



**NEAR EAST UNIVERSITY  
INSTITUTE OF GRADUATE STUDIES  
DEPARTMENT OF PUBLIC HEALTH**

**DETERMINING THE ANXIETY LEVEL OF INTERNATIONAL NURSING  
STUDENTS DURING COVID-19 PANDEMIC**

**M.Sc. THESIS**

**TIJANI ABDULLATEEF**

**Nicosia**

**January, 2022**

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### Approval

We certify that we have read the thesis submitted by Tijani ABDULLATEEF titled “DETERMINING THE ANXIETY LEVEL OF INTERNATIONAL NURSING STUDENTS DURING COVID-19 PANDEMIC” and that in our combined opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Nursing specialized in public health (MSc Nursing).

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## DECLARATION

I hereby declare that all information, documents, analysis and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

Tijani Abdullateef

...../01/2022

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Tijani ABDULLATEEF

## **Abstract**

### **Determining the anxiety level of international nursing students during covid-19 pandemic**

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This study aims to analyze the anxiety level of International nursing students during the COVID-19 pandemic in Near East University (NEU), Northern Cyprus. University students are increasingly vulnerable to high levels of mental problems like stress, and depression, anxiety that affect their academic performance. the COVID-19 pandemic, there is an increase in the burden of mental health in this vulnerable population. This study used a cross-sectional and descriptive study. Data was collected using a self-administered Questionnaire and COVID-19 anxiety scale (CAS). Open-ended questionnaires were distributed to 320 International NEU nursing students via online survey for period between first week of April to first week of May 2021 to determine COVID-19 anxiety scale (CAS). Package for Social Sciences (SPSS) 26.0 is used. For analysis and evaluation. Mean $\pm$ , Standard deviation, Numbers(n), Percentages(%) were used. Pearsons correlation analysis test, and KruskalWallis. The study provided a maximum CAS score of 20 and a mean of 14,04 from the total study score, thirds of the students confronted coupled with anxiety (87.7%). Nigerian students in were most level of COVID-19 anxiety, related while females experience higher rates of anxiety compared to males. This showed that the COVID-19 pandemic had a significantly negative impact on the International students. Irrespective of the COVID-19 pandemic, it is imperative that universities and institutions have in place a system that takes into consideration the mental state of their students. Especially considering the fact that a positive and healthy mental status invariably results in academic success; This can be achieved through mental exercises and meditation and sessions that focuses on the mindset of the students coupled with counseling visits.

**Keywords:** covid-19; anxiety; pandemic; nursing student

## TÜRKÇE ÖZET

### **TIJANI ABDULLATEEF, Uluslararası hemşirelik öğrencilerinin covid-19 pandemisi sürecindeki kaygı düzeylerinin belirlenmesi**

Bu çalışma, Kuzey Kıbrıs'ta Yakın Doğu Üniversitesi'nde (YDÜ) COVID-19 pandemisi sırasında Uluslararası hemşirelik öğrencilerinin kaygı düzeylerinin belirlenmesi amacı ile yapılmıştır. COVID-19 pandemisi nedeniyle öğrenciler, akademik performanslarını etkileyen stres, depresyon, kaygı gibi sorunlara karşı karşıya gelmektedirler. Tanımlayıcı olarak yapılan bu çalışmada veriler kişisel bilgi formu ve COVID-19 kaygı ölçeği (CAS) kullanılarak toplanmıştır. Veriler Nisan2021-Mayıs 2021 arasında çevrimiçi anket yoluyla toplanmıştır (N=320). Verilerin istatistiksel analizinde, Statistical Package for the Social Science (SPSS) 26.0 paket programı kullanılmış ve aritmetik ortalama, sayı ve yüzdelik, Mann Whitney U testi ve Kruskal Wallis Varyans Analiz yöntemlerinden yararlanılmıştır. Çalışmada, maksimum 20 CAS puanı ve ortalama 14,04 sağladı, öğrencilerin üçte biri kaygı ile karşı karşıya kaldı (%87.7). Nijeryalı öğrencilerde en fazla COVID-19 kaygısı düzeyine sahipken, kadınlar erkeklere göre daha yüksek kaygı oranları yaşıyor. COVID-19 pandemisinin Uluslararası öğrenciler üzerinde önemli ölçüde olumsuz bir etkisi olduğunu gösterdi. COVID-19 pandemisinden bağımsız olarak, üniversitelerin öğrencilerinin ruh sağlığı butunluğunu dikkate alan bir sisteme sahip olmaları zorunludur.

**AnahtarKelimeler:** COVID-19; Kaygı; Pandemi; Hemşirelik öğrencisi



**LIST OF ABBREVIATIONS**

BMI	Body Mass Index
CAS	Corona Anxiety Scale
COVID-19	Corona Virus Disease 19
GAD-7	Generalized Anxiety Disorder Scale
HHT	Human and to human
MERS	Middle East Respiratory Syndrome
NEU	Near east university
PTSD	Post-traumatic stress disorders
SARS	Severe acute respiratory syndrome
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
SPSS	Statistics Packages for Social Students
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization
ACHA	American College Health
ADAA	Anxiety and Depression Association of America
CBT	Cognitive Behavioral Therapy
CCMH	Center for Collegiate Mental Health
CTRS	Certified Therapeutic Recreation Specialist
GAD	Generalized Anxiety Disorder
NCTRC	National Council of Therapeutic Recreation Certification
NIH	National Institute of Mental Health
OCD	Obsessive Compulsive Disorder
PTSD	Post-Traumatic Stress Disorder

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## CHAPTER 1

### INTRODUCTION

#### 1. BACKGROUND

The Corona Virus Disease 19 (COVID-19) is the most terrible pandemic to ever hit the world in the new millennium. The first incidence was discovered in December, 2019 in Wuhan, China and the viral infection is known to originate from the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This pandemic outbreak is a devastating catastrophe that has proliferated rapidly across the entire world. On January 30<sup>th</sup> 2020, the World Health Organization (WHO) declared COVID-19 as a public health emergency as a result of the rapid rate at which it was spreading. This spread was so rapid that by April, 2020 the number of positive occurrences recorded as almost 3 million with confirmed fatalities of about 200,000 (WHO, 2020). There was a drastic increase in this number by June 7<sup>th</sup>, 2020 as it more than doubled to 6.91 million positive cases with 400,000 deaths and as of October 20<sup>th</sup>, 2020 the number erupted as close to 40 million positive cases were recorded worldwide (WHO, 2020).

Due to this staggering figure with regards to the number of new cases being discovered, the World Health Organization officially declared COVID-19 as a pandemic; especially after also considering the high susceptibility of the population to the infection proven by the enormous number of secondary cases springing from one primary case (Viner et. al., 2020). This declaration which was made on March 12<sup>th</sup>, 2020 instigated lots of countries to implement stringent anti-epidemic steps to curb the dissemination of the highly communicable infections from human-to-human. Some of the steps taken includes limitation of travelling for International nationals (Zhai et. al., 2020), shutting down shared public spaces, and closing down the whole transit system (Ahmed and Chen et. al., 2020). There was an embargo placed on celebrations, severely infected persons were attended to in hospitals while the less severe patients were quarantined in centers allocated in every country. With the identification of the first index case on March 9<sup>th</sup>, the Northern Cyprus government decided to carry out several comprehensive

initiatives to control the spread of COVID-19 disease. As it was the case for many other countries, this meant a partial lockdown and all public employees, who do not have a critical function, were asked to stay at home and strongly encouraged to work from home. Educational institutions at all levels including day-care were closed to prevent an overwhelming of the health system (Serakinci, et al., 2020).

It is worthy to note that these same steps have been used previously during the H1N1 pandemic (Sakaguchi et. al., 2009) and also during the SARS infections (Reis, 2006) and was effective in controlling the spread of the virus. These measures were paramount despite the negative repercussions it had on communities and individuals as the economic and social aspects of life was affected coupled with the adverse effect on the psychological health (WHO, 2020)

A statistical analysis by McCarthy evaluated that as of April 2020, COVID-19 had affected more than 300 million students globally which resulted in lots of schools and colleges adopting distance learning. The mental health of students was affected negatively as the unusual verdict of ‘stay at home’ measure was enforced under lockdown; this placed some gloom over their academic and professional goals. A typical example is the link between longer time of quarantine after the severe acute respiratory syndrome (SARS) and the resulting high widespread presence of anxiety and depression among people as depicted by a Canadian study (Hawryluck et. al., 2004). A significant increase in the number of mental health cases such as anxiety, depression, sleep disorder fear and stress has been recorded since the onset of the COVID-19 pandemic indicating that the virus has initiated a range of psycho-emotional chaotic situation in many countries (Gritsenko et. al., 2020). This anomaly in the psycho-emotional state of the citizens has also led to an increase in the use of drugs and suicidal practices (Mamum et. al., 2020). Due to the fact that the academic dreams and aspirations of students coupled with their social lives have been jeopardized by COVID-19, they are considered as the people worse affected by the virus amongst the whole population (Aristovnik et. al., 2020). Students have always been vulnerable to psychosomatic problems, anxiety, depressive moods and suicidal urges even before the onset of the pandemic (Holm-Hadulla et. al., 2015) and the COVID-19 outbreak has further worsened the already fragile psychological state of the students. Due to this unstable state of the students, it is obvious that they might require extra means to address the mental and physical health impacts of the disease. The ability to decipher the effects of COVID-19 on students by the university executives will aid them in addressing its negative psychological impacts on the students and

assist with recuperation and renewed focus and drive in the student in order for then to attain academic excellence. It is important to understand these impacts early enough and address it before it escalates and become more difficult to address (Stieger et. al. 2020).

It is a known fact that an epidemic not only result to infection and death of a populace but also affects the psychological state of the citizens worldwide tremendously (Bai et. al., 2004). The long- and short-term impacts of an epidemic on the psycho-social well-being of the population have been researched and analyzed by different studies. (Aassve et. al., 2020). Part of the long-term effect is the fact that persons who test positive for the disease and are eventually treated and cured continue to be stigmatized despite their recovery from the disease (Jeong et. al., 2016) and also there is a psychological stress for those placed under quarantine as they experience infection fears, limited supplies, frustration, financial loss, insufficient communication and stigma. There is also an expectation by (Brooks et. al., 2020) that there will be a sporadic post-traumatic stress symptoms like anger and confusion. Emphasis have been placed on the psychological responses to COVID-19 by health care providers and this is because they have discovered that the damage done by the negative psychological impacts of the virus on humans is lasting and destructive (Maaravi et. al., 2020). This is evident by the development and validation of tools for assessing the psychological responses with regards to COVID-19 (Ahorsu et. al., 2020).

The cultural variances of students across the globe pays a significant role in the resulting psychological effects of the virus on the students as the different culture is a major determinant of how the students will respond psychologically to COVID-19. Also, the different levels of COVID-19 in each country leads to different levels of psychological impacts. This is particularly important especially with regards to administering psycho-therapy to students affected by COVID-19 as different approaches are required for different countries and cultures. The learning of more than one billion students have been hampered by the pandemic in 129 countries worldwide (UNESCO, 2020). There was a transition to virtual classes due to the closure of universities and schools; this was necessary as there was need continue teaching the students despite the restrictions placed on movement. It was expected that classes were taken in students' residences and considering that these measures taken were unprecedented and impromptu in North Cyprus, psychological difficulties for the students were expected. It is inevitable that students would have experienced enormous pressures due to the fear of being infected or losing family members and relations to the virus while having to swiftly adapt to the new standard of

teaching and assessment processes. There was need to pay attention to the students' psychological well-being while testing, planning and implementing the new learning standards. This is to ensure that steps are taken to assist students get used to the new methods adopted.

As it stands there is no known research with regards to anxiety as a result of COVID-19 pandemic among the students in North Cyprus, therefore this research is aimed at assessing the anxiety levels amongst the students amidst the pandemic with the goal of spotting the risk factors of COVID-19 related anxiety and also pin point some safety measures to get through with the anxiety. The information derived from the results can be useful in making effective psychological interventions which will go a long way to ameliorate the mental health of the Nursing students in Near East University during the pandemic and lead to better academic outcomes.

## **1.2 STATEMENT OF THE PROBLEM**

The sudden surge of covid-19 occurred at the time spring is at its peak and towards summer, the period during which the heavy human traffic contributed to the rapid spread of the virus across the world especially considering the fact the virus can be spread easily through droplets therefore, this spread can be exacerbated due to the crowded situation.

Immediately, a case was reported in Northern Cyprus, lockdown and quarantine measures were implemented from March to May, 2020 in an attempt to check the large-scale global spread of this pandemic (Lancet, 2020)

The outbreak of the pandemic impacted all facets of life in all societies, particularly the mental health (anxiety) of the Northern Cyprus resident particularly the International students. This sudden public health incidents have the tendency to affect one's mental health. Adults are more likely to suffer from adverse mental health symptoms such as anxiety (Guan et al., 2020) with International students in Northern Cyprus, especially the ones from middle class home mostly affected. The residents of North Cyprus went through a long period of quarantine during the COVID-19 and might have experienced various levels of anxiety and powerlessness as well as other negative trauma. The following problems are the reason why this study is necessary.

### **1.3 PURPOSE OF THE STUDY**

To identify the effect of Covid-19 pandemic on international students in Near East University

To find out the level of anxiety and how it affect students' performance academically

To identify the types and challenges faced by international students psychologically duringCovid-19

### **1.4 RESEARCH QUESTIONS**

This research aims to answer questions related to anxiety caused by the COVID-19 pandemic and the effect it has on the International students of Near East University. The determination of the anxiety level amongst the students will help understand the measures to take in order to curtail the situation early enough. The research questions include:

- A. What is the anxiety level of nursing students during Covid-19 pandemic?
- B. Is there any correlation between anxiety level and quality of life of nursing students?

### **1.5 SIGNIFICANCE OF THE RESEARCH**

The research is design to investigate and analyze the anxiety level of International nursing students during the COVID-19 pandemic in Near East University (NEU), and to examine the vulnerability levels of mental problems like stress, depression, anxiety and its effects on students academic performance.

### **1.6 LIMITATIONS**

The major limitation to this study was is that the study is limited to nursing International students in Near East University. It was difficult to communicate with the native Turkish Cypriot and students from Turkey due to the language barrier. Hopefully future studies will improve on this limitation



## CHAPTER 2

### GENERAL INFORMATION

#### 2.1 Overview of Corona Virus Disease (COVID-19)

Covid19 belongs to a family of coronaviruses such as severe acute respiratory syndrome (SARS) and Middle East Respiratory Syndrome (MERS). Covid19 just like SARS and MERS are viruses that attack the respiratory system (especially the lungs) and has capacity to cause severe health complications (like Pneumonia) to people with low levels of immunity and other vulnerable groups. Another name for COVID19 is severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), originating from a zoonotic transmission of the SARS-CoV-2 virus from animals to humans in China's Wuhan city (Touma, 2020), and then from human and to human (HHT). Due to mystery behind the emergence, transmission and valid information about COVID19, the resulting consequence on the world was a rapidly spreading SARS-CoV-2 virus of great unpredictability in terms of the nature, pathology, prognosis, as well as the interventions needed to prevent transmission and further spread of the virus (Isa et al., 2022).

The SARS-CoV-2 virus that causes COVID19 is extremely contagious and has the ability to infect humans of all ages and gender (Touma, 2020). The primary transmission is through contact with infected respiratory fluids (such as fluids from cough, sneeze, speak, sing or breathe) of infected persons, and these fluids are can range from micro droplets to larger spit, mucus or aerosols (WHO, 2020). Once infected by the SARS-CoV-2 virus, it takes within 2-14 days for symptoms to begin to manifest, and within two days after infection with SARS-CoV-2 virus, a person is most contagious.

The manifestation of COVID19 after a human is infected varies within a range of clinical symptoms. What it means is that, there are a collection of symptoms associated with COVID19 from which infected individuals may exhibit some or none at all (John Hopskin Medicine, 2021). The most accurate way to know if an individual is affected with the SARS-CoV-2 virus is through testing. Generally, the symptoms of COVID19 according to the world health organization (WHO, 2020) include the following; dry cough, fever, difficulty breathing, body

aches, sore throat, new loss of taste and or smell, diarrhea, headache, new fatigue, vomiting, and runny nose.

In general, COVID19 has no cure as of present but clinical symptoms can be managed until immune's defense to full recovery. Majority of infected persons exhibit mild to moderate symptoms in the form of respiratory problems, however, depending on the strength of their immune system, they can recover from their symptoms even without any medical interventions. Unfortunately, people with lower levels of immunity may exhibit more serious symptoms and may require extensive medical intervention. In some cases, however, COVID-19 can lead to respiratory failure, lasting lung and heart muscle damage, nervous system problems, kidney failure or death. (John Hopskin Medicine, 2021)

## **2.2. Prevention and Intervention Measures**

Although the SARS-CoV-2 virus is highly contagious in more ways than one can imagine, the risk of contracting the virus is widely available. As mentioned earlier, COVID19 know no age or gender, meaning anyone one can contract the SARS-CoV-2 virus and can possibly die from it. Ultimately being well aware of COVID19 and the virus that cause it, and the various prevention measures is the cornerstone of contracting the illness (WHO, 2020). This will not only cut the transmission line from animal to human, and human to human, and prevent future transmission (especially among vulnerable and susceptible persons). One of the very popular prevention measures is the physical distancing (not social distancing) at least one meter from other people to prevent exposure from infected fluids from other's mouth and nasal passages. With this measure is other popular measures including wearing face masks, frequent and proper hand (and general) health hygiene by using water to wash and alcohol-based sanitizers to kill the virus before making contact with the various channels of mucous membranes such as mouth, nose, and eyelids.

In general, the prevention and intervention arresting the menace of COVID19 lies in proper strategies targeted at on time diagnosis by testing, isolation, contact tracing and disease surveillance, and proper treatments available to all from individuals, local and state governments, national and international levels of governments. No prevention or intervention measure can work properly except with adequate availability of healthcare resources. Emergency alert

especially in COVID19 surveillance in all tiers of government to prevent and manage the spread of infectious diseases and subsequently mitigating the effect not only in healthcare, but in other facets of life such as economy and social facets. Extensive research and exchange of vital data among medical workers and other professionals about COVID19 and its pandemic effects to continue to detect new variants, update new symptom and prevention guidance, as well as treatment update (Touma, 2020). Vaccines have been developed as prevention measures to prevent COVID19 infection, but it was later found that these vaccines do not guarantee infection or even death, but they can significantly reduce the clinical complications especially among vulnerable groups.

### **2.3 covid-19 and Social Life**

Any pandemic disturbs the normal daily lives of humans. The latest that caused unprecedented changes in the daily lives of humans is the COVID19 pandemic that started in 2019 (Isa et al., 2022) and is still going strong in 2022. In the early stage of the pandemic, lockdown and travel restrictions which saw people confined to their houses without any significant activities of social life. Wilder-Smith and Freedman (2020) discussed that, because of the physical (not social distancing) and lockdown, people were confined to two meters from each other outside their houses.

The world social distancing is not the right term to use in curbing contact between person, rather physical distance is the appropriate terms that embodies what is intended. The world health organization (WHO) recommended the physical distancing as the right term since it better embodies the intention of the prevention guidelines, as physical distancing entails at least two meters of physical distance should be physical maintained why social relationships should be encouraged (WHO, 2020). Nevertheless, according to Markel et al. (2007) physical distancing still severe the bond of social life between persons in the sense that there is no physical relationships which social interactions through online medium is not enough to maintain social life. Over the years, research proved the significance of social life in human wellbeing (Maslow, 1943; Baumeister & Leary, 1995; Ryan & Deci, 2000; Diener & Seligman, 2002; Cacioppo&Cacioppo, 2018). Thus, the resultant effect of the pandemic is not only on health and

economy, but also includes the social life of persons. The world happiness report of 2021 shows that the potential negative consequences to well-being posed by COVID-19 and its sequelae, was very high raising questions on how to prevent and maintain the social effect (Okabe-Miyamoto and Lyubomirsky, 2021). The effect of COVID19 on social life includes social isolation, stress, depression, anxiety, and other mental problems.

#### **2.4. COVID 19 and Anxiety**

Anxiety is one of the mental problems that was triggered or increased by COVID19 pandemic. As mentioned earlier, the pandemic affected all facets of life requiring people to self-quarantine, isolate, or participate in general nationwide lockdowns (in other words, confined to their respective homes), in effort to increase contact tracing and curb the spread of the SARS-CoV-2 virus. As a result, there was side and extensive report on the impact on social life that gave rise to several mental problems and other psychological issues such as stress, frustration, and depression (Chaturvedi et al., 2021). Previous studies also reveal the effect of quarantining especially for long periods of time results in not only temporary mental problems, but also long-lasting ones which is important for governments to put in mind when measures are being enforced on people (Brooks et al., 2020.) who the measures are meant to protect anyway.

In more details, the disruption in social life affects people's daily routines significantly especially the inability to have physical social interactions/relations through outdoor activities, hence social life routines such as sleeping patterns were affected which are precursors for mental issues such as anxiety disorder. In order to determine the level of mental issues related to COVID19 pandemic, Cao et al. (2020) utilized a seven-item Generalized Anxiety Disorder Scale (GAD-7) as an investigative tool to evaluate mental issues such as anxiety disorders, panic disorders, and social phobia. Some of the approaches to deal with these measures according to Ye et al. (2020) include the social support from relevant sources, self-resilience, and coping mechanism.

## **2.5. Covid and Academic Activities**

When there is a total lockdown in not only national level, but international level, all sectors of life are affected. Education sector and academic activities were affected since education that usually requires physical and social interaction between students and lecturers was abruptly prohibited. Despite educational institutions being closed, alternative academic approach from physical academic activities transitioned to online learning (Kapasia et al. 2020), with significant efforts from digital giants like google meets, Zoom, and other digital mediums for educational purposes. A decade before the pandemic, Cook (2009) in a meta-analysis on online education (e-learning), stated that “online learning is better than nothing and similar to conventional learning”. Meaning, the same problems encountered during conventional face to face (or physical learning) is faced in online education and in fact, sometimes these problems are experienced more by students and teachers alike in the presence of isolation and other disruption in social life (such as that brought about by the COVID19 pandemic).

Some of the problems of online learning include less interaction between students and between teachers which affect learning process, increased academic workload, less real time participation, dropouts, and many more problems. Additionally, there are several millions of students that have no access to technology and internet connectivity which are two important prerequisites to online learning. In fact, Lee (2020) reported that about 1.5 billion students across the world are now deprived of basic education. The pandemic affected all spheres of life simultaneously with a domino-like effect. Family incomes were reduced which reduces the purchasing power of obtaining technological devices and obtaining internet services that are required for their children’s participation in online education environment. However, governments have created guidelines to aid schools to on improving the online learning environments and motivate students to continue with their academic activities (Aucejo et al. 2020).

## **2.6. Covid-19 Related Anxiety Among Students During the Pandemic**

The effect of COVID-19 has been severely felt by students all over the world. The government and local authorities in North Cyprus immediately shut down academic institutions due to fear of infection so they can try to search for survival techniques to cope with the crisis. Little attention

has been paid however to techniques for coping during the COVID-19 pandemic and with regards to techniques for managing the pandemic by university students, very few measures were taken especially as it concerns shutting down their institutions.

Most of the previous researches focused more on the effects of SARS on the anxiety levels of the students and only few of them analyzed the effect felt by students on as a result of COVID-19.

As a result of the depression amongst students due to COVID-19 pandemic, so many risk factors have emerged for example, the tendency for females to develop depression related symptoms are higher in comparison to their male counterparts (Lei et al. 2020). Another study discovered that participants from age group less than or equal to 40 years displayed more depressive symptoms (Ahmed et al., 2020). Another risk factor discovered was the status of the student which was responsible for bringing about depressive symptoms when compared to other occupational statuses like employment and retirement (Gonzalez et al., 2020). Lower education levels were also spotted as an accompanying factor with more depressive symptoms (Gao et al., 2020).

According to Wang et al., 2020, more depressive symptom was noticed in persons with higher education and professional jobs when juxtaposed against individuals who are less educated and persons in the enterprise or service companies. Out of 19 researches, 11 of them were assessed for anxiety symptoms and there was a significant difference in the prevalence of the anxiety symptoms which ranged from 6.33% to 50.9% (Ahmed et al., 2020). There is a close relationship between anxiety and depression (Choi et al., 2020) and also symptoms predictable for depression are also reported in symptoms of anxiety especially in younger age groups 40 years and under poor self-rated health, high loneliness, female gender, and the presence of chronic illness (Ahmed et al., 2020). Students were also found to display symptoms of anxiety when exposed more to social media or news information related to COVID-19 (Gao et al., 2020). One study proposed that the marital status of the students was also a determinant of the anxiety levels with regards to COVID-19 as it was noticed the married participants had higher level of anxiety when compared to unmarried participants. Another generalized study discovered that divorced/widowed participants experienced more anxiety symptoms in comparison to single or married persons (Lei et al., 2020). Also, anxiety symptoms from COVID-19 was linked with prolonged quarantine period and also a history of contact with a COVID-positive patient or object was seen to lead to more serious anxiety symptoms as noted in one study (Moghanibashi-Mansourieh, 2020). Post-traumatic stress disorders (PTSD) resulting from COVID-19 was also

studied amongst students and it was found that related rates of prevalence were reported by Zhang and Ma (2020) and N. Liu et al. (2020) which recorded a close outcome of 7.6% and 7% respectively. Irrespective of the fact that the same measurement scales Zhang and Ma (2020) employed were used by Wang et al., (2020), significantly different results were noticed with 53.8% of the total participants recording moderate-to-severe psychological impact. 15.8% of participants with PTSD symptoms were noted by Gonzalez et al., (2020). The female gender with relation to COVID-19 was also studied in depth as by four different researches and three out of the four studies recorded that the female gender was more likely to develop symptoms of PTSD after measurements were carried out on the traumatic effects of COVID-19 on students. This was opposed by a study carried out by Zhang and Ma (2020) where they found out that there was no remarkable difference in the PTSD measurements between males and females. Loneliness, poor sleep quality and status have also been discovered to be another risk factor to COVID-19 related anxiety amongst students. Some criteria that had no correlation with the measurement scores were Body Mass Index (BMI), age and levels of education of the students (Zhang and Ma, 2020). There was also a study which took an incisive look at non-specific psychological distress; three researches were made on this and one of the study recorded a symptomatic rate of psychological distress at 38% (Moccia et al., 2020), the second study carried out by Qiu et al. (2020) reported a rate of prevalence as 34.43% while the third study by Wang et al. (2020) outlined the predisposing factors for higher psychological distress symptoms as he proposed that the persons most likely to come down with psychological distress were the people of younger age and the female gender.

Researchers have been able to determine the predictability of psychological distress using personality traits. A typical example is that the tendency of a person to express psychological outcomes is dependent on the coping style of the individual. He/she will show symptoms of psychological distress if the coping style is negative and will be less likely to display these symptoms if they have the ability to cope effectively with changing scenarios (Wang et al., 2020).

Four different studies examined and reported the potency of the overall stress; and this was recorded to vary between 8.1% to over 81.9% (Wang et al., 2020). Higher level of stress is usually reported in females and the younger age group compared to males and the elderly. The

status of the student is another factor that can predict the intensity of the stress level (Wang et al., 2020).

Separate previous researches analyzing the effect of COVID-19 on the anxiety level of International students in different countries discovered that the psychological outcomes were moderate but higher than the normal trend as anxiety symptoms ranged from 6.33% to 18.7%, symptoms of depression ranged from 14.6% to 32.8%, stress symptoms recorded at 27.2% and PTSD recorded at approximately 7% (Liu et al., 2020). More severe psychiatric symptoms were recorded for the female students and students of younger age group. There was a correlation between the prompt releases of up to date and precise COVID-19 related health information from the authorities and the level of anxiety amongst the student population as it was lower. Stress and depressive symptoms also dropped drastically when the students were accurately informed (Wang et al., 2020). Preventive measures such as mask-wearing, continuous hand washing, and reduced person-to-person contact that reduced the risk of becoming infected also foretold lower psychological distress levels (Moccia et al., 2020). The mental health status of International students and its anticipating factors were explored by popular reviews amid the COVID-19 pandemic. Some of these reviews proposed that the prevalence of symptoms related to unfavorable psychiatric result is higher amongst the students in comparison to the prevalence prior to the pandemic (Huang et al., 2019). These variations with regards to the rate of prevalence were spotted and could have sprouted from the different scales of measurements and varying patterns of reporting. A typical example is the pattern of reporting by some studies where participants with outcomes above the cut-off mark (mild to severe) were reported while the only other inclusions were participants with moderate to severe symptoms (Moghanibashi-Mansourieh, 2020). There was a difference in the students' psychological health with respect to the regions during a large outbreak as a result of different degrees of severity in the outbreaks, the proactivity of the government, presence of medical facilities/supplies, and proper awareness creation through dissemination of information related to COVID-19. The stage of the outbreak was also a factor in determining the psychological response of the students in different regions. It was observed that at the beginning of the outbreak symptoms were more prominent when the compulsory quarantine was in effect (Ho et al., 2020).



The period of the psychiatric symptoms should be considered when analyzing the psychological effects caused by coronavirus outbreak on students due to the fact that the critical psychological responses to traumatic occurrences are sometimes protective (Yaribeygi et al., 2017).

The anxiety and stress concerning the outbreak compels students to come up with preventive measures to protect themselves. The studies revealed several predictive factors such as the fact that the vulnerability of female students to develop symptoms of different forms of mental disorders during the pandemic is higher and they include anxiety, depression, stress and PTSD (Ahmed et al., 2020). Older students particularly above 35 years also displayed adverse psychological symptoms during the pandemic (Ahmed et al., 2020). The number of students who experience more emotional distress as a result of closure of schools, dissolution of social events, reduced efficiency in study with controlled online courses and procrastination of exams are enormous (Cao et al., 2020). The fact that depressive symptoms and PTSD symptoms was closely related to the status of the students was in agreement with a study carried out by Lei et al., 2020. Student who had a history of psychiatric illness and chronic disease displayed more symptoms of anxiety and stress (Mazza et al., 2020). Due to the pre-existing conditions of anxiety and chronic disease the rate at which the students are affected by the coronavirus infection is influenced with regards to their susceptibility to the infection and this stems from the fact that their immunity is compromised and this in turn leads to a higher rate of mortality (Sawalha et al., 2020). Higher death rate has also been reported in students who suffer from diabetes, hypertension and other coronary heart disease leading to fear and uncertainty in those with chronic conditions.

The constant exposure to social media and news related to COVID-19 as a reason for anxiety and stress symptoms was identified by various studies (Gao et al., 2020). The tendency for increased anxiety is further strengthened by the constant exposure to fake news and reports; this is particularly common especially considering the fact that not too much is known about the corona virus leading to avoidable fears and anxiety (Erku et al., 2020). The constant sight of fellow students suffering from COVID-19 through social media platforms or news reports also results in sadness and feelings of anxiety (Lei et al., 2020). The economic status of the students is also another important factor that directly affects the mental status or anxiety level of the students with regards to their perception of COVID-19 pandemic.

There has been a significant decrease in the demand for goods and services coupled with an adverse effect on the local businesses and industries as a result of the coronavirus outbreak. Also, the stay-at-home order rigidly imposed by the authorities has also affected activities that would otherwise have benefitted the students (Nicola et al., 2020). Students can display adverse psychological symptoms as a result of the decrease in the quality of life especially with regards to the restrictions that have been imposed as a result of the COVID-19 pandemic (Ng et al., 2013).

The general consensus by the researchers is that COVID-19 indeed has a significant effect on the anxiety level of students and the scale of anxiety is determined by some underlying factors which has to do with the status of the student. Since these factors vary for different students, the resultant anxiety effect for each student vary in intensity.

Although previous researches have analyzed the effect of COVID-19 on the anxiety level of students in different countries, none of the studies have not been specific to nursing students. This research will seek to concentrate more on the nursing students especially considering the fact that the nursing profession exposes the nurses to handling patients with COVID-19 and the prospect that one day the student nurse will have to face this reality is enough to cause anxiety on a larger scale compared to other students.

## **2.7 Human Anxiety**

Anxiety is therefore one of a range of emotions that serves the positive function of alerting us to things we might need to worry about: things that are potentially harmful. More importantly, these emotions help us to evaluate potential threats and respond to them in an appropriate way, perhaps by quickening our reflexes or focusing our attention. Fear, like anxiety, is a familiar emotion precisely because it is part of everyone's experience and we consider it an essential component of our humanity, yet it is also a psychological, physiological and behavioral state we share with animals when confronted by a threat to our wellbeing or survival. Fear increases the body's arousal, expectancy, and neurobiological activity, and triggers specific behavior patterns designed to help us cope with an adverse or unexpected situation. But how do we distinguish anxiety from fear, given that the two are often used interchangeably?

While fear often has a specific, immediate context which provokes classic ‘fight or flight’ reflexes - the automatic fear response occurs faster than conscious thought, releasing surges of adrenaline which can subside quickly once the perceived or actual threat has passed—anxiety connotes lingering apprehension, a chronic sense of worry, tension or dread, the sources of which may be unclear. It can be a vague, unpleasant emotion experienced in anticipation of some ill-defined misfortune. The committee charged with reviewing the diagnostic criteria for the latest version of the Diagnostic and Statistical Manual of Mental Disorders (DSM) similarly distinguish anxiety as “a future-oriented mood state associated with preparation for possible, upcoming negative events” from fear which “is an alarm response to present or imminent danger (real or perceived)”; but add “importantly, these descriptions represent prototypes of fear and anxiety that lie at different places upon a continuum of responding. Along such a continuum, symptoms of fear vs. anxiety are likely to diverge and converge to varying degrees” (Craske et al., 2009). Another writer, expressing the distinction in less esoteric terms, suggests “the sudden re-arrangement of your guts when an intruder holds a knife to your back (fear), is different from the mild nausea, dizziness and butterflies in your stomach as you’re about to make a difficult phone call (anxiety).

The most recent national survey of mental health in the UK indicates that while 2.6% of the population experience depression and 4.7% have anxiety problems, as many as 9.7% suffer mixed depression and anxiety, making it the most prevalent mental health problem among the population as a whole (McManus et al., 2009). Previous surveys conducted in 1993 and 2000 showed an increase in the prevalence of mixed anxiety and depressive disorders, but only small changes between 2000 and 2007 (Self et al., 2012). Panic is an exaggeration of the body’s normal response to fear, stress or excitement. Panic attacks are a period of intense fear in which symptoms develop abruptly and peak rapidly. Panic attacks have been described as a form of “emotional short-circuiting” (Servian-Schreiber, 2005) whereby the limbic brain suddenly takes over the body’s functioning, leading to overwhelming sensations, which might include a pounding heart, feeling faint, sweating, shaky limbs, nausea, chest pains, breathing discomfort and feelings of losing control. Adrenaline overwhelms the cognitive functions that would normally help the brain assess the real nature of the threat to the body. The effects can be so severe that people experiencing panic attacks believed they were dying. It is estimated that about

1.2% of the UK population experience panic as a separate disorder (Goodwin et al., 2005), rising to 1.7% for those experiencing it with agoraphobia (Skapinakis et al., 2011).

## **2.8 Phobia**

A phobia is an intense and irrational fear of a specific object or situation, such that it compels the person experiencing it to go to great lengths to avoid it. Phobias can be about harmful things or situations that present a risk, but they can also be of harmless situations, objects or sometimes animals. Social phobia can include a fear of being judged, scrutinized or humiliated in some way. It can show itself with a fear of doing certain things in front of others, such as public speaking. According to the Office for National Statistics, around 1.9% of British adults experience a phobia of some description, and women are twice as likely as men to be affected by this problem.

## **2.9 Generalized Anxiety Disorder**

Generalized Anxiety Disorder (GAD) is the most commonly diagnosed anxiety disorder and usually affects young adults. Women are more likely to be affected than men. While feelings of anxiety are normal, people with GAD find it hard to control them, to such an extent that it impinges upon their daily life. It causes sufferers to feel anxious about a wide range of situations and issues, rather than one specific event. Unlike a phobia, which focuses upon a specific object or situation, generalized anxiety is diffuse and pervades the sufferer's daily life. Although GAD is less intense than a panic attack, its duration and the mental and physical symptoms, such as irritability, poor concentration and the effects of disrupted sleep patterns, mean that people with the disorder often find it difficult to live the life they would prefer to live. GAD affects 2–5% of the population and has increased slightly since 1993 (Self et al., 2012), yet accounts for as much as 30% of the mental health problems in people seen by GPs, which explains why an analysis of people seeking help through primary care suggests a higher prevalence rate of 7.2% (Martin-Merino et al., 2010).

## **2.10 Anxiety and health**

Anxiety and health the true impact of anxiety can be masked when it is the symptom of other more obvious or treatable physical problems which are likely to be prioritized in any subsequent medical intervention. Anxiety problems are common amongst cardiovascular patients; for example, panic disorder is up to 10 times more prevalent amongst people with chronic obstructive pulmonary disease than in the general population (Livermore et al., 2010, cited by Naylor et al., 2012). People with GAD have been found to be at higher risk of coronary heart disease, while anxiety has also been linked to increased incidence of gastrointestinal problems, arthritis, migraines, allergies, and thyroid disease. People with anxiety disorders are four times as likely as others to develop high blood pressure, and many studies have shown a relationship between anxiety and reduced white blood cell function, a sign of immune system weakness. There is also emerging evidence of a link between stress and Alzheimer's disease

## CHAPTER 3

### 3. METHODOLOGY

#### 3.1 Study Design

This survey was carried out in the first week of April, and lasted for 30 days between April 2 and May 1, 2021. Samples of International students were obtained in Near east university to participate in the study. in order to get the response of the sampled participants, a detailed questionnaire was prepared and distributed to the final sample of the study. the questionnaire consisted of two main sections designed to evaluate participants personal and demographic information and also to evaluate COVID19 anxiety level among the participating students. When data were collected from responses of the participants, the data were sorted out, revised, and coded for analysis.

#### 3.2 Sample Selection

The target population were International nursing students of Near East University and this school was chosen due to the fact that they have the highest number of International students in Northern Cyprus. Thus, our sample was concentrated within near east university with the questionnaire reaching up to 351 participants in the nursing department. After using online sample calculator, the final sample size was brought down to 348 with a confidence interval of 0.5% and confidence level of 95%.

#### 3.3Data Collections

Data collection was achieved using Personal Identification Form and Coronavirus Anxiety Scale (CAS) Scale. The personal identification form was made up of 10 questions which were meant to determine their status and ensure they met the inclusion criteria for assessment. These questions were meant to determine their age, sex, marital status etc. The personal identification form questioner was also meant to forecast the participant's reactions to the Corona Anxiety Scale considering the fact that previous studies have shown that there is a direct relationship between the participant's status and their reaction to the CAS. The personal identification form therefore gave a guide to the nature of the response in the CAS.

### **3.4 Data Analysis**

Data analysis was performed through statistical analysis. Statistical analysis was achieved through Statistics Packages for Social Students (SPSS) version 24 to assess data collected and that were coded. This was done in order to test the results of the assessments and determine its authenticity so as to rule out any discrepancies that must have aroused during the assessment.

## CHAPTER 4

### FINDINGS

This research saw a reception of a total of 348 responses but after the data validation, 320 responses were discovered to be valid. The results obtained were based on the feedback received from the participants who actively took part in the assessment using the administered questionnaire.

The 320 participants were made up of majority of females (66.4%) compared to male (33.6%) and most of them (62%) were within the age group of 21-25 years with majority of them being African students from Nigeria, Zimbabwe and Cameroon. The focus was on International nursing students in Near East University and all of the students accessed were pursuing their undergraduate studies with majority of them (85%) in their first, second and third year while the other 15% were in their fourth year. At the time of this survey, Near East University was conducting online studies for the students so most of the students were either in their school dormitories or off the school environment in their rented apartments. Few of the students (22%) stated that they have history of psychiatry or psychological treatment in their families whereas majority of them stated that they are up to date on the COVID-19 pandemic by following the news online and through listening to the news although this was done some of the time. The academic performance of the students during the COVID-19 era for the students ranged mostly from fair to poor which was indicative of the deprivation of face-to-face lectures as it affected their performance significantly. All the students surveyed were found to be resident in North Cyprus during the COVID-19 pandemic.



#### 4.1 Data Analysis

Table 1 indicates 182 males and 138 female students participated with a mean of 14.31 and 13.68 and standard deviation of 3.93 and 3.72 respectively which indicates males participated more than the female students.

**Table 1** Frequency distribution according to gender of the participants

Variable		N	Mean	SD ( $\pm$ )
Gender	Male	182	14,31	3,93
	Female	138	13,68	3,72

Table 2 indicates 21-25 years of age participated more than other age group with 170 participants having a mean of 14.43 and standard deviation of 3.73 and the least are <20 years of age with 16 participants and 26-30 with 68 participants and >30 with 66 participants in the research

**Table 2** Frequency distribution according to age of the participants

Variable		N	Mean	SD ( $\pm$ )
Age in category	<20	16	15,81	3,12
	21-25	170	14,43	3,73
	26-30	68	13,80	2,72
	>30	66	12,84	4,76

Table 3 indicates second year of participants are high with 97 followed by third year with 85, fourth year with 77 and first year with 61 with a mean of 14.21%, 14.69%, 13.66% and 13.34% respectively

**Table 3 Frequency distribution according to academic year of the participants**

Variable		N	Mean	SD ( $\pm$ )
Academic year	First year	61	13,34	3,72
	Second year	97	14,21	3,44
	Third year	85	14,69	4,03
	Fourth year	77	13,66	4,04

Table 4 indicates 239 singles participated with a mean of 14.26% and 81 married with a mean of 13.38%, this shows that singles participated more than the married in the research.

**Table 4 Frequency distribution according to marital status of the participants**

Variable		N	Mean	SD ( $\pm$ )
Marital status	Single	239	14,26	3,54
	Married	81	13,38	4,50

Table 5 indicates Nigerian students has the highest number of participants with 91 with 64 having strong sign of anxiety at 20% with mean and standard deviation of  $165.4 \pm 13.6$ , followed by Zimbabwe with 70 participants having 48 sign of anxiety at 15% with mean and standard deviation of  $124.62 \pm 6.4$ , followed by Cameroon with 65 participants having 40 with sign of anxiety at 12.5% with mean and standard deviation of  $115.53 \pm 4.6$ , followed by Ghana with 32 participants having 24 with sign of anxiety at 7.5% with mean and standard deviation of  $103.34 \pm 4.3$ , followed by Jordan with 28 participants having 18 with sign of anxiety at 5.6% with mean and standard deviation of  $97.24 \pm 8.5$ , followed by Lebanon with 20 participants having 12 with sign of anxiety at 3.8% with mean and standard deviation of  $94.65 \pm 3.6$

**Table 5 Frequency distribution according to Nationality of the participants**

Country	# of students	Strong signs of anxiety	%	Mean $\pm$ SD
Nigeria	91	64	20	$165.4 \pm 13.6$
Zimbabwe	70	48	15	$124.62 \pm 6.4$
Cameroon	65	40	12.5	$115.53 \pm 4.6$
Ghana	32	24	7.5	$103.34 \pm 4.3$
Jordan	28	18	5.6	$97.24 \pm 8.5$
Lebanon	20	12	3.8	$94.65 \pm 3.6$

Table 6 indicates 187 participants are residing in the university dormitory with a mean of 14.20% and standard deviation of 3.83, while participants outside the university dormitory were 133 with a mean of 13.81%

**Table 6. Frequency distribution according to type of residence of the participants**

Variable		N	Mean	SD ( $\pm$ )
Accommodation type	Dormitories	187	14,20	3,83
	Rental flat	133	13,81	3,80

Table 7 indicates a drop in the academic performance of the participants with a total of 93 participants falling below average (fair and poor) with 13.14% and 12.60% respectively, while excellent performance were 105 with 14.47% and 122 participants with 14.46%

**Table 7 Frequency distribution according to academic performance of the participants**

Variable		N	Mean	SD ( $\pm$ )
<b>Academic status during covid-19</b>	Excellent	105	14,47	3,69
	Good	122	14,46	3,38
	Fair	68	13,14	4,54
	Poor	25	12,60	3,64

Table 8 indicates 37 participants with 14.48% has medical history of psychiatric/ psychological health issues, while 283 participants with 13.98% has healthy medical history with standard deviation of 2.68 and 3.94 respectively

**Table 8 Frequency distribution according to family medical history of the participants**

Variable		N	Mean	SD ( $\pm$ )
<b>A family story of psychiatric/ psychological treatment</b>	Yes	37	14,48	2,68
	No	283	13,98	3,94

Table 9 indicates country of residence of the participants during the research which shows 169 participants were in their countries with 14.41% showing a standard deviation of 3.65 and 92 participants were residing in cyprus during the research with a mean of 13.52% and 59 participants were partly in their countries and partly in Cyprus WITH A MEAN OF 13.79%.

**Table 9 Frequency distribution according to country of residence of the participants**

Variable		N	Mean	SD ( $\pm$ )
<b>Where did you live during covid-19?</b>	My country	169	14,41	3,65
	TRNC	92	13,52	3,51
	Both	59	13,79	4,61

Table 10 results of the Corona virus anxiety scale indicates that the participants showed signs of anxiety related to COVID-19. This was as a result of the fact that a significant percentage (32%) of the participants seemed to answer between several days to more than 7 days. This outcome called for concern and was indicative of the fact that the COVID-19 pandemic was actually having a notable effect on International students in Northern Cyprus. Although majority of them (67.8%) answered not at all to all the questions, which indicated that the pandemic had no effect on most of the participants assessed.

**Table 10 Corona Virus Anxiety Scale (CAS)**

The analysis from the corona anxiety scale measure used total participants of 320.

	Minimum	Maximum	Mean	$\pm$ SD
<b>Coronavirus Anxiety Scale score</b>	0	20	-	-
<b>This study total score</b>	2	20	14,04	$\pm$ 3,82



#### **4.2 RELATIONSHIP BETWEEN PUBLIC HEALTH NURSING AND COVID-19**

The pandemic has placed great pressures on the entire global nursing workforce. A recent Wall Street Journal commentary<sup>16</sup> stated nurses are “marinating in risk as they spend more time than anyone else tending to patients.” Increased nurse-to-patient face time is concerning when greater exposure to COVID-19–positive patients put nurses at greater risk, particularly for older clinicians (>55 years)<sup>17</sup> and given the widespread deficits of personal protective equipment. Nurses are the frontline agents tending to the suffering of the patient: psychologically, emotionally, spiritually, socially, and physically. Palliative nurses are confronted with the challenge of providing compassionate, relationship-based care in the context of a viral pandemic characterized by rapid decompensation and symptom exacerbation, embedded in a culture of social distancing.

There are roughly 28 million nurses working globally, constituting approximately 59% of the health sector and delivering up to 90% of care services.<sup>18</sup> While all nurses should be included in the practice-based, scientific, and scholarly dialogues surrounding safe COVID-19 mitigation strategies, palliative nurses are uniquely trained in goals-of-care communication, clinical ethical considerations, symptom management, and end-of-life care and are more likely to be consulted as experts on these pertinent issues during the evolving crisis. Thus, palliative nurses are at disproportionate risk of moral distress, moral injury, and poor well-being given these responsibilities and skill sets.

#### **4.3 INCREASED NEED FOR PALLIATIVE NURSING DURING COVID-19**

COVID-19 is a global pandemic, first identified in Wuhan, China.<sup>1–3</sup> Widespread transmission of COVID-19 is translating into large numbers of people needing medical care simultaneously.<sup>4</sup> As of May 5, more than 3.8 million people globally had been confirmed COVID-19 positive and over 267 000 had subsequently died.<sup>5</sup>

With the daily number of confirmed COVID-19 cases rising exponentially, social fabrics on a global scale are being worn by panic, uncertainty, fear, and the dire need for greater numbers of

medical professionals to adequately address the crisis.<sup>6,7</sup> At the same time, health systems are striving to increase capacity to meet public health demands,<sup>8</sup> fairly distribute sparse resources,<sup>9</sup> address the complex ethical challenges posed by the pandemic,<sup>10</sup> and support health care workers to lower viral exposure and maintain the health of their families.<sup>11,12</sup> In fact, there have been few health events in modern times that have caught health care professionals as unprepared to effectively tackle the clinical needs of patients and communities as COVID-19.

The COVID-19 pandemic has intensified the strain on seriously ill patients and their families, amplifying suffering through increased functional decline; grief, bereavement, and death; stresses and anxieties; and economic and social instability. Alleviation of that suffering—in all its forms—is a key part of the palliative nurse workforce response.<sup>13</sup> Patients and their families will undoubtedly face symptoms, emotional distress, and complex decision-making in the face of uncertainty and limited options, and no one is more prepared to address these needs than palliative care clinicians.<sup>4</sup> Although the palliative care professional community is readily adapting strategies to provide high-quality services to those in both acute and community-based settings,<sup>14,15</sup> there remains an opportunity to provide specific recommendations for leveraging the role of palliative nurses during this unprecedented health crisis



## CHAPTER 5

### DISCUSSION

One of the most catastrophic and exigent crises for the public health in the present-day world is the COVID-19 pandemic. The world in general has been in agony due to the thorns of extreme psychological situation coupled with the rising death rate across the globe; anxiety and depression that cuts across all the age groups has been the resultant effect of this negative psychological state. The university students have not been exempted from this turmoil considering the unprecedented closure of all the institutions, and for Near East University it has been more than 7 months in a row. There is a resultant sense of uncertainty with regards to the academic and professional careers of the students due to such closures and also this leads to an intensity in the incessant mental health challenges amongst university students. As a result of such daunting circumstances, the goal of this research was to explore the anxiety and depression of International students in Northern Cyprus during the COVID-19 pandemic and also to analyze the influencers of the presence of depression and anxiety disorder in the students.

In order to access the effect COVID-19 had on the psychology of the International students in Northern Cyprus, 320 survey responses from nursing students in Near East University were analyzed in the first week of April to the first week of May 2021. The results of the cross-sectional web-based survey indicated that more than two-thirds of the students were confronting mild to severe depression (82.4%) coupled with anxiety (87.7%). Studies in other countries such as America, Bangladesh and Sudan noted the presence of both depression and anxiety amongst university students (Holm-Hadulla et al., 2015). Our finding of depression and anxiety agrees with Choi et al. (2020), who emphasized the close relationship between anxiety and depression and also symptoms predictable for depression are also reported in symptoms of anxiety. Previous research analyzed the effect of COVID-19 on the anxiety level of International students in different countries and discovered that the psychological outcomes were moderate but higher than the normal trend as anxiety symptoms ranged from 6.33% to 18.7%, symptoms of depression ranged from 14.6% to 32.8%, stress symptoms recorded at 27.2% and PTSD recorded at approximately 7% (Liu et al., 2020). However, our study found a much higher level of psychological outcomes as the level of depression and anxiety 82.4% and 87.7% respectfully.

Qualitative data gotten from administration of the questioner which were made up of open-ended questions indicated that the COVID-19 had a huge negative impact on the International students of Near East University especially with regards to their mental health and life style characteristics. Lack of motivation, stress, anxiety and isolation coupled with social distancing, changes in education and less socialization were among the changes recorded.

There has been a great deal of fear throughout history as a result of infectious disease outbreak when compared to non-infectious disease and considering the fact that COVID-19 is an emerging disease without treatment or vaccine, this fear is exacerbated. The World Health Organization has classified the COVID-19 disease as a stressor due to the anxiety caused by the psychological impact of the pandemic.

This research also made a major discovery with regards to the group most vulnerable to anxiety related to COVID-19. It was discovered from the results that the rate of anxiety was much higher in female International students when compared to their male counterparts. This finding was similar to a study carried out in Indonesia (Maaravi et. al., 2020). Lei et al. (2020) also found the tendency for females to develop depression related symptoms is higher in comparison to their male counterparts. This is mainly due to the fact that the emotional tendencies of females is far more expressed than that of males and this emotional expressions may have been stretched by the recent pandemic. Also, studies have pointed out that the threshold limit for tolerance of uncertain events by females is far lower than that of males and when this threshold limit is exceeded, extreme stress and anxiety is experienced. Females are also unskilled in employing strategies to curtail and cope with uncertain and stressful conditions.

Age was also seen to have an effect with regards to the gravity of anxiety and stress levels of the students as younger students especially those that fall between 17 to 18 years were seen to exhibit higher levels of COVID-19 related anxiety when compared to the older students. This is partly as a result of the fact that the younger students usually are more in tune with the social media and therefore have access to more information. Gao et al. (2020) found that students were also found to display symptoms of anxiety when exposed more to social media or news information related to COVID-19. It is well known that since the COVID-19 outbreak, the social media has been flooded with news related to it and the younger students have more access to

these COVID-19 related information which has been seen to induce some level of fear which accrued and resulted to anxiety and stressful conditions. This analysis was also deduced by a study in Saudi Arabia (Ahorsuet.al., 2020). The social media intention might be to grant easy access to information especially during the lockdown period which is necessary but due to the ever-present access to social media which is active round the clock, it can lead to exhaustion in students and affect the mental health of the students. The quick spread of high-risk messages on social media that are projected negatively could set off anxiety and the 24/7 media coverage of COVID-19 always makes it seem like the disease is ever present.

There was also a significant deduction from the results of this research as it was realized that International students staying alone without house mates, roommates or families and friends displayed the highest level of anxiety in comparison with those International students that stay with house or roommates and friends. The loneliness of these students makes them more prone to challenges related to their safety and security during this period of pandemic. It is therefore necessary to track and correct any extended form of loneliness amongst students early enough to prevent the inadvertent feeling of anxiety and stress that normally results from it. Due to the strict social distancing rules imposed by the government of Northern Cyprus, the opportunity to build relationships by the students has been cut short and this relationship building is an integral part of a student's life. This has further led to loneliness and the resulting depression and anxiety that surfaces.

The narrative feedback from the students portrays the most common stressor as financial constraints and uncertain future as a result of COVID-19 and lockdowns. The financial constraints had to do with the students' concern about their educational financial needs especially with the loss of family income resulting from the pandemic.

A second major stressor was identified as the sudden transition to online classes as the students were made to face challenges such as keeping up with the class schedule which they sometimes forget due to the time constraints. The immense tasks given to students by their instructors that has to do with countless assignments accompanied with deadlines that are always fixed contributed significantly to anxiety experienced by the students; this was further compounded by the need to complete household chores and continuous distractions while attending classes as the anxiety levels increased as a result. Some of the students also reported that they found it difficult

adjusting to the online class and this was attributed to the fact that most instructors were still using the same curricula meant for face-to-face teaching and this increased the anxiety level of the students considering the excess burden placed on them due to the continuous alternative assessments. A lot of instructors failed to come to terms with the fact that the student's emotional trauma was affecting concentration and outcome of their studies and that there was a need to turn to remote learning especially as the students were experiencing frustration, anger and to a greater extent anxiety.

## RECOMMENDATIONS

Irrespective of the COVID-19 pandemic, it is imperative that universities and institutions have in place a system that takes into consideration the mental state of their students. Especially considering the fact that a positive and healthy mental status invariably results in academic success; This can be achieved through mental exercises and meditation and sessions that focuses on the mindset of the students coupled with counseling visits (Schlesselman et al., 2020). The COVID-19 pandemic makes it even more necessary to have in place such structure that attends to the psychological needs of the students considering the anxiety and depression the COVID-19 pandemic has caused students as portrayed in this research. The anxiety level and the sense of isolation the students reported in this research will be reduced through the help of these group meetings. Some psychotherapeutic interventions such as applications and online programs or text messages and calls to access those with digital challenges, forums and chat lines coupled with other technologies to track risk either actively or passively will have a significant positive impact on the students that have ascertained level of anxiety or depression (Holmes et al., 2020) A six-step intervention was proposed recently by (Chen et al., 2020) meant to reduce the impact of psychological risk amongst students in China. The steps were delivery of information related to pandemic, negative behavior reduction, learning stress management strategies, family relationship improvements, growth in positive behavior, and academic expectation adjustments.

The goal for universities considering the psychological distress amongst students due to the COVID-19 pandemic should be assisting students maintain a healthy state of mind instead of avoiding stress (Bavel JJV et al., 2020)

The most reliable way to predict increase in anxiety and symptoms of depression during the pandemic is by analysis of the behavioral avoidance and cognition which has to do with avoidance of exposure to the virus and thoughts about the pandemic (Zimmermann et al., 2020)

The mind-set of students should be trained to focus more on the future opportunities resulting from their studies in order to remove their mind from focusing on the current pandemic as this will enhance their ability to overcome the stress and anxiety that accompanies the pandemic (Dienstbier et al., 1989). Students can also accommodate new ways of learning by adopting adaptive mindset which can assist with shifting priorities in order to bring about intimate

relationships and better life appreciation (Tedeschi et al., 2004). Some of the students in this study reported that they do not feel very motivated and productive due to the pandemic and that their level of academic focus has dropped as a result; therefore, a transition to an adaptive mindset may assist the students to cope in their education.

On a final note, when a member of the family or a close friend becomes infected by the virus, the physiological functioning in cases of acute stress can be boosted through reappraisals of the mindset which will reduce any form of detrimental health symptoms and foster well-being. This steady state of the mind can also be achieved even when there seems to be a swift change in policies that have effects on the students

Also, platforms that enable students to socially interact in a safe way can be developed by the university as this will encourage socialization without fear of being infected despite the restrictions. This is particularly necessary as students tend to socialize more during their university experience (Ravert et al., 2013). Although, considering the outcome of this research which revealed that the chance to socialize decreased to a greater extent in the nascent stages of COVID-19. Some of the students who participated in this study reported that they miss "going out" and attending important functions such as sporting events and graduations.

Other studies recommended that in order for students to keep up a healthy mental status in the first wave of the pandemic, they increased the frequency of communication with their close families and friends online on a daily basis (Aristovnik et al., 2020). The restrictions on physical distancing should not require that the students are socially distant from one another (Bavel JJV et al., 2020) as online interactions which are synchronous in the case of Zoom meetings and asynchronous in the case of Facebook group can help increase the bond between students and close the gap in social connection (Ellison et al., 2007) which can be stretched beyond just posts on the social media. Common venues of congregation such as gyms, cafeterias, classes and places of worship can be imitated online with a process similar to that prior to the pandemic (Galea et al., 2020).

## CONCLUSION AND LIMITATIONS

The Catastrophic effects of COVID-19 has been felt across the globe as a huge number of people have reported negative psychological and physiological state as a result of the viral pandemic; this virus has completely transformed our way of life and this transformation was came about within a very short period. Various researches have pointed out the detrimental consequences with regards to health, politics, education and economics. Therefore, global cooperation is needed to curb the effects of the COVID-19 pandemic.

This research which cut across all the International students in Near East University revealed that females, younger age groups, suffering from poor or fair general health status, and acquaintance with a COVID-19 infected individual made the students more vulnerable to the psychological effects of COVID-19 as they were shown to display signs of anxiety, stress and depression. All the students who participated in this survey reported that they have been affected by COVID-19 one way or another and 57% of the students stated that the psychological impact of the COVID-19 on them was high. COVID-19 has affected 1.5 billion students worldwide as at the time of collecting these data from the respondents (UNESCO, 2020). It was also reported that the rate of psychological stress for the students was as high as 84% (Krakauer et al., 2020). The prior focus for the students should be their physiological and psychological need before attention is turned to their academic life since success in academics depends to a large extent on a healthy physical and psychological state.

Stakeholders in education industry in Northern Cyprus should do well to acknowledge the need for prompt and all-encompassing policy to spot and curtail the negative psychological impact of COVID-19 or any future pandemic on students.

The aim of this study was to analyze the anxiety level of International students in Near East University Nursing department during the COVID-19 pandemic. However, the limitation of this study was with the sampling size which as a result of the lack of time and in order to do away with the long process of getting the feedback from a large number of the International students in the whole school, focus was on a section of the International students in the Nursing department. Despite the fact that this sample study is small, the results obtained can be revealing especially

considering that such pandemic of high proportion is the first experience for the Northern Cyprus population. Therefore, any data obtained will be considered useful and the results can act as a guide in future research concerning COVID-19 or other epidemic.



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## APPENDIX 1

### Personal Identification Form

This form was administered to extract demographic information from the participants which were students. Questions which have direct or indirect influence on the COVID-19 screening were asked in this form. The following questions were asked:

1. Gender : (  ) Male      (  ) Female
2. Age:    (  )18-20    (  )21-25    (  )26-29    (  )30+
3. Academic year: (  ) 1st year    (  ) 2nd year    (  ) 3rd year    (  ) 4th year
4. Marital status: (  )Single      (  )Married
5. Nationality:    (  )Nigerian    (  )Zimbabwean    (  )Cameroon    (  )Ghanian    (  )Jordanian  
(  )Lebanese    (  )Others
6. Accommodation Type: : (  )Dormitory      (  )Flat
7. A family story of psychiatric/ psychological treatment? (  ) Yes      (  ) No
8. Do you listen, read or watch the news about the COVID-19 pandemic?  
(  ) Most of the time    (  ) Some of the time    (  ) Seldom    (  ) Never
9. How would you rate your academic performance especially during this COVID-19 era?  
(  ) Excellent    (  ) Good      (  ) Fair      (  ) Poor
10. Where did you mostly live in the COVID-19 pandemic?  
(  ) My country      (  ) North Cyprus      (  ) Both of my country and North Cyprus

## APPENDIX 2

### Coronavirus Anxiety Scale

This was a main assessment form that was used to determine the scale of anxiety of the participants as a result of the COVID-19 pandemic. They were instructed to select the option that most appropriately represented their experience and they were also told that there was no wrong or right answer. The form was an assessment concerning what they had experienced over the past two (2) weeks. Below is a detail of the form administered:

		Not at all	Rare, less than a day or two	Several days	More than 7 days	Nearly every day over the last 2 weeks
1	I felt dizzy, lightheaded, or faint, when I read or listened to news about the coronavirus.	0	1	2	3	4
2	I had trouble falling or staying asleep because I was thinking about the coronavirus.	0	1	2	3	4
3	I felt paralyzed or frozen when I thought about or was exposed to information about the coronavirus.	0	1	2	3	4
4	I lost interest in eating when I thought about or was exposed to information about the coronavirus.	0	1	2	3	4
5	I felt nauseous or had stomach problems when I thought about or was exposed to information about the coronavirus.	0	1	2	3	4





YAKIN DOĐU ÜNİVERSİTESİ  
BİLİMSEL ARAŞTIRMALAR ETİK KURULU

ARAŞTIRMA PROJESİ DEĐERLENDİRME RAPORU

**Toplantı Tarihi** : 27.05.2021  
**Toplantı No** : 2021/91  
**Proje No** :1353

Yakın Dođu Üniversitesi Hemşirelik Fakültesi öğretim üyelerinden Yrd. Doç Dr. Samineh Esmæilzadeh'in sorumlu araştırmacısı olduđu, YDU/2021/91-1353 proje numaralı ve **“Determining the Anxiety Level and Quality of Life Among Nursing Students During Covid-19 Pandemic.”** başlıklı proje önerisi kurulumuzca online toplantıda deđerlendirilmiş olup, etik olarak uygun bulunmuştur.

Prof. Dr. Rüştü Onur

Yakın Dođu Üniversitesi

Bilimsel Araştırmalar Etik Kurulu Başkanı



Sherman Lee 18:04

to me ▾



Yes, you have my permission to use all of my COVID-19 scales for your research, education, and/or clinical purposes. You can find all of the information you will need in the websites below.

Best of luck, Sherman.

[Pandemic Grief Project](#)

[Coronavirus Anxiety Project](#)

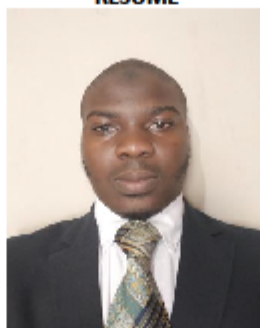
[Show quoted text](#)

—

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Director of the [Coronavirus Anxiety Project](#) and  
[Pandemic Grief Project](#)

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## RESUME



TUANI ABDULLATEEF

NATIONALITY	NIGERIAN
STATE	OYO
LOCAL GOVERNMENT	SAKI WEST
HOME TOWN	SAKI
CONTACT ADDRESS	No 9 ISTIKLAL SOKAK CUKUK KAYMAKLI LEFKOSA
DATE OF BIRTH	7th NOVEMBER 1995
MARITAL STATUS	SINGLE
PHONE NUMBER	+905488911126
INTERNATIONAL PASSPORT NUMBER	AO4234483
E-MAIL	<a href="mailto:tijani5569@gmail.com">tijani5569@gmail.com</a>
SCHOOLS ATTENDED	NEAR EAST UNIVERSITY - 2015/2019
QUALIFICATIONS	Msc. PUBLIC HEALTH NURSING (IN VIEW)  Bsc. NURSING - 2019
WORKING EXPERIENCE	<ol style="list-style-type: none"> <li>1. FOUNDER AND FIRST SECRETARY OF THE INTERNATIONAL NURSING STUDENTS ASSOCIATION OF NEAR EAST UNIVERSITY (INSAN)</li> <li>2. VOLUNTEER SENSITIZATION REGARDING HIV AND AIDS</li> <li>3. FINALIST DURING THE PATRAL PUBLIC SPEAKING CONTEST AT CYPRUS INTERNATIONAL UNIVERSITY</li> <li>4. COMPUTER LITERACY AND CONVENTIONAL AND FLEXIBLE LECTURER</li> <li>5. HUMANITARIAN/RELIEF AID COORDINATOR DURING COVID-19</li> </ol>
PUBLICATIONS/RESEARCH	WORK-BOOK: EASY GUIDE TO NURSING PRACTICAL ( UNDER REVIEW)