleagues (2016) found that, higher levels of stress were connected with poorer average grades through lower exam-related self-efficacy. This is consistent with the inverted-U theory of stress in which stress is motivating and increases performance up to a certain point and then begins to impair performance. According to a study done by Frazier and her colleagues (2018) found that, stress was found to be positively correlated with performance at lower levels of stress, but negatively correlated with GPA at higher levels of stress, this is consistent with the inverted-U theory of stress in which stress is motivating and increases performance up to a certain point and then begins to impair performance.

5.3 Association between depression, stress, anxiety, and academic performance with socio-demographic characteristics

There is no significant association between demographic data (age, gender, financial status, and year of study) with academic performance but still, the effect was found and supported by many other different studies. The findings indicated that the level of depression is moderate (mean score = 6.7), and that the most frequent behavior among the participants is [I found it difficult to work up the initiative to do things] (1.08), followed by [I was unable to become enthusiastic about anything] (1.02), and that the least frequent behavior is [I felt that life had no purpose] (0.84), followed by [I felt I wasn't much of a person] (0.92). This study agrees with another study that anxiety is higher among academic students. The anxiety level is more severe than depression while the stress level is mild among the participant sample. In the study by Afolayan and his colleagues (2013) the results show that Students' academic performance has been observed to be influenced by several factors including anxiety. The main factor that they focused on is anxiety and found that anxiety could affect student academic performance., This study disagreed with the study (Ali & M, 2020) Student distress may affect the progress of their carrier, and adversely affect patient care quality, patient security, and dedication. Also a study conducted by Chandrashekhar (2015) showed that, stress was more likely to be present among students with lower monthly income than among those with higher monthly income.

Another study conducted at Universiti Kebangsaan Malaysia by Harlina and her colleagues (2014) showed that students with a high and severe stress level were observed to have higher CGPA. A study conducted by Pokhrel (2020) depression, anxiety, and was seen in students. Most of them were stressed with academic-related factors. depression was not found to be more frequent for female students compared to men. Another study showed that, Both male and female students were going through same level of depression (Rahman et al., 2019). Depression has always been found to be frequent in women (Bostanci et al., 2005).

CHAPTER 6

LIMITATION AND RECOMMENDATION

6.1 Limitation

The study has different limitations, the study not specific to a certain age or certain academic level, the study included different levels from level one academic students to level four. The study should be more specific to give certain results, which helps in the perspective research in the future. The study had a small sample size due to the short period in collecting the data. As a result, the findings may not apply to all the international student in UPM. Another limitation was that, to preserve anonymity, we had to rely on self-reported GPA for measuring academic performance.

The result showed that there's no significant relationship between the study variables and academic performance and this disagreed with the different studies that most of this study interpreted that the relation is significant and the academic performance affected by these variables and should be controlled to help in the academic performance enhancement. another problem found is in the research aspect, so far, the results of research conducted by lecturers are still normative and sometimes do not even touch the nature of the research itself.

There are no previous studies that relate the three different variables to academic performance but there is more than one study about every

variable with academic performance, this is another limitation of our study to relate the three variables in the same place with academic performance, the literature included different gathered information from different previous literature. Further studies should be done to make approval of the correlation.

6.2 Recommendation

6.2.1 Increase the awareness of the mental health

Misconceptions and stigma surrounding mental health issues often cause people to suffer in silence and not seek treatment for their illness. Mental health awareness is an important initiative to improve understanding of mental illness and increase access to health care for those who need it. When students responded to the questionnaire, the study indirectly raised awareness about the mental health.

6.2.2 Study different type of mental health issues

Study Anxiety disorders or bipolar disorder to help recognise early signs and risks of mental illness. It would also be beneficial to explore more predictive variables of academic performance. Because there was no significant correlation found between depression, stress anxiety and GPA, other possibilities should be explored.

6.2.3 Help the students how they deal with the stress factor, depression and anxiety

If a student is showing signs of depression and/or anxiety, engaging him/her in mental health services is encouraged. University faculty and staff, family, and friends may be especially aware of these issues, and could serve an important role in detecting at-risk students and encouraging them to seek out appropriate supportive services.

References

World Health Organization. (1948). *Mental health: Strengthening our response*. World Health Organization. from https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response

Kiekens, G., Hasking, P., Claes, L., Mortier, P., Auerbach, R. P., Boyes, M., Cuijpers, P., Demyttenaere, K., Green, J. G., Kessler, R. C., Nock, M. K., & Bruffaerts, R. (2018, April 26). *The DSM-5 nonsuicidal self-injury disorder among incoming college students: Prevalence and associations with 12-month mental disorders and suicidal thoughts and behaviors*. Wiley Online Library. from https://onlinelibrary.wiley.com/doi/abs/10.1002/da.22754

Koo, K., & Nyunt, G. (2020, August 1). *Culturally sensitive assessment of mental health for international students*. Wiley Online Library. from https://onlinelibrary.wiley.com/doi/10.1002/ss.20343

Linden, B., Boyes, R., & Stuart, H. (2021, March 25). *Cross-sectional trend analysis of the NCHA II survey data on Canadian post-secondary student mental health and wellbeing from 2013 to 2019 - BMC Public Health*. BioMed Central. from https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-021-10622-1

nguyen, M., le, tam, & meirmanov, serik. (2019). Depression, Acculturative Stress, and Social Connectedness among International University Students in Japan: A Statistical Investigation., from

https://doi.org/10.3390/su11030878

Dachew, Bifftu, Tiruneh, Anlay, Wassie , berihun. (2019). *Prevalence of mental distress and associated factors among university students in Ethiopia: A meta-analysis*. Journal of mental health (Abingdon, England). from https://pubmed.ncbi.nlm.nih.gov/31250685/

Mortier, P., Demyttenaere, K., Auerbach, R. P., Cuijpers, P., Green, J. G., Kiekens, G., Kessler, R. C., Nock, M. K., Zaslavsky, A. M., & Bruffaerts, R. (2017, September 28). *First onset of suicidal thoughts and behaviours in college*. Journal of Affective Disorders. from https://www.sciencedirect.com/science/article/pii/S0165032716309570

Minutillo, S., Cleary, M., P. Hills, A., & Visentin, D. (2020). *Mental Health Considerations for International Students*. Taylor & Francis. from https://www.tandfonline.com/doi/abs/10.1080/01612840.2020.1716123

Lei, X.-Y., Xiao, L.-M., Liu, Y.-N., & Li, Y.-M. (2016). *Prevalence of depression among Chinese University Students: A meta-analysis*. PLOS ONE. from https://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0153454

Ismail, A., & Kahwa, K. M. (2020). *Prevalence, associated factors, and help seeking behavior related to psychological distress among international students at Universiti Kebangsaan Malaysia*. Malaysian Journal of Public Health Medicine. from

https://mjphm.org/index.php/mjphm/article/view/478#:~:text=The%20overall%20prevalence%20of%20depression,association%20with%20depression%20and%20stress

Clough, B., Nazareth, S. M. N., & J. Day, J. (2018). *A comparison of mental health literacy, attitudes, and help-seeking intentions among domestic and international tertiary students*. Taylor & Francis. from https://www.tandfonline.com/doi/abs/10.1080/03069885.2018.1459473?journalCode=cbjg20

Kotera, Y., Ting, S.-H., & Neary, S. (2020, May 5). *Mental Health of Malaysian University Students: UK comparison, and relationship between negative mental health attitudes, self-compassion, and resilience - higher education*. SpringerLink. from https://link.springer.com/article/10.1007/s10734-020-00547-w

Ibrahim, A. (2019). *A systematic review of studies of depression prevalence in university students*. Journal of psychiatric research. from https://pubmed.ncbi.nlm.nih.gov/23260171/

Kokou-Kpolou, C., Jumageldinov, A., Park, S., Nieuviarts, N., Noorishad, P.-G., & Cénat, J. (2020). *Prevalence of depressive symptoms and associated* ... Prevalence of Depressive Symptoms and Associated Psychosocial Risk Factors among French University Students: the Moderating and Mediating Effects of Resilience. from https://pubmed.ncbi.nlm.nih.gov/32804341/

Malaysian Mental Healthcare Performance:Technical report 2016. (2021, October 20). *Mental health Malaysia statistics*. Indialdx. from https://indialdx.blogspot.com/2021/10/mental-health-malaysia-statistics.html

Adam, I. F., Muhayadin, N. A. M., & Yusof, N. (2020). *Analisis Faktor penyebab stres Dalam Kalangan Pelajar diploma geomatik politeknik Tuanku Sultanah Bahiyah*. Jurnal Dunia Pendidikan. from https://myjms.mohe.gov.my/index.php/jdpd/article/view/8306

Ma, J., & Zhao, K. (2018, February 3). *International student education in China: Characteristics, challenges, and future trends - higher education*. SpringerLink. from https://link.springer.com/article/10.1007/s10734-018-0235-4

Mohd Kamal, N. A., & Ismail, S. N. (2021). The Factors That Influence Stress Among Students Participating in the Co-Curricular Activity at Universiti Tun Hussein Onn Malaysia (UTHM). https://docs.microsoft.com/en-us/answers/topics/dotnet-csharp.html?page=223&pageSize=15&sort=active&filter=all

Lukman, K. (2019). *PREVALENCE OF STRESS AND ITS ASSOCIATED FACTORS AMONG MEDICAL STUDENTS IN SABAH, MALAYSIA BORNEO*. View of prevalence of stress and its associated factors among medical students in Sabah, Malaysia Borneo. from http://www.mjphm.org/index.php/mjphm/article/view/179/40

Kamal, N. A. M., & Ismail, S. N. (2021). *The factors that influence stress among students participating in the co-curricular activity at Universiti Tun Hussein Onn Malaysia (UTHM)*. Research in Management of Technology and Business. from https://publisher.uthm.edu.my/periodicals/index.php/rmtb/article/view/1887

Tung Li, C., Cao, J., & Li, T. (2016). *Eustress or distress: An empirical study of ... - github pages*. Eustress or Distress: An Empirical Study of Perceived Stress in Everyday College Life. from https://ubicomp-mental-health.github.io/papers/li-eustress.pdf

Choi, E. P. H., Hui, B. P. H., & Wan, E. Y. F. (2020, May 25). *Depression and anxiety in Hong Kong during COVID-19*. MDPI. from https://www.mdpi.com/1660-4601/17/10/3740

Yee, L. (2018). *PREVALENCE AND DETERMINANTS OF PERCEIVED STRESS AMONG UNDERGRADUATE STUDENTS IN A MALAYSIAN UNIVERSITY*. View of prevalence and determinants of perceived stress among undergraduate students in a Malaysian University. from http://ijie.um.edu.my/index.php/jummec/article/view/11016/7823

Quek , T., Tam, W., Tran, B., Zhang, M., & Zhang 8, Z. (2019). *The global prevalence of anxiety among medical students: A meta-analysis*. International journal of environmental research and public health. from https://pubmed.ncbi.nlm.nih.gov/31370266/

Runswick, O., Williams, M., Bezodis , N., & North, J. (2018). *The*

effects of anxiety and situation-specific context on perceptual-motor skill: A multi-level investigation. Psychological research. https://pubmed.ncbi.nlm.nih.gov/28337548/

Shadowen, N. L., Williamson, A. A., Guerra, N. G., Ammigan, R., & Drexler, M. L. (2019). Journal of International Students. from https://www.ojed.org/index.php/jis/article/view/277

Ogunsanya, M. E., Bamgbade, B. A., Thach, A. V., Sudhapalli, P., & Rascati, K. L. (2018, January 19). *Determinants of health-related quality of life in international graduate students*. Currents in Pharmacy Teaching and Learning. from https://www.sciencedirect.com/science/article/abs/pii/S187712971730028X?via%3Dihub

Ahmed, Z., & Julius, S. H. (2015). *Academic performance, resilience, depression, anxiety and stress among women college students*. Indian Journal of Positive Psychology. from http://www.i-scholar.in/index.php/ijpp/article/view/127155

Wani, G., & Ahmad, Z. (2017). *Mental health, depression, stress, anxiety and academic ...* MENTAL HEALTH. from https://www.researchgate.net/profile/Dr-Zaffar-Nadaf-2/publication/325755398_Mental_Health_Depression_Stress_Anxiety_and_Academic_Achievement_-

_A_Literature_Review/links/5b21fa65458515270fc6ef9d/Mental-Health-Depression-Stress-Anxiety-and-Academic-Achievement-A-Literature-Review.pdf

Kowalczyk, M., Karbownik, M. S., Kowalczyk, E., Sienkiewicz, M., & Talarowska, M. (2021, November 17). *Mental health of phd students at Polish universities-before the COVID-19 Outbreak*. MDPI. from https://www.mdpi.com/1660-4601/18/22/12068

Tus, J., Artiola, A., & Ramos, E. (2021). *(PDF) The new normal of education: Depression, anxiety, stress and academic performance of Tertiary students*. ResearchGate. from https://www.researchgate.net/publication/353598728_The_New_Normal_of_Education_Depression_Anxiety_Stress_and_Academic_Performance_of_Tertiary_Students

Awadalla, S., Davies, E. B., & Glazebrook, C. (2020, September 11). *A longitudinal cohort study to explore the relationship between depression, anxiety and academic performance among Emirati University students - BMC psychiatry*. BioMed Central. from https://bmcpsychiatry.biomedcentral.com/articles/10.1186/s12888-020-02854-z

Nayak, S., & Sahu, P. K. (2021). *Socio-demographic and educational*

factors associated with ... Socio-demographic. from https://www.researchgate.net/profile/Shivananda-Nayak/publication/349954306_Socio-demographic_and_educational_factors_associated_with_Depression_Anxiety_and_Stress_among_Health_Professions_students/links/6048f774a6fdcc4d3e55dc41/Socio-demographic-and-educational-factors-associated-with-Depression-Anxiety-and-Stress-among-Health-Professions-students.pdf

Marthoenis, M., & Meutia, I. (2018). *Prevalence of depression and anxiety among college students living in a disaster-prone region*. Taylor & Francis. from https://www.tandfonline.com/doi/abs/10.1016/j.ajme.2018.07.002

Abou Bakar Idrees, A. (2019). *Relationship between the demographic variables and prevalence of Depre*. Biomedical Journal of Scientific & Technical Research. from https://ideas.repec.org/a/abf/journl/v17y2019i4p12959-12961.html

Ali, S. M. A. H., El-Amin, M. A.-M. M., & Abdalla, W. A. M. (2017). *Influence of socio demographic factors on anxiety among third year student in AHFAD University*. Public Health Review: International Journal of Public Health Research. from https://publichealth.medresearch.in/index.php/ijphr/article/view/54

Lama, L. M. (2011, January 1). *[PDF] the relation of depression and anxiety in academic achievement among group of university students: Semantic scholar*. undefined. from https://www.semanticscholar.org/paper/The-relation-of-depression-and-anxiety-in-academic-Al-Qaisy/a02811a33ff33506ac31aa08fb02d3ef9389b662

Gao , W. G., Ping, S., & Liu 3, X. (2020). *Gender differences in depression, anxiety, and stress among college students: A longitudinal study from China*. Journal of affective disorders. from https://pubmed.ncbi.nlm.nih.gov/31818792/

Abasher, S., El-Amin, M., & Abdalla, W. (2017). *Influence of socio demographic factors on anxiety among ...* Influence of Socio Demographic Factors on Anxiety among Third Year Student in Ahfad University. from https://publichealth.medresearch.in/index.php/ijphr/article/view/54

Asturias, N., Andrew, S., & Boardman, G. (2021). *The influence of socio-demographic factors on stress and coping strategies among undergraduate nursing students*. Nurse education today. from https://pubmed.ncbi.nlm.nih.gov/33516979/#:~:text=Conclusion%3A%20This%20study%20has%20determined,and%20utilisation%20of%20coping%2

0strategies.

Iorga, M., Dondas, C., & Zugun-Eloae, C. (2018, August 3). *Depressed as freshmen, stressed as seniors: The relationship between depression, perceived stress and academic results among medical students*. Behavioral sciences (Basel, Switzerland). from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6115777/

Bhat, A. (2018). Quantitative Research: Definition, Methods, Types and Examples.

from https://www.questionpro.com/blog/quantitative-research/

Setia, M. S. (2016). *Methodology series module 3: Cross-sectional studies*. Indian journal of dermatology. from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4885177/

Rodrigues, I. B., Adachi, J. D., Beattie, K. A., & MacDermid, J. C. (2017, December 19). *Development and validation of a new tool to measure the facilitators, barriers and preferences to exercise in people with osteoporosis - BMC musculoskeletal disorders*. BioMed Central. from https://bmcmusculoskeletdisord.biomedcentral.com/articles/10.1186/s12891-017-1914-5

C, C., & Kotrlik, J. (2001). *Organizational research: Determining appropriate sample* ... Organizational. from https://www.opalco.com/wp-content/uploads/2014/10/Reading-Sample-Size1.pdf

l, J., Tejada, Joyce, & Raymond. (2012). *On the Misuse of Slovin's Formula, The Philippine Statistician* . On the misuse of Slovin's formula. from https://www.psai.ph/tps_details.php?id=26#:~:text=Abstract%3A,just%20about%20any%20sampling%20problem.

Wang, X. (2020). *Sample Size Estimation in clinical research: From randomized controlled trials to observational studies*. Chest. from https://pubmed.ncbi.nlm.nih.gov/32658647/

Chow, S.-C., Shao, J., Wang, H., & Lokhnygina, Y. (2017). *Sample size calculations in clinical research, Third edition*. Chapman and Hall/CRC.

Suresh, K., & Chandrashekara, S. (2012, January). *Sample size estimation and Power Analysis for Clinical Research Studies*. Journal of human reproductive sciences. from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3409926/

Stratton, S. (2021). *Population research: Convenience sampling strategies*. Population Research: Convenience Sampling Strategies. from https://www.cambridge.org/core/services/aop-cambridge-core/content/view/B0D519269C76DB5BFFBFB84ED7031267/S1049023X21000649a.pdf/population_research_convenience_sampling_strategies.pdf

Rodrigues, I. B., Adachi, J. D., Beattie, K. A., & MacDermid, J. C. (2017, December 19). *Development and validation of a new tool to measure the facilitators, barriers and preferences to exercise in people with osteoporosis - BMC musculoskeletal disorders*. BioMed Central. from https://bmcmusculoskeletdisord.biomedcentral.com/articles/10.1186/s12891-017-1914-5

Zamanzadeh, V., Ghahramanian, A., Rassouli, M., Abbaszadeh, A., Alavi-Majd, H., & Nikanfar, A.-R. (2015, June 1). *Design and implementation content validity study: Development of an instrument for measuring patient-centered communication*. Journal of caring sciences., from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4484991/

Katherine, H. (2017). *Abilene Christian University Digital Commons @ ACU*. The Effect of Anxiety and Depression on College Students' Academic P Academic Performance., from https://digitalcommons.acu.edu/cgi/viewcontent.cgi?article=1057&context=etd

Awadalla, S., Davies, B., & Glazebrook, C. (2020). A longitudinal cohort study to explore the relationship between depression, anxiety and academic performance among Emirati university students. from https://chrome.google.com/webstore/detail/mendeley-web-importer/dagcmkpagjlhakfdhnbomgmjdpkdklff

Dawood1, E., Al Ghadeer, H., Mitsu1, R., & Almutary, N. (2013).

Relationship between test anxiety and academic achievement among ... - ed. Relationship between Test Anxiety and Academic Achievement among Undergraduate Nursing Students . from https://files.eric.ed.gov/fulltext/EJ1089777.pdf

Ahmed, Z., & Julius, S. (2015, January 1). *Academic performance, resilience, depression, anxiety and stress among women college students: Semantic scholar*. undefined. from https://www.semanticscholar.org/paper/Academic-Performance%2C-Resilience%2C-Depression%2C-and-Ahmed-Julius/169675ef8ef040f43f800456545b5cbd4ddc7c81

Alzahrani, A., Hakami, A., & AlHadi, A. (2020). *Depression,stressandacademicperformanceinmedicalstudents:A Saudiperspective.* depression,stressandacademicperformanceinmedicalstudents:A Saudiperspective. from https://chrome.google.com/webstore/detail/mendeley-web-importer/dagcmkpagjlhakfdhnbomgmjdpkdklff

Bisson, K. (2017). *Abilene Christian University Digital Commons @ ACU*. The Effect of Anxiety and Depression on College Students' Academic P Academic Performance: Exploring Social Suppor formance: Exploring Social Support as a Moder t as a Moderator , from https://digitalcommons.acu.edu/cgi/viewcontent.cgi?article=1057&context=etd

Abdul Lateef , M., Auf, A., Shaikh, K., & Khan, N. (2020). Correlation between Academic Performance and Anxiety in Medical Students of Majmaah University – KSA. from https://jpma.org.pk/PdfDownload/9830

Vitasari, P., Wahab, M. N. A., Othman, A., Herawan, T., & Sinnadurai, S. K. (2010, December 23). The relationship between study anxiety and academic performance among engineering students. Procedia - Social and Behavioral Sciences. from https://www.sciencedirect.com/science/article/pii/S1877042810021725#:~:text=Anxiety%20is%20one%20of%20the,in%20exams%2C%20and%20on%20assignments.

Sousa, J., & Moreira, C. (2018). Google scholar. Anxiety, depression and academic performance. from https://scholar.google.com/

LV, D., & Al, M. (2016). Google scholar. The impact of anxiety and depression on academic performance in undergraduate medical students. from https://scholar.google.com/

Allison , R., & Jared , D. (2012). Google scholar. A study of depression and anxiety, general health, and academic performance in three cohorts of veterinary medical students. from https://scholar.google.com/

Edwin , C., & Mei, W. (2017). The influence of negative affect on test anxiety and academic performance. Retrieved August 24, 2022, from https://scholar.google.com/

Katherine, B. (2017). The effect of anxiety and depression on college

students' academic performance. Retrieved August 24, 2022, from https://scholar.google.com/

Spivey, C. A., Havrda, D., Stallworth, S., Renfro, C., & Chisholm-Burns, M. A. (2020, May 29). Longitudinal examination of perceived stress and academic performance of first-year student pharmacists. Currents in Pharmacy Teaching and Learning. Retrieved August 24, 2022, from https://www.sciencedirect.com/science/article/abs/pii/S1877129720301945

Elias, H., Ping, W. S., & Abdullah, M. C. (2011, December 17). Stress and academic achievement among undergraduate students in Universiti putra Malaysia. Procedia - Social and Behavioral Sciences.from https://www.sciencedirect.com/science/article/pii/S1877042811027492

Khatake, P., Twinkle, H., & Salgar, A. (n.d.). Stress among medical students and its impact on academic performance. Biomedicine.from https://biomedicineonline.org/index.php/home/article/view/1212

Chandrashekhar, S. (2015). Higher stress among minority and low-income populations can lead to health disparities, says report. American Psychological Association.from https://www.apa.org/news/press/releases/2018/01/stress-minority-income

Harlina, S. (2014). Google scholar. Stress and its association with the academic performance of undergraduate fourth year medical students at Universiti Kebangsaan Malaysia. Retrieved August 24, 2022, from

https://scholar.google.com/

Pokhrel, N. B., Khadayat, R., & Tulachan, P. (2020, June 15). Depression, anxiety, and burnout among medical students and residents of a medical school in Nepal: A cross-sectional study - BMC psychiatry. BioMed Central. Retrieved August 24, 2022, from https://bmcpsychiatry.biomedcentral.com/articles/10.1186/s12888-020-02645-6

Frazier, P., & Gabriel, A. (2018). *Understanding stress as an impediment to academic performance*. Taylor & Francis. Retrieved October 12, 2022, from https://www.tandfonline.com/doi/abs/10.1080/07448481.2018.1499649

APPENDIX

Appendix A: permission for instrument

Appendix B: Gantt Chart

Project	2021	2022								
	DEC	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	August	September
Identify the research problem										
Discussion with supervisor regarding the research title										
Review of the article for literature review										
Select an appropriate questionnaire										
Proposal presentation										
Submit proposal										
Obtain permission from the relevant party										
Conduct a pilot study										
Conduct the research and data collection										
Data analysis and discussion										
Thesis presentation										
Submit the research report										

Appendix C: Participant Information Sheet and Informed Consent Form

JAWATANKUASA ETIKA UNIVERSITI UNTUK PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,
SELANGOR, MALAYSIA

FORM 2.4: RESPONDENT'S INFORMATION SHEET AND INFORMED CONSENT FORM

Please read the following information carefully and do not hesitate to discuss any questions you may have with the researcher.

1. STUDY TITLE :

The association between depression, stress, anxiety, and academic performance among international students at Univesiti Putra Malaysia.

2. INTRODUCTION:

International student's mental health status can influence their whole life; thus, it becomes a hot topic to be discussed. The increase in the prevalence of depression, stress and anxiety among international university student can be a serious issue the world will face. Therefore, this study aims to determine the association between depression, stress, anxiety, and academic performance among international students.

Your participation in this study is voluntary. You do not have to be in this study if you do not want to. If you volunteer to be in this study, you may withdraw from it at any time. If you withdraw, any data collected from you up to your withdrawal will still be used for the study. Your refusal to participate or withdrawal will not affect any medical or health benefits to which you are otherwise entitled. Please take your time to read through and consider this information carefully before you decide if you are willing to participate. Ask the researcher if anything is unclear or if you like more information. You must sign this informed consent form

if you wish to participate in this research. If you need counselling services at UPM, please contact UPM COUNSELING DIVISION : +603 9769 2082. You can also contact the researcher if you would like to know your score on DASS.

3. WHAT WILL YOU HAVE TO DO?

You must answer all of the questions asked by the researcher honestly and completely. If your condition or circumstances change during the study, you must tell the researcher. As for your safety, you need to follow the instruction given to make sure the process is going well.

4. WHO SHOULD NOT PARTICIPATE IN THE STUDY?

Local studen at student at Univesiti Putra Malaysia. Anyone who refuses to participate in this study.

5. WHAT WILL BE THE BENEFITS OF THE STUDY:

(a) TO YOU AS THE SUBJECT?

The information that you provided regarding your mental health status is valuable and much appreciated. It has no direct benefits to the respondent, but it helps to understand the mental health status of international students and the impact on their academic performance. This participation is voluntary and will be no payment given to the respondent. Besides, this study is also conducted by an international undergraduate student, and it is a self-sponsor.

(b) TO THE INVESTIGATOR?

The information and data obtained from this study will allow the researcher to determine the association between depression, stress, anxiety, and academic performance among international students. Also, the findings from the study can suggest any improvement to be done and improve the quality of international students' mental health.

6. WHAT ARE THE POSSIBLE RISKS?

There are no risks and side effects when you participate in this study.

7. WILL THE INFORMATION THAT YOU PROVIDE AND YOUR IDENTITY REMAIN CONFIDENTIAL?

Yes. All information obtained from this study will be kept and handled confidentially. Your identity will not be revealed without your permission throughout the activities in this study including presentation and publication. However, anyone who is related to this study includes researcher, qualified monitors, auditors and governmental authorities will have the right to inspect and photocopy your related record when necessary. The information obtained will be treated as strictly confidential and the questionnaire will be kept in the researcher's Google Drive account after the submission. Besides that, the researcher's Google Drive account is only available to the researcher. Then, the data collected will be transferred to the computer to perform statistical analysis, hence, the computer will be protected a by password and all data will only be accessed by anyone related to this study which includes the researcher and the relevant authorities only

8. WHO SHOULD YOU CONTACT IF YOU HAVE ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH?

i. **Researcher**

Razan Mansour Alabdali

Contact no.: +60172404573

Email: raz.alsharif@gmail.com

ii. **Supervisor**

Ms.Parameseveary A/P L.Subramaniam

Contact no.: +603 9769 2429

Email:parameseveary@upm.edu.my

iii. Co-supervisor

PhD. Ruthpackiavathy A/P Rajen Durai

Contact no.: +603 9769 2429

Email:ruthpackiavaty@upm.edu.my

9. CONSENT

I …………………………………… Identity Card No. …………………………… address…………………………………………………………………………………………………...

…………………………………………………..hereby voluntarily agree to take part in the research stated above *(clinical /drug trial/video recording/ focus group/interview-based/ questionnaire-based).

I have been informed about the nature of the research in terms of methodology, possible adverse effects and complications (as written in the Respondent's Information Sheet). I understand that I have the right to withdraw from this research at any time without giving any reason whatsoever. I also understand that this study is confidential and all information provided with regard to my identity will remain private and confidential.

I* wish / do not wish to know the results related to my participation in the research

I agree/do not agree that the images/photos/video recordings/voice recordings related to me be used in any form of publication or presentation (if applicable)

* delete where necessary

Signature ……..………………………… Signature ……..……………………………
(Respondent) (Witness)

Date :……………………………………..….. Name :……………………………………..…..

I/C No. :……………………………………..…..

I confirm that I have explained to the respondent the nature and purpose of the above-mentioned research.

Date ……..………………………… Signature ……..……………………………
(Researcher)

Appendix D: Questionnaire

UNIVERSITI PUTRA MALAYSIA

FACULTY OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF NURSING

BACHELOR OF NURSING

RESEARCH TITLE:

ASSOCIATION BETWEEN DEPRESSION, STRESS, ANXIETY AND ACADEMIC PERFORMANCE AMONG INTERNATIONAL STUDENTS IN UNIVERSITI PUTRA MALAYSIA

QUESTIONNAIRE

RESEARCHER: RAZAN MANSOUR ALABDALI (199485)

SUPERVISOR: Ms.Paramesevary A/P L.Subramaniam

INSTRUCTION:

This study is conducted for academic purposes. All information will be kept private and confidential. Thank you for your cooperation in answering this questionnaire.

Part A: Socio-demographic Information

Instruction:

All the answers given are to complete your background information. Please answer each question appropriately by ticking (√) or writing down in the box or at the space provided respectively.

1. Age: [ ] 17-20 [ ] 21-24 [ ] 25 and above

2. Gender: [ ] Female [ ] Male

3. Financial status:

[ ] *Household income is* RM4,849 and below *per month*

[ ] *Household income between* RM4,850-RM10,959 *per month*

[ ] *Household income exceeds* RM10,960 per month

4. Year of study: [ ] Year 1 [ ] Year 2 [ ] Year 3 [ ] Year 4 [ ] Above 4

5. CGPA: [ ] below 2.5 [ ] 2.5-3.0 [ ] 3.1-3.5. [ ] 3.6-4.0

Part B: Depression, Anxiety and Stress Scale - 21 Items (DASS-21)

Instruction:
This questionnaire intends to to measure the emotional states of depression, anxiety and stress. Please read each statement below and choose the numbers 0,1,2 or 3 to describe your situation during the past week. There are no right or wrong answers. Don't take too long to answer any statements.

Scale	**0**	**1**	**2**	**3**
Response	Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree or a good part of time	Applied to me very much or most of the time

No.	**Question**	**0**	**1**	**2**	**3**
1	I found it hard to wind down				
2	I was aware of dryness of my mouth				
3	I couldn't seem to experience any positive feeling at all				
4	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)				
5	I found it difficult to work up the initiative to do things				
6	I tended to over-react to situations				
7	I experienced trembling (e.g. in the hands)				
8	I felt that I was using a lot of nervous energy				
9	I was worried about situations in which I might panic and make a fool of myself				

10	I felt that I had nothing to look forward to				
11	I found myself getting agitated				
12	I found it difficult to relax				
13	I felt down-hearted and blue				
14	I was intolerant of anything that kept me from getting on with what I was doing				
15	I felt I was close to panic				
16	I was unable to become enthusiastic about anything				
17	I felt I wasn't worth much as a person				
18	I felt that I was rather touchy				
19	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)				
20	I felt scared without any good reason				
21	I felt that life was meaningless				

THE END

Thank you for your cooperation

Appendix F: Turnitin Summary

RAZAN

ORIGINALITY REPORT

27%	22%	15%	16%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	hdl.handle.net Internet Source	3%
2	www.ncbi.nlm.nih.gov Internet Source	3%
3	bmcpsychiatry.biomedcentral.com Internet Source	1%
4	Submitted to Asia Pacific University College of Technology and Innovation (UCTI) Student Paper	1%
5	www.researchgate.net Internet Source	1%
6	Submitted to University of Nottingham Student Paper	1%
7	ijmrr.medresearch.in Internet Source	1%
8	digitalrepository.trincoll.edu Internet Source	1%
9	www.medrxiv.org Internet Source	1%