



**T.R.N.C
NEAR EAST UNIVERSITY GRADUATE INSTITUTE OF
HEALTH SCIENCES**

**THE EFFECT OF AN ONLINE PSYCHOEDUCATIONAL
STRESS MANAGEMENT PROGRAM ON THE
INTERNATIONAL STUDENTS COPING AND ADAPTATION**

TALAL BANI AHMAD

Ph.D. Degree of Nursing
(Mental Health and Diseases Nursing)

NICOSIA 2021



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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Date:

Signature:

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This thesis is particularly devoted to forgotten individuals suffering from mental illness alone.

“The purpose of life is to contribute in some way to making things better.”

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LIST OF ABBREVIATIONS AND SYMBOLS

- CAPS:** Coping and Adaptation Processing Scale.
- PSS:** Perceived Stress Scale.
- IMIs:** Internet and mobile-based Interventions.
- RAM:** Roy Adaptation Model.
- GAS:** General Adaptation Syndrome.
- OECD:** The Organization for Economic Co-operation and Development.

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ENGLISH ABSTRACT

The Effect of an Online Psycho-educational Stress Management Program on the International Students Coping and Adaptation.

Student Name: Talal H. Bani Ahmad

Mentor: Prof. Dr. Hatice BEBİŞ

Department: YDU Nursing Faculty Mental Health and Disease Nursing

Aim: To Provide background information about the effect of an online psycho-educational program on the ability of international Nursing students to manage their stress and' abilities to adapt and cope with this stress by using Roy's adaptation model as a baseline. **Material and Method:** The study was carried out as a Semi-Experimental Design with a pre-test, post-test, and control group design. Study Conducted in the Near East University for international students who are learning at Faculty of nursing and registered in spring semester 2019/2020. The sample consisted of 60 participants. n=30 students were assigned to the control group and n=30 to the experimental group. Pre-test data collected for both groups and the intervention group had one online psycho-educational stress management, coping, and adaptation program for a total of five weeks. When the educational program finished, the post-test was administered among both groups. Version 25.0 of the software Statistical Package of Social Sciences (SPSS) was used to analyze the data obtained. **Findings:** For the Experimental group the high level of stress decreased from 60% of participants in the pretest to 20% in the post-test, while the percentages of the high level of coping capacity were increased from 1.7% in the pretest to 36.7% in the post-test for the same group. Regarding the control group, the high level of stress was slightly decreased from 50% in pretest to around 43% in the posttest, concerning the capacity of coping; the high capacity of coping was slightly increased from 13.3% in pretest to 17.7% in the posttest. **Conclusion:** The results displayed that the program was successful in decreasing the levels of stress and improving the coping ability of the experiment group participants. This program is recommended to be tested with other groups.

Key Words: Stress, International Students, Coping, Adaptation

TÜRKÇE ÖZET

Çevrimiçi Psiko-eğitim Programının Uluslararası Öğrencilerin Stres Yönetimi ve Uyumuna Etkisi

Öğrenci adı: Talal H. Bani Ahmad

Danışman: Prof. Dr. Hatice BEBİŞ

Bölüm: YDU Hemşirelik Fakültesi Ruh Sağlığı ve Hastalıkları Hemşireliği

Özet

Amaç: Roy adaptasyon modelini temel alınarak hazırlanan *çevrimiçi bir psiko-eğitim programının*, uluslararası hemşirelik öğrencilerinin stres yönetimi ve sresleriyle başa

çıkabilmeleri uyumlarına etkisinin belirlenmesi amaçlanmıştır. **Gereç ve Yöntem:**

Çalışma bir ön test, son test ve kontrol grubu tasarımı ile Yarı-Deneysel Bir Tasarım olarak yürütülmüştür. Çalışma Yakın Doğu Üniversitesi'nde hemşirelik fakültesinde okuyan ve 2019/2020 bahar döneminde kayıtlı uluslararası öğrencilere yönelik olarak yürütülmüştür. Örneklem 60 katılımcıdan oluşmaktadır. n=30 öğrenci kontrol grubuna, n=30 öğrenci deney grubuna atanmıştır. Hem deney hemde kontrol grubu için ön test verileri toplanmıştır, deney grubuna *beş hafta boyunca çevrimiçi stresle baş etme ve değişime uyum psiko-eğitim programı* uygulanmıştır. Eğitim programı tamamlandıktan sonra, son test her iki grup içinde toplanmıştır. Toplanan verileri analiz etmek için Sosyal Bilimler İstatistik Paketi (SPSS) yazılım sürümü 25.0 kullanılmıştır. **Bulgular:** Deney grubunda; yüksek stres düzeyi, % 60'ından son

testte % 20'ye düşürken, uyum kapasiteleri % 1.7'den, % 36.7'ye yükselmiştir. Kontrol grubu ile ilgili olarak, yüksek stres seviyesi % 50'den, % 43'e hafif seviyede düşmüştür, başa çıkma uyum becerisi % 13.3'ten, % 17.7'ye yükselmiştir **Sonuç-**

Öneriler: Bulgular, programın deney grubundaki katılımcıların stres düzeylerini düşürmede ve başa çıkma kapasitelerini geliştirmede etkili olduğunu göstermiştir. Bu programın başka gruplarda uygulanarak denenmesi önerilmektedir.

Anahtar Kelimeler: Stres, Uluslararası Öğrenciler, Başa Çıkma, Uyum

1. INTRODUCTION

1.1 Definition of problem

Stress is a person's psychological response to the demands and challenges that exist on something that is faced beyond one's capacity or resources (Colquit et al., 2011). Students can be vulnerable to stress. The perceived difficulties can develop into negative feelings which in turn can cause tension, feelings of anxiety, worry, fear, stress, frustration and can become hopeless and at the end of all these problems is loss of motivation to learn (Stevianus, 2019). According to OECD (2015), Students who complained from elevated levels of academic related stress also complained from declining in level of wellbeing, measured by mental, physical, behavioral and social components. As seen in a literature review of 13 studies, reporting a high level of stress in people seeking higher education are correlated with poorer quality of life and health (Ribeiro et al., 2017). The ongoing stress on education has also shown a detrimental effect on the learning ability of students (OECD, 2015), academic success (Bernal et al., 2015; Kotter et al., 2017), education and work attainment, quality of sleep and quantity (Lee et al., 2013; Wallace et al., 2017), physiological health through the development of noncommunicable diseases such as metabolic syndrome, overweight or obesity and decreased in sensitivity to insulin because of unhealthy lifestyle habits and stress system dys-regulation (Pervanidou and Chrousos, 2012; Stults-Kolehmainen and Sinha, 2014), mental health through the emergence of more severe mental illnesses e.g. depression and anxiety (Maes et al., 2013) and drugs use outcomes (Leonard et al., 2015; Boulton and O'Connell, 2017).

According to Lyrakos (2012), international students are more likely to have stress and there are several reasons for the increase in stress rate in foreign students' lives. Firstly, foreign students need to adapt in a significant way to the new educational setting. Second, because of the language barrier, it is important to understand the new community of people. Thirdly, the burden faced by most foreign students is exacerbated by living conditions and the entire shift in lifestyle. International students may also face emotional difficulties relating to education needs and changes in society that may not be ready to face (Lyrakos, 2012). These findings provide a chance to learn more about the stress that affects foreign students and has a negative effect on their potential aspirations of getting a worldclass education (Odunola, 2016). For

international students, psychological adaptation is a crucial concern because it is difficult to cope and deal with the new learning setting (Lyrakos, 2012). The faculty members of the school play an important role in accommodating foreign students and offering adequate instruction on how to live an academic life free of stress. Eventually, stress reduction would have a beneficial influence on the academic efficiency of international university students (Odunola, 2016).

Flexibility in the north Cyprus residency policy has enabled international nursing students to remain in north Cyprus and obtain access to registration. More than 80,000 students are already in Northern Cyprus in 2018, mostly from foreign backgrounds, from African and Asian countries such as Zimbabwe, Nigeria and Pakistan (Susanne, 2019). The international students are also facing challenges, including institutional racial prejudice at universities in Northern Cyprus, insufficient access to accommodation, and even sexual harassment and abuse, shed some welcome light on them. This reinforces the stigma and stereotypes toward international students specially the African students. In Northern Cyprus, some learners may be run away, but there are many more who decided to study and come back home to utilize their certificates (Emmanuel, 2019). So, international students are facing massive stressors in a near east university same as (culture shock, financial difficulties, isolation, transportation, on-campus, job opportunities, housing, communication difficulties, educational support and others). This research may be helpful in helping International students see their arrival to Northern Cyprus as a wonderful experience and chance to obtain good education which will open them up to experience a real-world and chances for interacting with individuals from diverse backgrounds.

The lives of people are frequently disrupted or changed by the experience of immigration. The coping method has been studied in many research studies, so it is useful to assess and consider the relevant coping skills which people need to have to adapt with the new situation (Perez et. al., 2012; Russo, 2019; Azarmi and Farsi, 2015; Chayaputi et. al., 2014; Lee et. al., 2011; Phillips et. al., 2011; Roy, 2011). The results of these papers show that coping mechanisms for people relate to an adaptive goal or outcome, attitude reacts to changes in the environment and results are effective or inefficient. Coping is described as a mechanism the individuals are using to help them react effectively with the environmental stressor (Roy, 2011). Based on Roy (2014),

Coping process is the "innate and acquired ways to respond to the changing environment to promote adaptation goals". Innate coping procedures are unconscious mechanisms that an individual creates and learns through acts that are accidental, spontaneous, effortless, and occur without the person's consciousness and acquired coping processes. The Roy Adaptation Model (RAM) considers humans to be a holistic adaptive structure that can communicate and use their coping mechanisms with environmental stimuli. The regulator and the cognator subsystem are the individual's coping systems (Roy, 2009). By concentrating on the sections of the subsystem of the cognator, with four psycho-social processes (conceptual / knowledge, understanding, emotion and judgment) which examined inside the RAM. Behavioral inputs and related psycho-social mechanisms can be defined for assessing free and conscious coping (Roy, 2009). Coping has two main roles to support the individual; it handles the immediate problem that causes anxiety in the surrounding environment and controls the emotional response to the problem (Roy, 2009). In her research on coping (2014), Roy said that coping is seen as an important phase in the supporting of the individual's wellbeing (Roy, 2014). People use coping mechanism to deal with environmental stressors to promote adaptation in the four adaptive modes: physiological, self-concept, role function, and interdependence (Alkrisat and Dee, 2014). The adaptation promotion support wellbeing and quality of life in each of the four adaptations modes (Roy, 2009), also Roy's defined adaptation as "The process and outcome whereby thinking and feeling people, as individuals or in groups, use conscious awareness and choice to create human and environment integration" (Roy, 2009, p. 26).

There is little research to understand what stress management mechanisms are used to deal with stressful circumstances by international students and how they are related to psychological and physical adaptation. (Laura et al., 2012). Previous studies showed that stress management for international students varies due to the time spent in the host country, as people in the host country for longer periods tend to use more social support during difficult situations, whereas people who have spent less time more often use problem-focuses stress coping as planning more frequently. In contrast, this study found that senior students are more likely to reflect on and vent feelings, spiritual coping technique and less willing to use denial coping strategies compared to

freshmen. (Laura et al., 2013). Students who feel optimistic about a difficult situation are much less likely to face depressive symptoms, and international students who smile or laugh more often than those who laugh less are less likely to experience depressive symptoms. Students who are smoking or consume alcohol in the stressful conditions can also have more symptoms of depression than students who are not possible to be involved in drug use (Laura et al., 2013). The growing number of literatures suggest that stressful experiences in life can help to enhance stress-related improvements, i.e. improve personal resilience, create new opportunities for life, strengthen positive relationships, acquire knowledge of life and foster spiritual development (Kim et al., 2014; Holm and Koutsoukou, 2015; Pogrebtsova et al., 2018; Kim and Kim, 2013), On the other side, international students have also been shown to experience uncertainty of cultural identity (de-Araujo, 2011), health problems (Li et al., 2017), strained interpersonal relationships (Glass, 2014), low self-esteem (Kim and Kim, 2013) feelings of loneliness (Wang & Hannes, 2014), and homesickness (Poyrazli and Grahame, 2007), and which in effect impact their psychological health.

Increasing the stress-management skills and abilities of international students to cope and adapt is an essential aim for improvement. In the clinical environment, coping mechanisms available to students can manage their levels of stress. Useful coping mechanisms help students gain enhanced marks that minimize stress (Al-Zayyat and Al-Gamal, 2014). Emotions can be changed if appropriate coping mechanisms are used, and the difficult situation can be managed by using of successful coping mechanisms, in other words, encourages the return to a healthy state, which decreases the detrimental effects of stress. The coping behaviors play a critical role in the stress adjustment process, therefore (Seyedfatemi et al., 2007). Education environments should also help to enhance student academic stress by delivering instructional services that have been shown to minimize stress and increase stress control and dealing with stress (Albers and Pattuwage, 2017). These results demonstrate the need for services for stress management that are related to the needs of international students.

Stress Management – refers to the "emotional, psychological, and behavioral methods used to cope with and alleviate stress responses" (Campbell, 2012). The interventions of stress management are classified as primary, secondary or tertiary.

Aim of the primary interventions is to deter the occurrence of stress by managing the sources of stress and strengthening health conditions. Secondary interventions goal is to decrease the stress severity or period after it has happened and avoiding the problem of the rising of stress. For those who are complaining from mental illnesses. Tertiary treatments aim to rehabilitate and increase the functioning of those who either undergo or suffer from mental illnesses (Holman et al., 2018). The psycho-educational stress management services focus on helping people improve stress management, coping and reduction skills, "e.g. mindfulness training health promotion, exercise, cognitive behavioral therapy, relaxation techniques, meditation, personal and interpersonal skills training, Acceptance and commitment therapy, psycho-social intervention training, coping skills training, and resilience training" (Holman et al., 2018).

One approach to the stress dilemma is internet-based therapies. Web-based online activities may take different forms, but often involve psycho-education provided through document, audio recording and video, projects, and personalized input. According to a preset timeline, they can be complete or self-paced (Beacon, 2013). For several factors, online therapies are a promising alternative to face to face therapy for a variety of conditions which including anxiety and depression, it has been found to be effective. Moreover, online programs do not actually require people to travel to a specific place to get a treatment, are less costly to provide, and preserve anonymity for those vulnerable to face stigma (Amstader et al., 2009). In particular, there's very few online programs focused on dealing with university students' tension. Cavanage et al. (2013) explored whether an online self-guided mindfulness- focused intervention enhanced the university student's depression, 'anxiety and perceived stress, this research indicated that online, self-paced, mindfulness-based approach may enhance the stress management and mental wellbeing of college students by using more efficient coping strategies. In this study, researchers will assess the associations between online psycho-educational stress management program and the new registered international student's psychological and physical adaptation and stress coping strategies.

Since Northern Cyprus is an attractive country for students with international perspectives and the number of international students at universities in Northern Cyprus is growing, the demands of students from different nations and cultures need

to be addressed. Therefore, in order to improve their adaptation experiences, knowing all about the factors affecting the adaptation process of international students seems highly important. This study is providing valuable information's about the offering counseling and support services to the new registered international students and preparing of stress management prevention or orientation services to allow them cope and adapt with the stressful world. The result of this study will therefore help universities to know about the stress experience of students with international perspectives and to work with academic staff, counseling centers and other institutions interested in international students to provide adequate psychological support to international students, especially during the first semester.

1.2. Aim of the study

This study aimed to provide background information about the effect of an online psycho-educational stress management program on the abilities of the international students to manage their stress and compare between the both study group to find the differences in the level of stress and' abilities to cope and adapt with this stress.

1.3. The Study Questions:

1. What are the effects of the online psycho-educational program on the international student's stress level and abilities to cope and adapt?
2. Are there any differences in level of stress and coping capacity for the experimental group before and after the intervention?
3. Are there any differences in the level of stress and coping capacity between the experimental group and the control group?
4. What is the relationship between the socio-demographic characteristics of participated students and their stress level and coping capacity?

1.4. Hypothesis:

In the study hypothesis after the intervention; there is no difference between Participants in the experiment group and control group.

$H0_1$ = Perceived Stress Scale mean score find no difference between participants in the experimental group and the control group after the intervention.

$H0_2$ = Coping and Adaptation Processing Scale mean score find no difference between participants in the experimental group and the control group after the intervention.

2. GENERAL INFORMATIONS

2.1. Stress:

Stress is a common phenomenon all around during all human lifespan. The word 'stress' seems inherent in our daily lives. Human new lifestyles are filled with stress and strain, that's why this present century is named stress era (Amir et al., 2015). Based on Mulyadi (2015) study, stress was taken from a Latin word "Stringer" which mean tension and stress and based on Colquitt et al., (2011), stress is related to the person's psychological response to the demands that exist on something that's faced beyond one's capacity or resources Stress is also the reaction of our body to the pressures of a circumstance or life event which called stressor. Moreover, stress is unexpected things that appear due to high demand in someone's environment. Some common stressor characteristics include new something or unpredictable, somethings that challenges your abilities, and a feeling not control over this situation (Center for Safety & Health Sustainability, 2018). Stress could also be either external with environmental sources or caused by internal perceptions of the individual (Oken et al., 2015).

Sopiah (2011) in his study classified stress in two types; First, the degree of physical, psychological, and behavioral deviations from healthy functioning is called distress. Second, stress encountered by non-excessive stress simply moves and motivates individuals achieve targets, improve their climate, and excel in meeting the challenges of life. This stress response may also often be an effective or even beneficial response, such as passing the exam or learning a new language (Oken et al., 2015). Without any lasting adverse effects, many people are capable of coping with a certain amount of stress. The 'resilience' is called this capacity to resist and increase our resistance to stressors. There is a distinction in the ability of individuals to resist stressors depending on their genes, expectations, and the world in which they finding oneself (Mental Health Foundation, 2018). Stressor exposure becoming too constant or too severe to deal with may give us the feeling of constantly in a 'fight or flight' status and this strain can make us feel exhausted or unable to cope with it (Oken et al., 2015).

Stress sources and stress predictors are also in literature used by different meanings. Stuart (2013) proposes that risk factor that lead the person to stress are stress predictors. These can, for instance, be physiological, psychological and socio-cultural,

sex, personality characteristics, thought styles, and attachment strength (Stuart, 2013). The predictors generally classified as intrinsic "those that occur within the person" or extrinsic "those external to the individual" (Bridie et al., 2018). There are a lot of factors that can function as stressors. According to a recent study for Physoc in 2017, the loss of a loved one, relationship breakdown, unanticipated financial difficulties and loss of job are from the top ten reasons of stress. But not all stressful events in life are negative; also, the positive events in life, such as marriage, childhood or career, are by no means stress free. (Mental Health Foundation, 2018). In the United States, a recent stress survey finds that nearly 70% of adult people were somewhat or considerably worried about the country future, 63% followed closely by worries about income, and 62% about jobs (American Psychological Association, 2017). In another survey, nearly 19% of people in the British who are using the internet and experience severe stress says that cause of tension was their thoughts towards world affairs (Mental Health Foundation, 2018).

It has been found that the distribution of stressors differs between classes. One study found that painful and traumatic life experiences are recorded more often in deprived people, ethnic minorities population, and younger age groups (18 years or above) (Hatch and Dohrenwend, 2007). Our survey showed that housing issues (paying rental, having the ability to purchase a house) were main stressors for young people, with more than one of three adults (32 percent) aged 18-24 citing this in the last year as a source of stress. Examinations are considered fair or very difficult for young people in higher education (90.5 percent), but they still worry about their job opportunities (75.2 percent) and have enough resources to get by (68.2 percent) (NUS, 2018).

Stress is not a mental illness in itself, excessive stress is often referred to as chronic or long-term stress for a long time period, and it can effect on both physical and mental status and cause certain diseases (Berger, 2019).

Stress will impact our GI system and brain function and gut are closely intimately linked in terms of particular physical health problems. For example, irritable bowel syndrome and stomach ulcers have been linked to psycho-social stressors (e.g. Stress related to work, money issues, low social support) (Konturek et al., 2011). The link between stress and cardiovascular disease has also received considerable

attention. As in the INTERHEART report, a significant correlation between psychosocial stress and heart attack was observed in 52 countries. Chronic stress, with excessive or repetitive stimulation of the stress response, can also affect the immune system, which is assumed to play an important role in disrupting healthy immune function. It may also clarify why sometimes brief illnesses can be encountered as one of the first symptoms of chronic stress. Long-term stress, it is also a major contributor in many of the main death causes in the U.S, which including cardiovascular disease, trauma, cancer, lung diseases, liver cirrhosis and suicides (Berger, 2019).

There is an increasingly large body of research that predictably shows that persistent stress may also have a discriminatory effect on mental health as well as exposure to stressors. It has been found that the experience of traumatic life events is related to depression symptoms and the onset of serious depression, (Stroud et al. 2008), along with suicide and suicidal behavior (Lui and Miller, 2014) and self-harm (Connor et al., 2012). In one study, this was also the case, which showed that more than half of adult people (51%) who felt excessive stress complained from depression and 61% complained from anxiety. In one study, the adults who said at sometimes in their lives they felt excessive tension, 16 percent said they were harmed themselves, and 32 percent said they had suicidal attempts and thoughts (Mental Health Foundation, 2018). Even, stress may play a role in exacerbating underlying issues with mental wellness. Stress can cause severe symptoms and potentially lead to recurrence for individuals coping with serious and persistent mental health issues. For example, stressful events have been shown to be linked with acute schizophrenia recurrence (Day R et al., 2013). High levels of stress can also lead to the use of drugs as well. They can turn to alcohol and other drugs when stress is increasing and the person is trying to rest (Berger, 2019). Stress can also affect a depressed person profoundly, physically, and/or behaviorally.

This correlation between stress and mental health may have several reasons for this. Some research shows that stress could be related to current physiological, mental, or social risk factors to create a compounding impact that can lead to emerging mental health problems (Salomon and Jin, 2013; Swartz et al., 2015). This means that some individuals might be more vulnerable than others to the consequences of severe stress and stressful events, may because of facing more stressors or to the presence of other

existing risk factors. Psychological and physical effect stress, for example, may have on minorities group, such as the people who are homosexual, transsexual, and transgender, appears to be larger due to the effect of discrimination and prejudice (Juster et al., 2017). This could also be the problem for people with minor ethnicity groups, with studies showing that the correlation between stress and depression is due to ethnic and gender differences, possibly perpetuating health inequalities (Bey et al., 2018). Stress may also have a more subtle effect on mental health by influencing how people communicate with other people, including friends and family members, possibly putting pressure on these relations (Ranall and Bodenmann, 2009). 37 percent of people who are feeling depressed was feeling loneliness due to stress in one study. By age, recorded loneliness decreased, as numbers ranging from 53 percent of 18 to 24 years old to 25 percent of those aged from 55 and over (Mental Health Foundation, 2018). The relationship between loneliness and stress is further explored in a 2010 study by the Mental Health Foundation, with some studies indicating that loneliness can both be a cause of stress and increase perceptions of stress (Mental Health Foundation, 2010).

There are a lot of people worldwide who worry about stress. According to the American Stress Institute, statistics show the widespread prevalence of stress: around 33 % of people were experiencing severe stress, 77 % of people encounter stress that effect on their physical status, 73 % of people complained from stress that affects their mental status, 48 % of people report difficulty sleeping due to stress (American Institute of Stress, 2019). Based on data from the Global Organization for Stress in April 2020, 75 percent of American people in the previous month encountered mild to severe stress level in the US. Based on Global Organization for Stress report in 2019, Stress is the number one health problem for students in high school. Around 91% of Australian people complained from anxiety for one or more significant parts of them life. stress is a global problem, 74% of individuals in the UK have felt so depressed at some point that they felt exhausted or unable to cope (AXA Stress Index, 2017), and around 450,000 employees in Britain people claim that stress made them sick, 86 % of China employee's experience stress (Smith, 2016).

In a stressful world, stress management may insert a huge number of coping skills and support to an individual. When therapy approaches the cause of stress

directly, instead of the revers effects of stress, the greatest results will occur. Many stress reduction therapies concentrate on knowing the symptoms of stress, having many of exercise and sleep, applying coping skills, developing strategies and setting expectations, and having more time with someone you love. When started early and continued with consistency, stress therapies can be extremely successful (Herscher, 2019; Berger K, 2019).

2.2. Undergraduates University Students Stress

For college students, stress may be a substantial issue. In one survey of 13,700 students from one of Midwestern university, 45 percent encountered at least two major stressful events in the last 12 months, 26 percent said they have been unable to control their stress (Lust et al., 2010). Other survey found that more than 80% of participated students was feeling exhausted about everything they have to do (American Health Association, College, 2012). Among undergraduate students of inter-personal and educational stressors are especially prevalent (Lust et al., 2010). A literature review reported that two academic stressors among students included excessive academic loads, tasks in different clinical environments, and exams (Bahadir Y, 2016; Al zayat & Al gamal, 2014; Lebraguee., 2017a; Suresh et. al., 2012). As additional resources for tension, recent studies have reported discussing unknown individuals, financial issues and academic incivility (Clerk, 2014; Greham, 2016).

Research was founded students will benefit from certain stress, its serves to be a good motivator for learning (Gibbons, 2010). Prolonged or high stress may have adverse effects on the learning, practices and academic achievement of students, and on physiological, psychological and social health and well-being (Akhu-Zaheya et. al., 2015; Zhao et. al., 2015; Pulido-Martos et. al., 2012). The creation of more serious mental health conditions like depression and anxiety are caused by continued tension or stress (Maes et. al., 2013). Jinbong & Wonjun's study in 2014 showed that students who experience a greater degree of cultural stress are more able to experience a greater degree of depression than those students who do not experience the stressor are more able to have a low stress level. In addition, side effects of anxiety and depression may further impact academic performance in order to impair overall health and well-being. (Bernal-Morales et al., 2015).

The OECD survey notes that stress harms the academic performance of students (OECD, 2015). In the lower half of academic achievement, students feel far more stress than those in the upper half of academic achievement (OECD, 2015). Another study suggest that educational stress could decrease student's educational performance, lowering encouragement, and raise the drop out risk from the college. High level of academic related stress lead to cause low educational achievement in one study of 456 undergraduates' medical student in Germany (Kotter et. Al., 2017). Academic stress is closely linked to reduced academic motivation for students (Liu, 2015; Liu & Lu, 2011). Someone with higher self-reported symptoms of depression and stress were found to earn lower examination grades among U.S. undergraduate university students (Chapel et. al., 2005; Hysenbegas et. al., 2005).

OECD in 2015 reported that students who exposed to a high level of academic pressure on themselves, assessed by psychological, physical, cognitive and social components, report poorer well-being. One literature review for 13 studies has shown that self-reported stress levels in people seeking higher education are correlated with reduced the life quality and health (Ribeiro et al., 2017). Academic stress may increase the use of substances among young people. Leonard study found that drug addiction has been related to higher stress levels and lower using of effective coping mechanisms (Leonard et al., 2015). The secondary nursing students who reported a greater stress level in one cross-sectional survey in the U.S had a greater rate of drug use. (Boulton and O'Connell, 2017).

The perception of great amount of educational stress raises the likelihood that younger students will have unpreventable issues in their life related to physical wellness. A systematic analysis for achievable research showed when individuals was depressed, they have been less likely to become physically intimate. Stress can also help grow non-communicable disorders arising from poor lifestyle attitudes and stress process of dysregulation, include metabolic syndromes, overweight and decreased insulin effectiveness (Stults-Kolehmainen and Sinha, 2014; Pervanidou and Chrousos, 2012).

Stress has also been revealed to lead to less sleep for students (Bernert et. al., 2007; Curcio et. al., 2006), academic stress lead to difficult sleeping in U.S female college student`s (Lee et. al., 2013; Wallace et. al., 2017), Portugal university student`s

(Amaral et al., 2017) in Saudi Arabia for medical and nursing students (Almojale et.al., 2013; Wallaci et al., 2017), and in Pakistani for medicine faculties student`s (Waqas. et al., 2015).

Nursing students are very susceptible to stress. Purwati (2010) In his research on the level of academic stress on a daily class of batch 2010 students of the Nursing Faculty in the University of Ibadan, reveals that nursing students are very vulnerable due to academic requirements to encounter stress. Stress appears to be present at certain stages in the time of nursing training, as nursing teaching focuses on the human life, which may produce extreme emotional stressor because of the features of the career that, in principle, dealing directly with treatment and commonly with pain, life completion and the complain of individuals and the family member`s (Corral-Mulato et al., 2011).

In the professional nursing training cycle, the importance of investigating stress is focusing on studies that have recognized serious signs of anxiety and depression among the nursing student`s (Moreira and Furegato, 2013) and emphasize time management as the key stressor with respect to the challenges of reconciling educational practices with intimate, social and emotional needs (Corral-Mulato et al., 2011; Bublitiz et al., 2012). Nursing students are exposed to multiple stressors because nursing is a difficult occupation (Liu M et al., 2015; Moreira and Furegato, 2013). In clinical practice and academic environment, role change, role requirement, and role uncertainty subject students to different stressors that can hinder their learning and success directly or indirectly (Labrague, 2013). These traumatic situations and their effects, however, make nursing student develop various coping strategies to survive and cope with these circumstances, but if the use of coping strategies is not successful, students are vulnerable to different conditions as eating disorders, sleeping disorders, using of illicit drugs, suicidal thoughts, unemployment, and psychosomatic disease (Shukla,2013). Therefore, this kind of researches should be carefully analyzed and controlled to make the learning environment more favorable to nursing students (Shukla, 2013; Labrague, 2013).

Therefore, it is a significant goal to provide opportunities to reinforce the educational related stress adaptation skills for young students during the extreme challenges, vital period of development (OECD, 2015). They emphasize that

educational environments are the places where students are building more of the emotional and psych-social and skills necessary to be adaptable and productive (OECD, 2015). Consequently, educational environments can help boost students' educational stress by delivering strategies to reduce stress and improve stress management skills and coping strategies. However, educational programs focused on increasing the skills and abilities of students to deal with stress have previously been shown to have a direct and beneficial effect on educational performance and minimize risks on health (Hanson and Austen, 2002; Pery et al., 2017; Weare and Gray, 2003). Stress management skills will help young people consistently throughout their lives, given that both positive and negative long-term wellness habits and practices are developed through adolescence and young adult (Sawyer et al., 2012). The creation of successful implementation strategies will be assisted by identifying and resolving the challenges and enabling it to the applying of stress management programs in universities (Alber and Patuwage, 2017; Domitrovitch et. al., 2008), for large numbers of students and them families and the society, this results in major health's, economics, and social benefits.

2.2.1. The International Students Stress Consequences

A complementary part of a society where one out of every 33 people in this world is a migrant with globalization and cross-cultural experiences (International Organization for Migrants, 2013). For young adults entering higher education, studying internationally has become a key of defining encounters. It is a chance to recognize their aspirations for high quality of education and the development of skills that may not be accessible in their origin countries. This can also enable them to know how to deal with various communities and gain chance for global ties to be developed (Aman and Ayşe, 2019). Studying abroad can also help to enhance the understanding and perceptions of learning experiences among students (Cisneros-Donahue et al., 2012). In addition, it's pushes to the grow of multicultural proficiency, such as tolerance to changes (Salisbury et al., 2013).

There is an international growth in the international population of students, considering these merits. Between the late 1970s and 2015, the total number of international students involved in global higher education grew from 800,000 to 4.7 million (OECD, 2017). The higher education sector in Australia, for example, attracted

more than 450,000 international students from 191 nations in 2012 (Commonwealths of Australia, 2013). In this regard and in 2018, Turkey has reported fast risen in the number of students studied abroad. According to Presidency of Turks Abroad report in 2018, Turkey's number of students from various countries has risen fivefold, from 28,000 in 2011 to 128,000 in 2018. More than 80,000 students are already in Northern Cyprus in 2018, mainly from an international perspective and mainly from African and Asian countries (Susanne, 2014).

Although international students have desirable results, studies have found that international students experience cultural shock often more when they travel to and stay in the new place (Hota & Ting-Tomey, 2013; Hendrickson et. al., 2011). The stress factors for international students are individual, but include language barriers, missing family and friends, diet change and adaptation to a new educational system (Hansen, 2010). Moreover, Studies have stated that studying abroad entails multiple educational and sociocultural challenges at the same time. These challenges include language difficulties, perceived differences in cultural, homesickness, low social supports, stress and decreased of self-efficacy (Cao et al., 2016; Zhang & Goodson, 2011). Odunola et al., 2016 founded that international students struggle with major stressors in a South Texas university such as (cultural shock, financial difficulties, isolation, employment, housing, language barriers, low academic support and others).

According to Lyrakos in 2012, there are several reasons for the rise in distress level in the international students' lives. Firstly, international students need to adapt to the current learning climate in a significant way. Secondly, there is a need to understand the new group of individuals because of the language challenge. Thirdly, living arrangements and the whole lifestyle shift of students increase the stress faced by most international students. In addition, international students may struggle with emotional challenges that may not be ready to meet related to educational requirements and cultural changes.

For international students, psychological adjustment is a crucial problem as studies find that it is not easy to adjust to the new educational environment. These findings provide a chance to learn more about the stressors that affects international students and has a reverse effect on their potential aspirations of getting a global education (Odunola et al., 2016). Like any International learners inescapably go

through processes of acculturation, dealing with stress and adaptation can vary from each other and their psychological wellbeing can be affected by these discrepancies (Aman and Ayşe, 2019). Sometimes, personal characteristics can affect change, such as openness to connections with others and/or finding help (Kağnıcı, 2012). In any cultural context, having a stress and finding assistance may not be accepted (Henderson et al., 2013). In particular, for Asian communities' learners are less likely to have a clinical assistance and they are using mal-adaptive coping techniques more frequently (Khewaja and Dempsay, 2008). Attempts to avoid coping with adaptation requirements and to suppress distressful emotional experiences over a period of time can turn into severe psychological problems (Aman and Ayşe, 2019).

The use of a psycho-educational program is one method for promoting adjustment for international learners. A psycho-educational community is developed in a manner that enhances individuals' tools and expertise so the group members can cope and adapt with them challenges more effectively (Casanas et. al., 2012). The experimental studies that were checked found changes in the international student's adaptation levels. This was analogous to a cross cultural program for peer-to-peer practice that was also find to be supportive of incorporating and benefiting international students into the learning program with regards to institutional assistance programs (Binder et al., 2013). In other study in Malaysia, a psycho-educational intervention initiative contributed to a greater adaptation of students in the intervention program (Naeni et al., 2015). In addition, with no control group, the cognitive behavioral focused group therapy program called *STAR*: "Strengths, Transitions, Adjustments, and Resilience" (Smith and Khawaja, 2015) successfully enhanced psychological adjustment and self-efficacy. Another no control group cognitive behavioral oriented community program has recently been documented to be affective in enhancing mental health status and encouraging post-migration development (Pan et al., 2016). The studies found that psychological support systems centered on groups could increase the levels of adjustment and the psychological wellbeing of students with international perspectives. Earlier studies also documented the contributions of group-based techniques to adaptation (Pagei et al., 2018; Yakuonina et al., 2010). In some of these experimental trials, the strengths included follow up measurement and controls on the fidelity of treatment. The use of control group designs and

Randomization, however, have drawbacks.

The faculty members of the school have to play an important role in welcoming international students and offering adequate instruction on how to live an academic life free of stress. Eventually, stress reduction would have a beneficial influence on the global college students' educational attainment (Odunola et al., 2016). This research may be helpful in helping international students to see Northern Cyprus as a wonderful experience and chance for a good education, which will expose them to the realities of the world and to interact with people from another culture.

2.2.2 Coping and Adaptation with Stress among the International Students

Coping links to a range of cognitive and behavioral techniques used by individuals to control their tension and to master, accommodate or eliminate internal or external demands (Yi-frazier et al. 2010). In response to a traumatic event, coping serves as a way for people to restoring senses of control in their setting. Although two types of coping models have been identified; emotion focused and problem focused, problem focused coping attempts to minimize stressful requirements or spend energy to cope with them; while emotion focused coping used to monitor the emotional reaction of a person to the situation (Bridie et al., 2018). Segerstrom and O'Connor (2012) conclude that what is most important is not seeking to alter the circumstances (problem coping) or emotional response (emotion coping), but if the individual uses an approach technique by actively trying to change problems through effort or acceptance or reassessment as this can have a better psychological and physical health outcome than avoidance (e.g. disengaging or distraction). Coping techniques for the term's primary vs. secondary were also clarified (Alexander et al., 2015).

Researchers have stressed the link between adaptation and cultural stress (Kuo, 2013). The link between stress and adaptation effects is moderated by primary coping and secondary coping (e.g., depression, anxiety and somatic symptoms). The bad effects of stress on psychological performance were buffered by primary coping (Alexander et al. 2015). In addition, ethnicity moderated the relationship between coping and maladjustment, Jose and Schurer (2010) discovered coping with three different cultures (Asian, European, New Zealanders, and those of Māori ancestry) ranged individualism and collectivism across levels and across cultural groups. Studies

show that coping (primary and secondary) allows the effects of stress on maladjustment to be buffered or intensified, depending on ethnicity groups members, circumstances and society contexts (Alexander et al., 2015).

In many research studies, the coping mechanism has been investigated (Azarmi and Farsi, 2015; Lee E et al., 2011; Chayaputi et al., 2014; Phillip et al., 2011; Pérez G et al., 2012; Phillip et al., 2011; Roy, 2011). The findings of that researches show that the mechanisms of people coping are related to an adaptive target or outcome, behavioral responding to the environment changing, and results were Adaptive or inefficient. The mere observation that the adaptation mechanism helps ill people respond to disease may not promote the health leadership agenda sufficiently; we need to be ready to quantify its effect.

There are a number of coping strategies used by individuals with stressful experiences based on their conditions. These can be categorized into individual actions or self-conduct in the sense of others (McCarthy et al. 2017). Coping with personal habits include problems resolution, inspiration, training, faith, positive thinking and listening music (Bam et al. 2014; Al-Zayyat and AL-Gamal, 2014; Zhao et al. 2015; Graham et al. 2016; Wolf et al. 2015). There are many people who want community support from friends and relatives, socialize with peers, and develop cordial ties with their clinical colleagues during clinical placements (Yesil et al. 2015; Bam et al. 2014; Reeve et al. 2013; Graham et al. 2016; Wolf et al. 2015).

For students it is necessary to know about coping strategies. Students have used different coping mechanisms, both adaptive and maladaptive. Their present and past circumstances, including their demands, what was at threat and their coping choices, tend to affect those. Overall, individual coping behaviors and self-implied coping actions for others is included in student coping strategies (Bridie et al., 2018). The most frequent individual coping activity of the students was problem-solving (Al-Zayyat and Al-Gamal, 2014_a; Shaban et al., 2012), stay optimistic (Bame et al., 2014), and move (Zhao et al., 2015); Exercises, listening music (Graham et al., 2016; Murdock et al., 2010); and religious coping were other garments (Wolf et al., 2015). Studies have also shown that some students are engaging in harmful methods like stress avoidance and other avoidance such as blame for others, school avoidance, unhealthy eating or drinking alcohol (Graham et al., 2016; Reeve et al., 2013). A

previous study showed that Lithuanian students used eight coping strategies most frequently: problem-oriented stress coping, emotional focus, social support method, diversion, negative behavior, religious coping, substance addiction and acceptance (Sapranavičiūtė et al., 2011a). Students more commonly use problem-oriented coping mechanism in an academic setting. To be more precise, stressful circumstances most frequently involve students having to organize their acts and solve the problem (Sapranavičiūtė et al., 2011b). The gender-specific coping with stress, however, under stressful circumstances, the mental focus and venting of students and their use of emotional and religious support are more common for females, whereas, the denial of drugs and the recognition of stress is more frequently employed by men (Sapranavičiūtė et al., 2011a).

Unlike the host students, it has been stated that international students have different coping techniques. Previous research showed that international students use more coping strategies than domestic students to refute, accuse and discontinue their actions (Chai, 2009). Another research showed that international students primarily employed stress management approaches directed to challenges, followed by relational strengthening and compartmental disengagement strategies (Amponsah, 2010). Research in New Zealand has shown that international students use more coping strategies to deny, blame and discontinue actions than domestic students (Chai P.P., 2009). Additional research showed that international students used predominantly problem-oriented stress management approaches and social consolidation methods and conduct disengagement (Amponsah, 2010).

Particular clinical stressors affecting international students were studied in contrast to other psycho-social systems, such as coping techniques (Yildirim et al., 2017; Zhao et al., 2015; Shaban et al., 2012); burnout, self-efficacy (Zhao et al., 2015); adaptation effects and health status (Jimenez et al., 2010); self-esteem and social support (Yildirim et al., 2017). Furthermore, numerous studies continue to focus on the need for more studies to investigate ways for students to handle stress more effectively and prevent diseastic strategies like drugs or alcohol, isolate themselves or avoid stress, anxiety and depression (Galbraith and Brown, 2011; Reeve et al. 2013; Jimenez et al. 2010).

Chronic stress accumulation and unable to integrate positive coping might have significant consequences for health and wellbeing (Labrague, 2014). Some research has introduced methods to resolve stress to international students with some encouraging results. The effects of a stress reduction program focused on mindfulness (van der Riet et al., 2015; Song and Lindquist, 2015), two experiments analyzed were performed over a period of seven and eight weeks, the result found a decrease in stress in both studies. Other benefits included sleeping better, more concentration, better clarity and a decrease in negative thoughts. Hsieh (2011) has set up a health promotion program for 16 weeks based on stress reduction through regular training and discussion groups (by peer support), and has found that stress levels are significantly reduced in the study population. Hsiao et al. (2012) researched and found that the use of a spiritual learning program over 12 weeks had significant short-term effects on spiritual health, especially for experimental community, on the perceived physical and functional stress of international students in their sixth-year caregivers. Research by Jameson (2014) on the use of a seven-week hardness education program shows a significant reduction in the perceived tension of the study community. Conversely, there were no significant variations between the two groups in stress arising from coping strategies by peer mentoring (Li et al., 2011). The Logical Emotive Behavior Therapy intervention carried out over five weeks for both and found there were no major variations in stress levels between the two groups (experimental and control) over five weeks (Kim et al., 2015).

Adaptations are the "process and outcome by which people as individuals or in groups use conscious awareness and choice to create human and environmental integration by thinking and feeling" (Roy, 2014). A three-dimensional adaptive process: emotional, social, and physical change.

The emotional satisfaction of active inclusion in the new social environment is connected with psychological adaptation, while socio-cultural adaptations are connected to the process of integration and productive contact with it (Astrid et al., 2019). The link between migrants and the environment is the viewpoint of socio-cultural adaptation. Adaptation is the product of four different capacities: meta-cognitive capacity, ability to gain information and address cultural-related issues; motivational or energetical capacity or adaptation to cultures not familiar; cognitive

capacity related to cultural contexts (i.e. norms, traditions and conventions); and ultimately, behavioral capacity (Yeke and Semerciöz, 2016). It also assigns the migrant, understood as a skill of the individual to fulfill the requirements of the new environment, a very active role during their adaptation process. Physical adaptation is the various physiological processes inside the body that respond to changes within or outside. GAS is a three-stage mechanism that describes the changes that are being physiologically stressed on the body, including the stage of an alarm response, relating to the initial effects of stress on the organs. After the first shock, and after a fighter or flight reaction, the body begins to recover. Reduces the quantity of cortisol and normalizes heart rate and blood pressure. Excessive or persistent stress results in the process of exhaustion. Long-term stress reduction can drain physical, emotional and psychological resources such that the body can no longer overcome stress (Szabo, S., Tache, Y., Somogyi, A, 2012).

2.2.3. The Online Psycho-educational Program for Stress Management

The way of promoting the transition of students with international perspectives is the use of a psycho-educational program. In order to help solve their issues, they have a psycho-educational program that develops their personal resources and skills (Casañas et al., 2012). Some studies have shown that psychoeducational programs can improve the level of adaptation and psychologic health for international students; in Malaysia, a psychoeducational program, the intervention program has improved the adjustment of participants (Naeeni et al., 2015). In addition, the cognitive-compliance therapy program's psychological adaptation and self-efficiency has been successfully improved (Smith and Khawaja, 2015). There has recently been news of another cognitive-conduct-oriented initiative being effective to enhance mental health and facilitate growth after migration (Pan et al., 2016).

During the past decade, Internet-based interventions have been used to make conventional therapies more accessible and better. The internet's global reach is gradually rising. The results show that 79 percent of people aged 16 to 74 in Europe are using the Internet (Eurostat, 2016). A lot of meta-analysis indicated, for a variety of routes, including depression, anxiety and adaptation, web-based services can be as successful as traditional face to face program (Montero-Marín et al., 2016; Botella et al., 2015), prevention of mental health illnesses (Sander et al., 2016; Heber et al.,

2017;) and health habits (e.g., Baños et al., 2015). Additionally, these steps are suitable and successful for different groups such as kids, students and older adults (Preschl et al., 2012; Farrer et al., 2013; Ebert et al., 2015).

Web-based interventions will allow university students to seek assistance on stress issues. Online interventions tend to provide many advantages to mental health promotion compared to stress-related assistance usually offered (Christensen and Hickie, 2010; Kazdin and Rabbitt, 2013; Kazdin and Blase, 2011). In some places, online therapies are a realistic alternative to face to face therapies because their existing barriers such as costs, availability of services, waiting time, transportation and stigma can be resolved, thus reducing health disparities. Furthermore, as young people immersed in the digital world, the Internet can be powerful and effective tools to enforce preventative measures on mental wellbeing (Baños et al., 2017). The online psycho education agenda is therefore readily accessible, high anonymity and its accessibility 24/7, Internet adoption has increased rapidly and is more cost-effective and less stigmatizing than conventional face-to-face programs, particularly for youngsters (Penetrasi and Perilaku, 2017). Everyone who visits a mental health provider will receive this stigma internationally, even though it is not a mental illness. Furthermore, studies report that most students use of web to get information's and assistance about emotional and mental health problems (Burns, 2012).

The field of online approaches is relatively new and, to our best knowledge, web stress management is not yet accessible for a population of university students and there is no study on the effectiveness of stress reduction for university students. Several research in a wide range of conditions, including stress, have tested the therapeutic effectiveness of web therapy in students (Chiauzzi, 2008; Day et al., 2013), anxiety and depression (Mc-Grath and Wojtowicz, 2013), drug dependence (Paschall, 2011; Kypri, 2014), smoking (An L et al., 2007), and obesity (LaChausse, 2012), with encouraging results. The meta-analysis also illustrated the probable usefulness of web-based stress management technique (Heber, 2017).

Web-based online activities may take various forms but mostly include e-mail, video or audio training, projects and individual input, in line with a default plan (Beacon, 2013). For several mental and physical disorders, these can be self-paced or completed, offering each scientific support for a range of online therapies. In a recent

study, only 10 percent of respondents were reluctant to perform an online intervention (Klein and Cook, 2010). These initiatives are particularly relevant for university students because of their large use of technology and internet access (Smith, Rainie, and Zickuhr, 2011). Cavanagh et al. (2013) analyzed whether a self-led online procedure based on mindfulness improved the college students' perceived tension and anxiety/depression compared to the wait-list control group. Participants randomly assigned to the intervention group were told about their sensitivity and they were instructed to listen to an audiotope for 10 minutes every day for 2 weeks, concerned participants showed valuable decrease in post-test stress and stress symptoms of depression and worry ($d=.24$ -.37) and the number of participants was significant. This research suggested the potential to improve the stress management and mental health of university students through online and pace activities based on concentration. Another recent meta-analysis in 24 studies has shown that university students are effective in reducing psychological distress in the form of anxiety and/or depression, using cognitive, compartmental and consciousness-based approaches (Regehr et al., 2012).

The use of adult health care has gained the attention from internet-based interventions (Ebert et al., 2018). The ability to solve issues of mental health on the internet among high school students in recent years has become increasingly noticeable (Ebert et al., 2017; Davies et al., 2014). The material is easy to access over the Internet and services delivered over the internet are highly scalable (Heber et al., 2017; Lindefors and Andersson, 2016). Relaxation and stress management interventions were most sought after in a distance-learning study with participatory involvement of 66.9% and 54.8% (Apolinário-Hagen, 2017). Research on the Internet shows that most students with clinically associated levels of depression are using stress remedies that have not found help through traditional healthcare networks (Harrer, 2018). Dispersal of Internet-based stress therapies may also be a non-stigmatizing means of improving the coverage of depressed symptoms among students.

Social networking in this significant population is another internet-based applications that has the prospect of screening. More than 80% of adults aged 18 to 29 visit social networking sites such as Facebook (Madden, 2011). The prevention and the treatment of a wide spectrum of mental ills has been shown as effective in internet

and mobile interventions (Sander et al., 2016; Ebert et al., 2017; Andersson et al., 2014; Andrews et al., 2010; Königbauer et al., 2017; Olthuis et al., 2015; Richards and Richardson, 2012; Zachariae et al., 2015; Ebert et al., 2015a & 2015b). However, few researches studied the effectiveness of web-based preventive intervention to promote psychological well-being and resilience of young people (Rose et al., 2013; Lintvedt et al., 2013; Baños et al., 2017)

2.2.4. Related Studies to the Topics

Research has shown that during their studying process, students face a number of stressors including "academic stressors, health stressors and psychosocial stressors" (Ganesan et al., 2018; Okoro, 2018). In compared with local students, many studies imply that international students have several stressors and use various coping mechanisms (Kumi-Yeboah, 2010; Gyambrah et al., 2017; Kwaah & Essilfie, 2017; Ramos, 2011; Panchabakesan, 2011). Most of the studies was also performed using the stress treatment methods used by these students (Govender et al., 2015; Ganesan et al., 2018; Okoro, 2018; Mathew, 2017). Moreover, many residential and non-residential student researches have shown that residences students encounter more stress than non- residences students (Parveen, 2016; Kabir et al., 2018), Addai (2015). Finds out stress is triggered by some problems. Govender et al., 2015 found that student stressors are grouped into three stressors: "individual, scholastic, and college linked". Examples of *individual pressures* that students are met with are physical issues/barriers, family problems, cash-related challenges, access to resources, social concerns and the change from childhood to adulthood. Students include a high degree of success, rigorous courses, integration of their classrooms and medical instruction, assessments and exams, class measurement and awful ratings, the time and field of clinical administration, and the interactions between students and supervisors. Similarly, stressors linked to college include the transition from campus life to property such as library properties and conflicts with friends or spouses. Since university cultures continuously change, students can face significant challenges that can influence their health and academic performance (Govender et al., 2015).

Coping is used as a major variable during the period of stress spent for minimizing or declining of stress feeling (Gustems C and Calderón, 2013). To discuss

the opinions and actions of persons in coping with internal and external tension demands (Folkman, 2010). Lazarus and Folkman (1984) described the coping mechanism as a method of continuously adjusting one's intellectual and computational efforts to supervise particular external or internal problems which are thought to stress or surpass one's properties. Coping Methods are considered as attempts to mask, mitigate or restrain distressing times for both behavioural and cognitive (Sreeramareddy et al., 2007). Eight comprehensive coping mechanisms for people under stressful situations described by Lazarus and Folkman (1984), these 8 coping mechanisms are categorized into cognitive, problem-oriented coping strategies. While *cognitive coping strategies* concentrate on the optimistic, self-critical and unrealistic, personal thought, separation and minimizing distress, *problem-oriented coping strategies* focused on seeking social assistance (Lazarus, 1993).

Yikealo and Tareke have been investigating stress coping procedures between undergraduates' students in College of Education (CoE) at the Institute of Technology in Eritrea (2018), 123 students were randomly selected to participate in the study, a Colleges Student Collaboration Strategy Scale (CSCSS) of 15 elements was used for this study, the study results suggest that students use more positive stress coping techniques than negative techniques.

The results of a study by Ganesan et al. (2018), have shown that many university students have a mild degree of stress to study the degree of stress and the coping mechanisms encountered by graduates, this study has been influenced by students' interaction between stress and coping techniques, results also found that the students' degree of stress and stress management strategies were significantly reversed, the research concludes that certain types of stress can be amazing when they are inspired by the right stress. However, it can be burdensome if students don't respond to stresses, the investigation allowed students to partake in extracurricular activities such as sport reduction.

Okoro (2018) also analyzed stress issues and student methods for stress control. The study found that the students' academic/coursing requirements are the greatest perceived cause of stress using descriptive statistics. In addition, "postponement, life equalization, the funds and finance issues" were known to cause major stress during the time of study. Among the students, constructive coping was the most common

adjustment scheme. Nevertheless, denial was the least fundamental technique used.

Similarly, et al. (2017) investigated distance learner stress and adaptation mechanisms. The research has shown that academic workload, a high repetition of exams, budgetary issues and familiar and marriage problems are significant causes for stress among students. Students used many ways to respond to stress, mostly prayer/meditation, personality exercises, such watching TV and listening to music.

Mathew (2017) has also examined stress and strategies of adaptation among undergraduates. This study looks at the level of stress encountered by undergraduates and the approaches used to deal with stress. The findings of the analysis found that the overall stress rating at 26% and 94% suggested that the average number of participants was moderately overwhelming. Similarly, the average number of participants with stratagem adaptation was 48%, and that 40% of them have an average amount of adaptation to approach.

Govender et al. in (2015) have studied the stress causes and stress control methods used by undergraduate students in occupational therapy in one in South Africa facilities. This study was assessing the form and repetition of stressors and forms. The research found that individual stress factors were the most relevant cause of stress among first-year students, while the strongest stressors for undergraduates were educational causes of stress. Students became interested in emotion-oriented and problem-oriented coping stress management.

Parveen, 2016, conduct study for students of Business and Law from the Aligarh Muslim University in India to determine the prevalence of stress among university pupils and its connection with academic life and social life, result revealed that resident students. experienced more stresses than non-resident students. For another study, an examination was performed for resident and non-resident students at Dhaka University for tension, isolation and depression by Kabir et al., in 2018, and the findings suggest that in residential students, there was more tension, isolation and dissatisfaction than in non-residential students.

Entering colleges and universities can be an overwhelming life and culture transition for many of international students. Several studies such as (Zheng, 2010; Bradley, 2000) explored international high-school students' challenges and hurdles. These questions included "linguistic difficulty, difficulties in adapting learning culture,

uncertainty and relationship difficulties with faculty and colleagues, stress, anxiety, feelings of loneliness, social interactions, cultural change, financial problems, lack of adequate housing, loneliness and solitude and daily life".

International students perceive isolation and depression in certain respects while studying outside their nations. Russell et al. found, in one study carried out by 900 international students in Australia, that 41 percent of international students experience significant stress levels. Home illness, shock or perceived harm may contribute to this stress. In 2003, Yi et al. focused on the use of foreign student counselling facilities in a big university in Texas. The aim of this study was to explain why foreign students are getting therapy. The results gathered over 6 years of research have shown that many international students have problems or social problems and depend on friends and family. Regretfully, most of students not have the support they deserve and not all people have sympathy on the hospitality of foreign students. While the university provided a counselling program, foreign students did not commonly use it. Many found counseling to replace families and friends only because there were no student friends or family. The research could result in an awareness of possible solutions such as advice to international students to help them adapt to their new lives in the new country.

Next, some issues also exist in the learning places. Language is assumed one of the great university challenges preventing a seamless adaptation of foreign students (Galloway and Jenkins, 2005). The following studies have highlighted international students' difficulties in their academic study. The workforce interactions for international students were investigated by Probertson et al., 2000. Results have demonstrated that the students have little empathy regardless of their linguistic abilities. It was blamed on international students not taking responsibility for their academic achievement. Several researches investigated both the language challenges and new life of students in the new world. As an example, in 2011, Liu took her own experiences as an international student to face her challenges in Canada. she said her lack of English skills was an impediment to the successful involvement of the host group. She did not understand what her professors and friends were all about in her graduate classes. She had difficulties coping with daily problems, such as getting the right taxis, looking for food or calling for help.

Many international students have also encountered the challenges of teachers, aside from being isolated from their peers. For instance, Terui 2011 examined the challenges of six international students in contact with native speakers through "ethnographic approaches". Results from this study found that international students had attempt to understand the discussion content they had to discuss with native English speakers because of their poor language abilities. Sometimes a limited amount of English would contribute to the unfavorable opinion of a professor since the teacher believed that the foreign student was not well prepared for the class. Likewise, another study has found a concern between an instructor and international students because of the language skills. Beoku B observed the African woman scientists researching in West Universities in 2004, The results revealed that professors often questioned students' desire to learn abroad, encouraged international students to complete correction courses and quickly mocked student accents. Influences of this kind of treatment on the university teachers led international students to believe they had little support in school if necessary and viewed these responses as prejudicial attitudes towards them from the Professor. These findings suggest that international students lack assistance in their academic education. There is always bias and prejudices towards international students and this is a crucial result to be acknowledged by universities when welcoming international students.

Although international students may add to the advantages, many international students are often discriminated against by their local students. The pessimistic opinions of 188 American students on international students were analyzed by Charles-Toussaint and Crowson in 2010. American students have demonstrated that their fiscal, educational, physical well-being, interests, ideals and their social standing are at risk of difficulties faced by students with international perspectives as a result of anti-immigration racism. In other words, the absence of intercultural contacts adds to the concern that people from various cultures connect. A stereotypical perception of immigrant behavior would be formed if people are hesitant to interact with people from other backgrounds. The Southwest relationship of realistic and abstract dangers to Mexican and Arab migrants was studied, for instance, in 2007 by Hitlan et al. The results revealed that there is no realistic or abstract danger to discrimination toward Mexican and Arab immigrants.

In 2008, however, Severiens and Wolff observed that schools and graduates who feel at home, are more likely to be in contact with fellow students and teachers and to partake in extracurricular activities. Family and community support in particular had a positive influence on the progress of the thesis (Wilcox et al., 2005).

Next, socio-cultural issues also arise for overseas students. In their everyday lives, international students from a foreign country may face many difficulties. International student seeks places to rent and banks to deposit and funds money and travel by looking for busses or purchasing vehicles and applying for credit cards on arrival in a foreign world. The new community surviving is the first thing to be learnt, and the help system need to have until they return again. After the new venue, foreign students also undergo a cultural shock.

Different cases from different populations were explored and the cultural strain of international students was shown in these studies. The variety of adverse consequences for Students with international perspectives are subject to academic stress. The research, for instance, has found that the issues of foreign students also cause feelings of unease, confusion, sadness, anxiety and loss (Wei et al. 2007), academic pressures, language challenges, inferiority, difficulty with adapting with the new nutrition or cultural norms, a lack of support, prejudice and home wellbeing (e.g., Yeh and Inose, 2003).

Although literature has intensively examined challenges and coping mechanisms, further study is necessary to investigate these difficulties in multiple circumstances. This thesis will include guidance on how to cope with challenging challenges and how to deal with and prepare for stressful consequences of migration encounters to international student`s at Near East University in Turkish Republic of Northern Cyprus.

2.2.5. Theoretical Framework

The theoretical structure of this research was Roy's Model for Adaptation (Roy, 2009) and coping and adaptation mid-range theory. In the mid-1960s, Callista Roy began designing RAM as a graduate student in the Los Angeles University (Roy, 1965). A design for evaluating an aspect of the treatment principle, which proposed that persons are adaptive systems to life conditions, Roy introduced in her term paper of a new theoretical paradigm called 'promotion of adaptation to patients,' which was at the core

of Roy's theory of adaptation (Roy, 1965).

Roy adaptation paradigm describes humans as a set of intertwined biological, psychological and social processes. As Roy conceived, people aim to reconcile their personal systems and their environment by using intuitive or intelligent ways of adjusting to an evolving world and strive to live in an environment that helps them to cope. Roy's philosophy of coping and adaptation discusses how individuals demonstrate constructive, therapeutic abilities to deal with unfamiliar situations (Roy, 2009). The Roy Adaptation Model systematically and clearly shows that humans are resilient structures and are constantly involved in changing environments both internally and externally. In order to maintain integrity, individuals function as adaptive mechanisms in the deal with the environmental stimuli`s (Phillips, 2011; Roy, 2009).

Adaptation process begins when a human meets an environmental stimulus (Roy, 2009). RAM classifies environmental stimuli as focus, contextual, or residual in three categories (Roy, 2009). *Focal stimulus* is the inner or outer stimuli the individual directly treats (Roy, 2009). The other stimuli in the person leading to concentration enhancement results are contextual stimuli (Roy, 2009). *Contextual stimuli* impact how human respond to the focal stimuli in an individual or in the physical world, lingering sensations surround the individual may be present. The individual might not realize that they feel a *residual stimulus* "e.g., residual stimuli may warn people from previous years that they are unaware of an influence factor" (Roy, 2009).

People and social world are interacting reciprocally, using triggers and using coping strategies (Roy, 2009). The person uses two subsystems, regulator and cognator, where the triggers are used during the coping processes (Roy, 2009). A *regulators* and *cognator* subsystems are activating and manifesting in the one or more than one of four adaptive modes: "physiological, self-concept, role function and interdependence" (Roy, 2009). Adaptation occurs as all subsystems are activated, which results in physiological changes in the role function of the position, self-concept and interdependence as shown in **Figure. 1**.

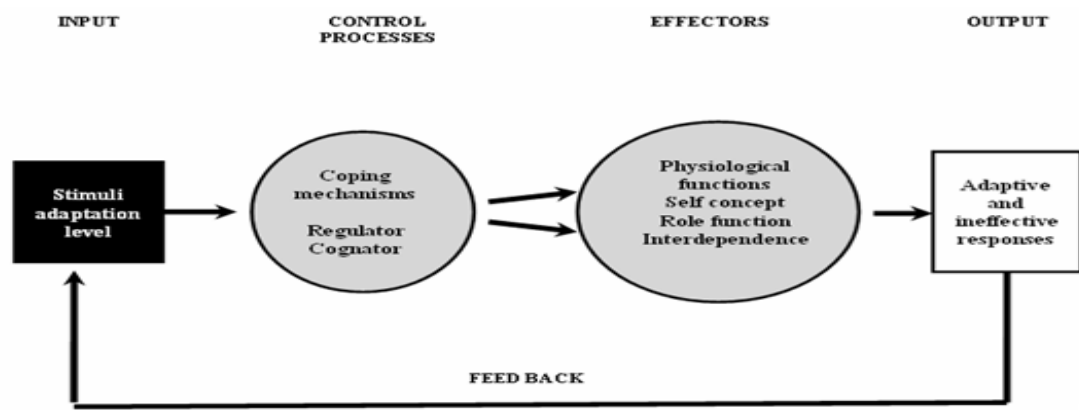


Figure 1. The four adaptive modes of Roy Adaptation Model

Physiological mode contains the compensatory processes utilized by the human body in order for the physiological integrity to be maintained. The physiological mode has four basic human needs: balanced breathing period for *oxygenation*, balanced exchange of gasses, adequate exchange of gas and adequate compensation time. Equal digestion *nutrition*, acceptable body nutrition styling, metabolic and nutritional needs with a modified dietary style; *Healthy bowel evacuation* form, ample time for urinary removal, fair urinary removal style and efficient evacuation method; *operation and rest* with reasonable length of action, adequate sleeping time, and four dynamical processes: *Senses* through ample emotional time, efficient incorporation of emotional data information, a perceptive input and appraisal balance and efficient treatment methods. *Fluid, Electrolyte and acid-based balance* through adequate fluid balancing time. *Neurological work* through the convergence of the systems of thought and meaning, and through increased stability and functionality during ageing as well as modification of neurological system. vision, decoding, concept formation, recollection, vocabulary, planning and motive response. *Efficient hormone regulation* in the reproductive production, closed-circuit equilibrium negative feedback in hormone management, regulated hormone cycle rhythm, effective methods of controlling stress, work by effective hormonal regulation in bodily and metabolic processes.

The way a person understands himself is a mode of values and feelings for himself based on his life experiences. It is contextual and conditioned by "internal perceptions and perceptions of the reactions of others" (Roy, 2009 p. 95). Self-concept mode reflects on a personal dimension of the human system, in particular

psychological and moral dignity. The positive self-concept mode adaptation indicators are listed as follows: Healthy self-image, Efficient sexual activity, Divine dignity for physical development, Ample reward for improvements in the body, Adequate dealing with death, End-of-life productivity, Sufficient synthesis of one's thoughts — Adequate time of moral ethics and spirituality, Suitable period in the sense of a morality-ethical and spiritual departure.

The role function mode is the role played by a person in society and their performance, social integrity and growth (Roy, 2009). The role mode emphasizes on relational integrity and on carrying out activities related to multiple roles in life. The classification of the positive role feature mode adaptation indicators of a person is as follows: "Effective cycle of shifting roles, Matching of non-verbal and explanatory roles, Matching of main, secondary and third roles, Productive example in the fulfillment of roles, Efficient methods of coping, Roles, Joint obligation, Mixed position modes, Optimistic style of adaptation".

The interdependence style concentrates on "close relationships with individuals and the need for a relationship of integrity fostered by security" (Roy, 2009 p. 384). Mode of Interdependence which discusses social dignity and concentrates on affectionate relations, provision of social assistance and recognition. The classification of the positive interdependence mode adaptation indicators of a person is as follows: Sufficient affection, appreciation and trust, Effective, reliant and autonomous examples, Efficient isolation and separation coping strategies, Enough growth to learn and evolve in relationships, Enough contact and relationships, Promoting developmental skills in caring and care, Faith in connections, Enough communication and relationships. The four modes are connected to each other as depicted in **Figure2**.

Results are mirrored in behavior as people interpret the stimuli input and function through adaptive modes coping processes (Roy, 2009). Operation serves as the feedback of method for deciding whether to attempts to deal with stimuli need to be improved or decreased (Roy, 2009). The relations between the handling systems and the adaptive modes generate a result that reveals the integral and holistic life of the individual (Roy, 2009; Alkrisat and Dee, 2014). In order to achieve human and environmental integration, the person adapts to the utilizing of consciousness awareness and option (Alkrisat and Dee, 2014; Roy, 2009).

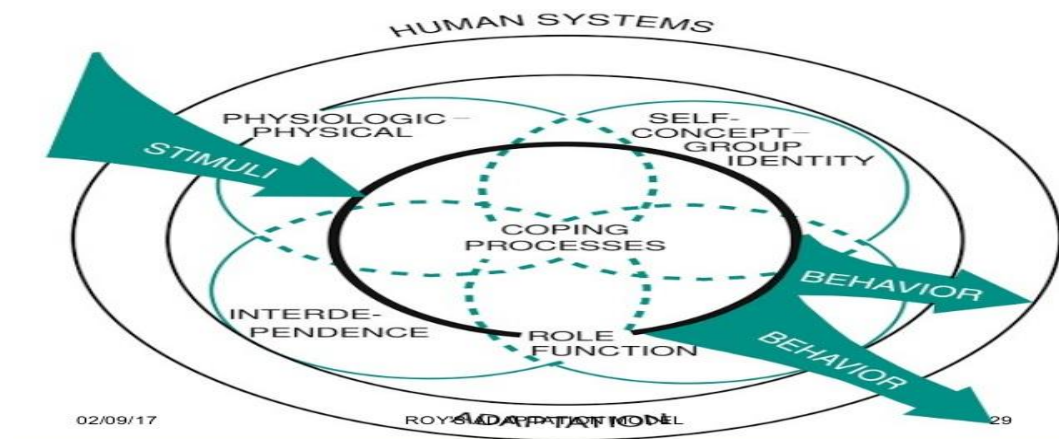


Figure 2: Diagram of Human Adaptive Systems

2.2.5.1. The Middle-range Theory of Coping and Adaptation Processing

Roy's sought to speak about the multidimensional and transactional methods in her Adaptation study to explain the construction of adjustment therapy (Roy, 2011). In order to develop the "middle-range theory of coping and adaptation processing (CAP)" in the four Adaptive Modes, Roy combined the coping principle and the theory of cognitive processing (Roy, 2011). The Coping is a complex, multidimensional and transactional structure" with hierarchical mechanism to support the individuals (Roy, 2011 p. 318; Roy, 2001c). To retain adaptation in four adaptive modes (physiological, self-concept, roles and interdependence), people use coping strategies to combat environmental stressors (Roy 2014). Therapy is seen as an essential step towards human wellbeing (Roy, 2009; Alkrisat & Dee, 2014). An adaptation promotion leads in every one of the four adaptive mode's to well-being and the life quality of (Roy, 2009). "Roy describes the philosophical foundation of the creation of the coping and adaptation processing as "the mechanism and the effect by which persons, as individuals or in communities, are actively aware of, and want to incorporate people and the world" (Roy, 2009, p. 26).

2.2.5.2 Application of Roy's Adaptation Model on Students Coping and Adaptation with Stress:

The available social reinforcement has an effect on student stress stimulation. In fact, greater tension is linked to less welfare benefits. The traumatic sensations of a student trigger stress control mechanisms. Emotional or problem-oriented management is also

related to potential tension. Psychological depression is adversely associated with stress control strategies, which are emotional and behavioral efforts by a person to cope with a traumatic situation. Psychological distress is positively correlated with emotion-focused strategies that result in the lack of any attempt to handle a difficult situation or try to ignore it. Psychological distress compares favorably with emotionally-focused interventions leading to a lack of any desire to cope with or attempt to ignore a challenging situation. Social support, the stress of students and coping styles are particularly influenced by psychological stress, and coping styles also serve as an indirect factor from social support to psychological distress (Chao- H Y, 2003).

This research would summarize the interaction between stress management and coping skill between international students during the first year and how the stress reduction program affects international students' coping and adapting to the new learning environment. In this study, the theoretical foundations of Roy's model of human adaptation were the theoretical foundations. (*Figure3*).

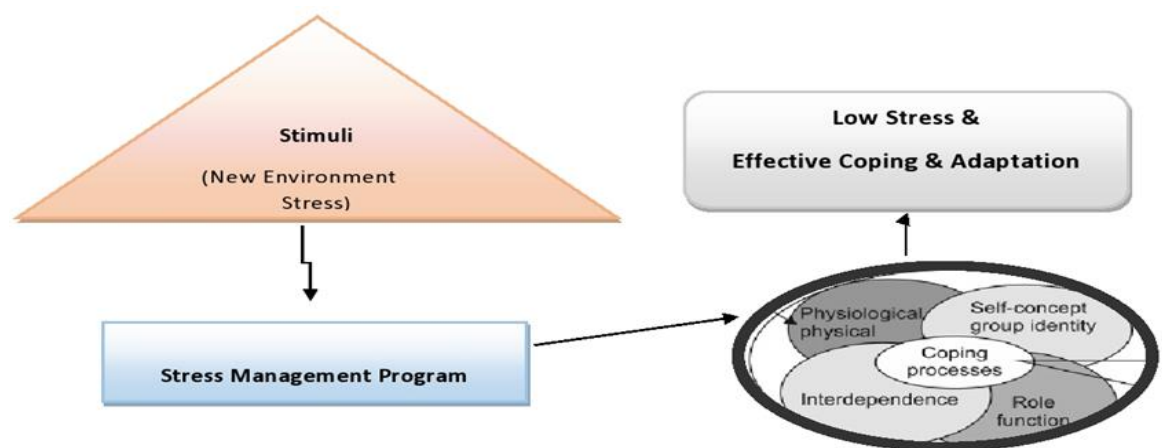


Figure 3. The relationship between Stress, Stress management Program & coping Process based on Roy's adaptation model.

3. MATERIALS AND METHODS

3.2. Study Design

The research was performed with a pre-test, post-test and control group structure as a semi-experimental design.

3.3. Research Location

The study conducted in the Near East University in Turkish Republic of North Cyprus among the international students of Faculty of Nursing which has 85 international registered students as at the time the study. The international students are from different nationalities as Nigerian, Zimbabwean, Jordanian...etc.

3.4. Sample Selection

The total numbers of new international students registered in the faculty of nursing at near east university in 2019/2020 are 85 students, and after excluding some students based on inclusion and exclusion criteria, the total population became 80 students. The sample population was calculated by using Sample Size Calculation Program and the formula $n = \left(\frac{Z\sigma}{E} \right)^2$ and it has consisted of N= 60 participants for an error rate less than 0.05 and confidence level: 95%. n=30 students were assigned to the control group and n=30 students to the experimental group. It was expected to use the following procedure for the chosen participants in the experimental group and control group: the first n = 30 students who joined the study were assigned to the experimental group and the last n = 30 students who joined the study were assigned to the control group.

3.5. Inclusion and exclusion criteria:

3.4.1 Inclusion Criteria

The International students who were registered in the faculty of nursing at the spring semester in 2019/2020, who can provide consent, and who can read and speak English were included in this research.

3.4.2. Exclusion Criteria

The international students who were registered before the spring semester 2019/2020, enabled to provide consent, non-English speaker students and the transfer students from another university or another faculty were excluded from this study.

3.6. Study Instruments

This form has been developed by the researcher with the support of the literature to collect the introductory information and demographical data of the students which included 24 questions. Includes information such as "age, gender, marital status, academic year, and place of residence, ethical and religious background... Etc".

(Enclosure IV).

3.5.1. The Perceived Stress Scale (PSS):

The research data was gathered with the descriptive form created by the researcher and the Perceived Stress Scale (PSS) to measure of the degree to which situations in one's life are appraised as stressful. The descriptive form that was developed by the researchers on the basis of the literature (Cohen et al., 1988). The form was included 10 questions for Stress Measures.

- The Perceived Stress Scale (PSS) (English Version) developed by Sheldon Cohen (1988), with total Cronbach Alpha coefficient was found to be 0.70. This scale will be applied for English speaker students (African, Arab & Asian... Etc.).as it is given below in *(Enclosure V)*.
- The Perceived Stress Scale (PSS) has 10 items and it is scored from 0 to 4, with 5 choices (0 – never 1 – almost never 2 – sometimes 3 – fairly often 4 – very often).
- The total score is **40**.
- First, reverse scores for the following questions 4, 5, 7, and 8. On these 4 questions, we will change the scores like this: 0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0.

"The Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress.

- ▶ "Scores ranging from 0-13 would be considered low stress".
- ▶ "Scores ranging from 14-26 would be considered moderate stress".
- ▶ "Scores ranging from 27-40 would be considered high perceived stress".

3.6.3. Copying and Adaptation Processing Scale (CAPS): Short Form

The research data was gathered with the descriptive form created by the researcher and the Coping and Adaptation Processing Scale (CAPS): Short Form is a practical tool to effectively and efficiently measure coping and adaptation in people dealing with physiological and psychological stressful conditions. The descriptive form that was

developed by the researchers on the basis of the literature (Roy et al., 2015). The form, included 15-item to assess the international students' abilities to adapt and cope with stress.

The Coping and Adaptation Processing Scale (CAPS): Short Form (English Version) developed by Callista Roy, William F and Chestnut Hill in 2015, with total Cronbach Alpha coefficient was found to be 0.82. This scale will be applied for English speaker students (African, Arab & Asian. Etc.). as it is given below in (*Enclosure VI*).

- The Coping and Adaptation Processing Scale (CAPS): Short Form; has 15 items and it is scored from 1 to 4, with 4 choices (1–Never, 2 –Rarely, 3 –Sometimes, 4 -Always).
- Total scores are obtained by summing the numeric responses on each item. Range of scores for 15 items is: 15 to 60
- In reverse scoring 1=4; 2=3; 3=2; and 4=1. The items to reverse score are: 5, 13, and 14. Reverse score the three negative items so that higher scores mean greater coping.

The total score is 60.

- Scores ranging from 15 – 30 would be considered low capacity of coping and Adaptation
- Scores ranging from 31 – 45 would be considered mild capacity of coping and Adaptation.
- Scores ranging from 46 – 60 would be considered high capacity of coping and Adaptation.

3.7. Pilot Study:

"A pilot study was conducted after approval from the Near East Institutional Reviews Board (IRB) of Near East University on twenty international nursing students from the first academic year. The questionnaire was updated for clarification after the pilot analysis".

3.8. Data Collection:

When the students finished the university registration process the students who are eligible for the study were asked to sign a consent form. Data was collected by using descriptive forms and scales between May and June 2020. Using the Google Form software for the pre-test and post-test, and self-completion process, these tools were

administered by researchers to students via online technique. It took about 25 minutes to complete the questionnaire, split into 15 minutes for descriptive data and perceived stress tests and 10 minutes for copying and adaptation scale.

3.9. Procedure

Before signing the consent form, students meeting the criteria for participation were informed about the goals of the study. Sample population was divided into experiment and control group after the pretest data has been obtained, as the first $n = 30$ students who joined the study were assigned to the interventional group and the last $n = 30$ students who joined the study were assigned to the control group.

The Experimental Group

1. The interventional group had one online psycho-educational stress management class per week for a total of five weeks during an activity time and the school days.
2. Each class was for approximately one-hour duration.
3. The class material was kept on the system for one week to allow all of the students from the experimental group to use it.
4. Every Friday, the educator stayed online for one hour from 7 pm to 8 pm for any questions or suggestions from the participated students.
5. When the five classes finished, the post-test was administered, this tagged the end of the data collection period for the experimental group.

The study Process:

Firstly; The educator created the online class on the selected program by the name of “stress management course”.

Secondly; The educator invited the experimental group students to join the class through the given password.

Thirdly; The educator uploaded the educational materials which included PowerPoint presentation slides, the presentation videos record, and the self-assessment questionnaires on the system every week by uploading the educational materials for one topic per week.

Fourthly; The participated students were requested to read the published presentation, watch the videos and answer the self-assessment questionnaires.

The attendance for the participated students was continuously checked by the

educator through the system and through the answers to the self-assessment questionnaires which were included in the recorded videos. The participated students were also requested to send feedback about each class to the educator through the program on the weekly basis.

Educational Program

The *Edmodo* program was used to publish the educational contents to the experimental group. The educational program was prepared based on the Roy Adaptation Model, as it is given below in *Figure 4p.9, Enclosures II & III*. The educational program included seven sessions conducted as asynchronies online classes and five topics in a total of 6 weeks duration as the following:

The first week: included two sessions, the first session include general information about the program (aim, duration, importance of this program ... etc. for around 20 minutes duration, signing the consent form and lastly answered the pretest questionnaires within 25 minutes. The second session titled by stress and stress management aimed to improve the participated students' knowledge about stress and stress management. It included general information about stress and stress management like; stress definition, sign and symptoms of stress, stress causes, stress management strategies, and techniques. The class duration was around 60 minutes and included recorded presentation video and self-assessment questionnaires.

The Second Week: Include one session talked about the physical adaptation mode with stress, this class aimed to help the participating students to know how the stress is affecting their physical activity and how they can physically adapt to this continuous stress. The class content includes the following topics with 10 mins duration for each topic: Nervous system and endocrine system responses to the human stress for 10 mins duration; Energy utilization and energy storage during stress exposure; Sex-specific deference's in response and adaptation with stress and the role of changing health behavior and lifestyles with maintaining a healthy diet, avoiding smoking and engaging in regular physical activity in stress management. The class includes recorded presentation video and self-assessment questionnaires.

The Third Week: "Include one session explained the self-concept adaptation mode. Aimed to help the participating students positively view their qualities, values, and worth. It included four topics: Self-Concept Meaning, how one with stress can

normally see his physical being (Body sensation and Body image), how one with stress can positively views his qualities, values, and worth (Self-consistency, Self-ideal/self-expectancy, and Moral-ethical-spiritual self) and lastly Effective coping methods, positive body image, functional self-esteem, physical changes, spiritual integrity in stress management".

The Fourth Week: "In this week the educator explained the role function adaptation mode; aimed to educate the participated students on the effective coping process in role change. This session includes the following five topics: Evolution of roles one occupies in the society, the effective coping process in role change, the responsibility to fulfill roles, combine effective roles, and lastly, balanced role competence. The class included a recorded presentation video, self-assessment questionnaires, and some additional videos."

The Fifth week: "Covered the interdependence adaptation mode. Aimed to teach the participating students the effective coping methods in case of feeling loneliness and build a good and mature relationship. The session includes: Qualification of important persons and support systems, effective coping methods in case of feeling loneliness, adequate development for learning and maturation in relationships, Intimate relationships, and less intimate relationships. At the end of this session; the educator provides the participants with a short video (10 minutes) summarizing all of the program topics."

The Sixth week: included the posttest measurement and the educational program evaluation. It was online and the educator answered the participant's questions and asked the students to fill the posttest measurement questionnaires, the posttest questionnaires answered by participants within 25minutes, and the course evaluation was done.

Control Group:

- Five weeks after the initial meeting, the Posttest was also conducted among the students in the control group and this tagged the end of the control group data collection period.
- At the end of the study and after the posttest measurement for both groups and to avoid any ethical issue, one online class was created for the control group and the whole contents and materials of the stress management psycho-educational

program were forwarded to them.

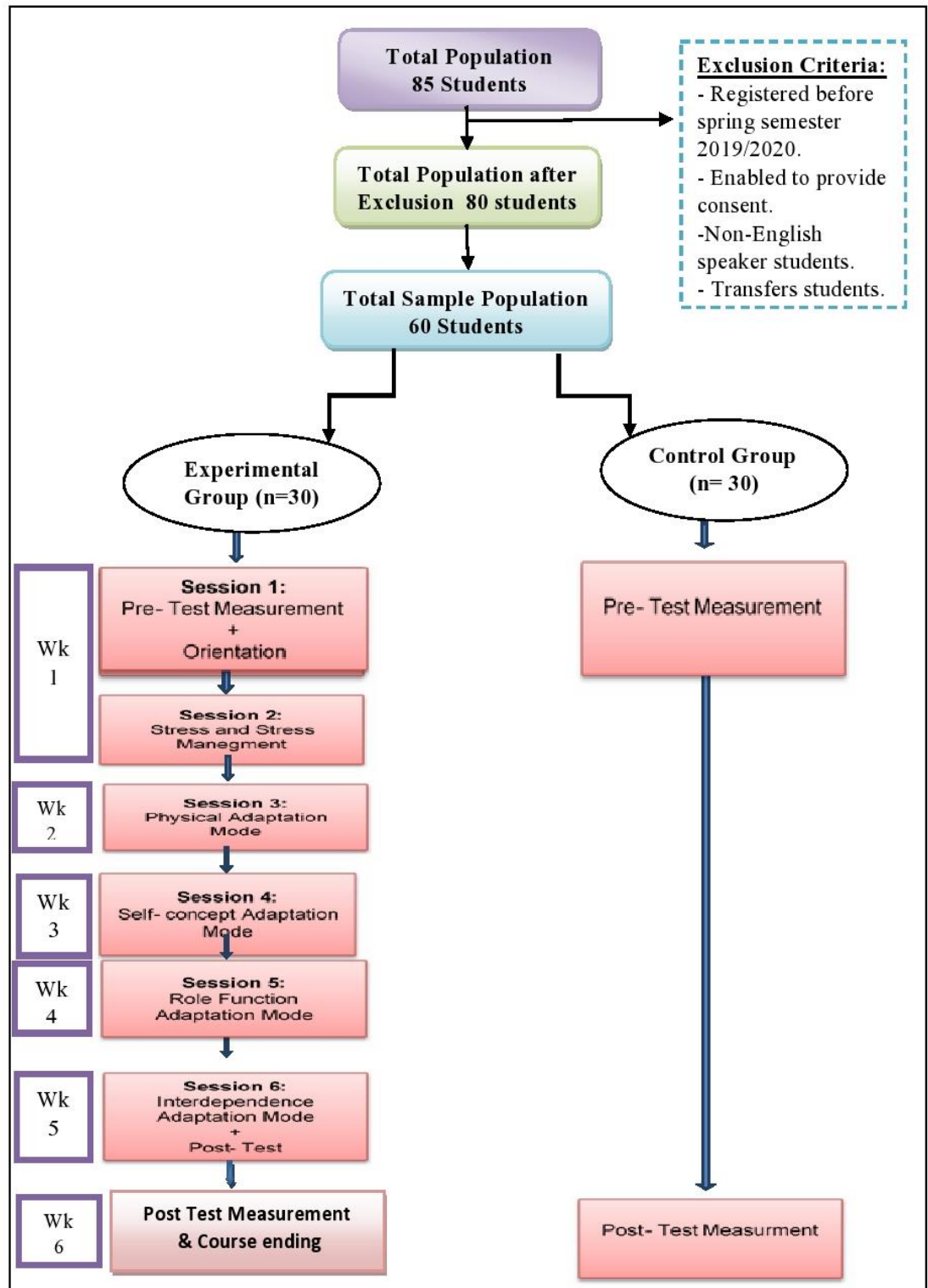


Figure 4: The Study Process

3.10. Ethical Aspect

The Near East Institutional Reviews Board (IRB) of Near East University obtained ethical approval (*Enclosure VII*). In addition, the students' informed *consent* (*Enclosure VIII*) and the approval of the deans were obtained. The students were allowed at any time to leave from the analysis and the collected data would be kept confidential.

3.11. Analysis of Data Results

The collected data from the survey was analyzed by using Statistical Package of Social Sciences (SPSS) software version 25.0, descriptive data, and chi-square tests. The SPSS software helps connect data to effective action by drawing reliable conclusions about current and previous conditions. Descriptive data used to evaluate the mean, median, standard deviation, range, and frequency. chi-square tests showed the significant stress and coping has on international students and whether or not the students' age, gender, ethnicity, etc. is a predictor of stress or coping. The Mann Whitney U-test, the non-parametric equivalent to the independent t-test & ANOVA test used to compare the two groups to determine if they differed in their stress level, and coping capacity (non- Parametric tests were used for the data evaluation. An independent sample t-test & ANOVA test was performed for the statistical analysis, Mann Whitney U-test were used for further analyses). When the statistic was significant, the chosen level of significance is $p < 0.05$.

The data were presented as a written discussion with an accompaniment of tables resulting from the instrument analysis. The data presented by using themes, a textual description, and a structural description.

4. RESULT

This chapter describes the findings of the study's data analysis and findings based on the scales used to assess an international nursing student's stress level, coping, and adaptation, and uses the RAM as its theoretical basis. It provides a summary of the findings and effects of the experimental and control groups' in pre and post-tests and compares the results of both groups.

Table 4.1a. Comparison of the experimental and control groups on sociodemographic variables.

	Experimental Group (n= 30)		Control Group (n = 30)		Total (N= 60)		Significance Level	
Age:	Mean \pm SD 19.33 \pm .799		Mean \pm SD 20.71 \pm 1.023					
	n	%	n	%	n	%	X ²	p
Age groups								
17 – 20	17	56.7	14	46.7	31	51.7	1.732	.431
21 – 25	10	33.3	10	33.3	20	33.3		
26 – 30	3	10.0	5	16.7	8	13.3		
>30	0	0.0	1	3.3	1	1.7		
Gender								
Male	11	36.6	8	26.7	19	31.7	.070	.414
Female	19	63.3	22	73.3	41	68.3		
Ethnicity								
Black or African	28	93.3	26	86.7	54	90.0	1.732	.392
Middle Eastern	2	6.7	2	6.7	4	6.7		
Mandinka	0	0.0	1	3.3	1	1.7		
Yoruba	0	0.0	1	3.3	1	1.7		
Religious Background								
Christian	24	80.0	23	76.7	47	78.3	1.414	.403
Muslim	5	16.7	7	23.3	12	20.0		
Jewish	1	3.3	0	0.0	1	1.7		
Actively practices spiritual/religious beliefs								
Always	24	80.0	21	70.0	45	75.0	1.732	.392
Sometimes	4	13.3	8	26.7	12	20.0		
Rarely	1	3.3	0	0.0	1	1.7		
Never	1	3.3	1	3.3	2	3.3		

Demographic characteristics of participants are presented in Table 4.1a. The final sample consists of N= 60 students. There are no significant differences between the experimental and control groups in sociodemographic characteristics with $p > 0.05$. Most of them are aged from 17- 20-year old with 51.7% (n=31), and 68.3% (n=41) of participants are female students. Regarding the ethnicity 90% (n=54) of participants are black and African backgrounds, while Mandinka and Yoruba ethnicity are the minority with 1.7% (n=1) for each of them. 76.6% (n=47) of participants are Christian and 75% (n=45) are practicing them spiritual/religious beliefs sometimes.

Table 4.1b. Comparison of the experimental and control groups on sociodemographic variables.

	Experimental Group (n= 30)		Control Group (n = 30)		Total (N= 60)		Significance Level	
	n	%	n	%	n	%	X ²	p
Marital Status								
Married	2	6.7	3	10.0	5	8.3		
Single	27	90.0	27	90.0	54	90.0	1.414	.403
Separated	1	3.3	0	0.0	1	1.7		
Have a Children								
Yes	1	3.3	2	6.7	3	5.0	.097	.414
No	29	96.7	28	93.3	57	95.0		
Family Type								
Single Parent	6	20.0	7	23.3	13	21.7		
Extended	8	26.7	5	16.7	13	21.7	1.732	.392
Nuclear	15	50.0	18	60.0	33	55.0		
Reconstituted	1	3.3	0	0.0	1	1.7		
Occupational situation								
Working & studying	6	20.0	2	6.7	8	13.3		
studying only	23	76.7	26	86.6	49	81.7	1.414	.403
was working before	1	3.3	2	6.7	3	5.0		
Type of accommodation								
Alone	22	73.3	20	66.7	42	70.0	.270	.414
with Partner	8	26.7	10	33.3	18	30.0		
Place of accommodation								
In Campus	3	10.0	6	20.0	9	15.0	.173	.414
Out of Campus	27	90.0	24	80.0	51	85		
Payment for school								
By her/himself	2	6.7	5	16.7	7	11.7		
Scholarship/	2	6.7	3	10.0	5	8.3		
Funding							1.732	.392
Parent /Family	24	80.0	21	70.0	45	75.0		
Loan	1	3.3	1	3.3	2	3.3		
Self-sponsor and Parent	1	3.3	0	0.0	1	1.7		
Economic status								
Poor	7	23.3	4	13.3	11	18.3		
Fair	20	66.7	19	63.3	39	65	1.414	.403
Good	6	20.0	7	23.3	13	21.7		
Experience of Travel or Immigration before								
Yes	10	33.3	12	40.0	22	36.7	.717	.414
No	20	66.7	18	60.0	38	63.3		
Speak Turkish								
Yes, Fluent	0	0.0	1	3.3	1	1.7		
A little	21	70.0	17	56.7	38	63.3	1.414	.403
Not at all	9	30.0	12	49.0	21	35.0		
History of any physical problems								
Yes	3	10.0	3	10.0	6	10.0	0.04	.414
No	27	90.0	27	90.0	54	90.0		
History of any mental health problems								
Yes	0	0.0	1	3.3	1	1.7	0.97	.414
No	30	100.0	29	96.7	59	98.3		

*Significance value $p < 0.05$.

In Table 4.1b. 90% (n= 54) of participants are single and have no children while 8.3% (n= 5) participants are married and 5 % (n= 3) of them have children and 55% (n= 33) of participants were grow in a nuclear family despite the economic status for this families are ranged from poor to a fair level. Most of the participants are studying only with 81.7% (n= 49) while only 13.3% (n= 8) students are working and studying at the same time. Regarding the participant's accommodation, we find that most of the participants are accommodated alone 70% (n=42), and out of campus 85% (n= 51). The parents or family are the main source of school and personal fees payment for most of the participants with 75% (n= 45). For 63.3% (n= 38)) of participants, this is the first time they experience travel or Immigration and most of them are not speaking the current country of residence language fluently as 35% (n= 21) of them not speaking Turkish at all and 63.3% (n= 38) are speaking a little Turkish. Also, the most of participants are physically and mentally fit with only 10 % (n= 6) of them have a history of physical illness and 1.7% (n= 1) has a history of mental illness

Table 4.2a. The special characteristics of the participated students in the experimental and control groups before interventions.

	Experimental Group (n= 30)		Control Group (n = 30)		Total (n = 60)		Significance Level	
	n	%	n	%	n	%	X ²	p
Explain away stress as temporary:								
Yes	20	66.7	19	63.3	39	65.0	1.189	.414
No	10	33.3	11	36.7	21	35.0		
Blame your stress on other people or outside events:								
Yes	6	20.0	6	20.0	12	20.0	.998	.414
No	24	80.0	24	80.0	48	80.0		
Define stress as an integral part of your studying life:								
Yes	12	40.0	13	43.3	25	41.7		
No	6	20.0	4	13.3	10	16.7	1.414	.403
Maybe	12	40.0	13	43.3	25	41.7		
Adaptive strategies with stress:								
Complained	1	3.3	0	0.0	1	1.7		
Pursuing hobbies, reading or watching television.	4	13.3	5	16.7	9	15.0		
Relied on others who have the ability to solve the problem	1	3.3	0	0.0	1	1.7	2.449	.362
Concluded that things could have been worse	1	3.3	0	0.0	1	1.7		
Tried to relax or to take a break	17	56.7	14	46.7	31	51.7		
Used medication to control anxiety or depression	1	3.3	1	3.3	2	3.3		
More than one marked	5	16.7	10	33.3	15	25.0		

Table 4.2a. identified the participant's concepts and beliefs about stress and their Strategies and techniques of coping and adaptation to this stress. There is no significant difference between the experimental and control group concerning these special characteristics for both groups with $p > .05$. Most of the participating students explain away stress as temporary by 65% ($n= 39$) and 80% ($n= 48$) of them don't blame them stress on other people or outside events, and most of the participants are defining stress as an integral part of the studying life. There are a lot of students who are using more than one strategy to adapt to stress but mainly most of them are using relaxation or to take a break strategy to adapt to recurrent stress with a percentage of 51.7% ($n= 31$).

Table 4.2b. The special characteristics of the participated students in the experimental and control groups before interventions.

	Experimental Group (n= 30)		Control Group (n = 30)		Total (n = 60)		Significance Level	
	n	%	n	%	n	%	X ²	p
Emotional coping strategies:								
Brood	2	6.7	2	6.7	4	6.7	3.317	.324
Imagine/Magic thinking	8	26.7	9	30.0	17	28.3		
Avoid/Deny	2	6.7	3	10.0	5	8.3		
Blame	1	3.3	4	13.3	5	8.3		
Social support	8	26.7	2	6.7	10	16.7		
Avoid/Deny and Social support	2	6.7	2	6.7	4	6.7		
More than one marked	7	23.3	8	26.7	15	25.0		
Coping techniques with stress:								
Listening to music	5	16.7	3	10.0	8	13.3	4.123	.289
Physical activity	0	0.0	1	3.3	1	1.7		
Mediation	3	10.0	3	10.0	6	10.0		
Praying	2	6.7	4	13.3	6	10.0		
Crying	5	16.7	2	6.7	7	11.7		
Rest and sleep	8	26.7	7	23.3	15	25.0		
Drinking alcohol, Smoking or/ & use of caffeine	2	6.7	4	13.3	6	10.0		
More than one marked	5	16.7	6	20.0	11	18.3		

Significance value $p < 0.05$

In Table 4.2b. The Imagine/Magic thinking is the common emotional strategy of coping used by participating students to deal with stress but also some of the students are using more than one emotional coping strategy like for example Imagine/Magic thinking, Avoid/Deny, and Social support to cope with stress. Regarding the coping techniques with stress used by participants most of the participated students are using more than one technique for coping and some of this technique are unhealthy as

smoking or & use caffeine or eating too much food but most of them are using healthy techniques as 13.3% (n= 8) of them are listening to the music when they feel stress and 20% (n= 12) are taking rest and sleep.

Table 4.3. The perceived stress test questionnaires result in pre and post tests for experimental and control groups.

Groups		"Experimental Group" n = 30 Mean \pm SD	Control Group n = 30 Mean \pm SD	Test Value t	Significance Value p
PSS Questions	Test				
1. "How often have you been upset because of something that happened unexpectedly during the last month"	Pre	2.13 \pm .776	2.23 \pm 1.13	-.398	.692
	Post	1.96 \pm .669	2.19 \pm .870	1.206	.006
2. "How often have you felt that you were unable to control the important things in your life during the last month"	Pre	2.446 \pm 1.10	2.20 \pm 1.29	.857	.395
	Post	2.26 \pm .974	2.18 \pm 1.21	.767	0.084
3. "How often have you felt nervous and stressed during the last month"	Pre	2.50 \pm 1.10	2.76 \pm 1.04	-.962	.304
	Post	1.63 \pm 2.14	2.72 \pm 1.10	-2.37	.027
4. "How often have you felt confident about your ability to handle your personal problems during the last month"	Pre	3.16 \pm .913	2.16 \pm 1.10	2.196	.034
	Post	2.737 \pm 1.06	2.06 \pm .961	.893	.031
5. "How often have you felt that things were going your way during the last month"	Pre	2.10 \pm .959	2.33 \pm 1.24	-.815	.419
	Post	1.96 \pm .774	2.35 \pm 1.40	-1.05	.029
6. "How often have you found that you could not cope with all the things that you had to do during the last month"	Pre	2.43 \pm 1.07	2.13 \pm 1.66	1.037	.304
	Post	2.01 \pm .879	1.95 \pm .654	1.203	.040
7. "How often have you been able to control irritations in your life during the last month"	Pre	2.43 \pm 1.04	2.33 \pm 1.24	.330	.743
	Post	2.34 \pm 1.70	2.37 \pm 1.44	-.546	.117
8. "How often have you felt that you were on top of things during the last month"	Pre	2.50 \pm .90	2.16 \pm 1.14	1.25	.216
	Post	2.44 \pm 1.10	2.14 \pm .998	.783	0.012
9. "How often have you been angered because of things that happened that were outside of your control during the last month."	Pre	2.30 \pm 1.20	2.80 \pm 1.27	-1.56	.124
	Post	2.33 \pm .988	2.80 \pm 1.27	-1.69	0.007
10. "How often have you felt difficulties were piling up so high that you could not overcome them during the last month"	Pre	1.76 \pm 1.00	2.30 \pm 1.17	-1.88	.064
	Post	1.41 \pm .904	2.21 \pm .783	.869	.032

* Scale Reliability test: (Cronbach's Alpha .833)

Table 4.3 explains the responses of the participants of experimental and control groups on perceived stress test questionnaires in pre and post-test. The participants were requested to answer the scale questions by five choices (0-Never, 1-Almost never, 2-Sometimes, 3-Fairly often, 4-Very often). However, for each question, the higher scores on the Positive domain of the scale indicated an overall high level of stress. While a lower score on the negative domain of the scale indicated overall low stress. Except for the reversed questions (questions number: 4, 5, 7 &8), the higher scores on the Positive domain of the scale indicated an overall low level of stress, and lower scores on the negative domain of the scale indicated an overall high level of stress. Through the above table, we can find that there are significant differences in stress levels for the experimental and control groups, especially in the posttest ($p < 0.05$). In the pretest, the most of answers are going toward the positive domain of the scale which indicates high stress for both groups. While in the post-test for an experimental group more answers are going toward the negative domain of the scale which indicates low stress, for example in questions 1,3,4,6,9...etc. with significance values for these questions less than $p = 0.05$. But for the control group, there was no significant difference in stress level as it's still high in most of the questions $p > 0.05$.

Table 4.4. The coping processing test questionnaires results in pre and post tests for experimental and control groups.

Group		Experimental Group <u>n = 30</u>	Control Group <u>n = 30</u>	Test Value	Significance Value
CAPS Questions	Test	Mean \pm SD	Mean \pm SD	t	P test
1. "Can follow a lot of directions at once, even in a crisis"	Pre	2.13 \pm .860	2.60 \pm .723	-2.273	.027
	Post	3.33 \pm .990	2.82 \pm .811	1.905	.002
2. "Can follow a lot of directions at once, even in a crisis"	Pre	2.70 \pm .952	2.63 \pm 1.06	.255	.799
	Post	3.31 \pm 1.64	2.66 \pm .941	2.310	.015
3. "Generally try to make everything work in my favor"	Pre	2.56 \pm .858	3.13 \pm 1.029	-2.554	.013
	Post	2.96 \pm 1.02	3.33 \pm .960	-1.661	.026
4. "Use humor in handling the situation"	Pre	2.83 \pm .985	2.66 \pm .802	.718	.475
	Post	3.16 \pm 1.22	2.79 \pm .782	2.030	.019
5. "Am more effective under stress"	Pre	1.83 \pm .698	2.06 \pm .944	-1.088	.281
	Post	2.14 \pm .851	2.90 \pm 1.04	- .609	.039
6. "Try to be creative and come up with a new solution"	Pre	2.80 \pm 1.03	2.93 \pm 1.08	-.489	.627
	Post	3.33 \pm 1.21	2.58 \pm .568	.758	.044
7. "Brainstorm as many solutions even if they seem far out"	Pre	2.70 \pm .915	2.80 \pm .996	-.405	.687
	Post	2.71 \pm .927	2.78 \pm .955	-.231	.002
8. "Find I become ill"	Pre	1.93 \pm .827	2.36 \pm .808	-2.051	.045
	Post	2.81 \pm 1.09	2.48 \pm .466	1.951	.002
9. "Try to more resources to deal with the situation"	Pre	2.90 \pm .884	3.03 \pm .808	-.609	.545
	Post	3.47 \pm 1.22	3.01 \pm .904	.479	.041
10. "Don't benefit from my prior experiences for some reason"	Pre	2.03 \pm .808	2.03 \pm .850	.000	1.000
	Post	2.50 \pm .869	2.16 \pm 1.70	.944	.023
11. "Gather as much information as possible to increase options"	Pre	2.80 \pm 1.18	3.16 \pm .985	-1.302	.198
	Post	2.99 \pm .978	3.22 \pm 1.10	- .918	.049
12. "Can think of nothing else, except what's bothering me"	Pre	2.76 \pm .817	2.36 \pm 1.09	1.601	.115
	Post	3.48 \pm .992	2.39 \pm .870	.533	.116
13. "Too often give up easily"	Pre	1.93 \pm 1.11	1.43 \pm .626	2.146	.036
	Post	3.01 \pm 1.72	1.69 \pm .544	1.732	.018
14. "Develop a plan with series of actions to deal with the event"	Pre	1.90 \pm 1.06	1.60 \pm .498	1.401	.167
	Post	2.03 \pm .826	1.51 \pm 1.03	.554	.044
15. "Try to clear up uncertainties before doing anything else"	Pre	2.93 \pm .907	3.03 \pm .927	-.422	.675
	Post	3.35 \pm 1.27	3.41 \pm 1.091	2.07	.002
	P test	0.001	0.481		

*Scale Reliability test: (Cronbach's Alpha .655)

Table 4.4. Identified the coping and adaptation questions answered among participating students in the pre and post-test for experimental and control groups with

four choices (1-Never, 2- Rarely, 3- Sometimes, 4-Always). However, for each question, the higher scores on the Positive domain of the scale indicated an overall high level of coping and adaptation. While lower scores on the negative domain of the scale indicated an overall low level of coping and adaptation. Except for the reversed questions (questions number: 5, 13 &14), the higher scores on the Positive domain of the scale indicated an overall low level of coping and adaptation, and lower scores on the negative domain of the scale indicated an overall high level of coping and adaptation.

The above table showed that the answer to questions by participated students in the experimental group had to go toward the positive domain in the post-test than in the pre-test as it's clear in the most of questions for example; in questions numbers 1,3,12 ...etc. and for the control group, there was no significant difference between pre and post-tests except in some of the questions. The “sometimes” choice is the most common answer selected by participants for the coping and adaptation processing scale questionnaires.

Table 4.5. The mean of stress and coping capacity among experimental and control groups in pre and posttests.

Experimental Group			Control Group		
	pre-test (mean± SD)	post-test (mean± SD)	pre-test (mean± SD)	post-test (mean± SD)	p t
Stress Level	n (%)	n (%)	n (%)	n (%)	
Low level of stress	9.55 ± .942 3 (10)	6.50 ± .466 9 (30)	10.05 ± .511 4 (13.3)	9.50 ± 1.08 6 (20)	.014 1.83
Moderate level of stress	17.17 ± 2.40 11 (36.6)	14.92± 2.41 15 (50)	18.00 ±2.51 14 (46.6)	16.98 ± 1.26 12 (40)	.404 1.95
High level of stress	36.38 ± 4.16 16 (53.3)	29.50 ± 3.82 6 (20)	36.23 ±3.51 12 (40)	36.05 ± 3.79 12 (40)	.986 3.35
t & p	.034	1.306	.403	.776	
Coping Level	n (%)	n (%)	n (%)	n (%)	
Low capacity of coping	19.02 ± 1.77 14(46.6)	24.92 ± 3.61 8 (26.6)	21.24 ± 2.01 13 (43.3)	22.02 ± 1.99 12 (40)	.339 3.34
Mild capacity of coping	38.00 ± 2.95 9 (30)	43.05 ± 2.47 11 (36.6)	37.97 ±3.25 7 (23.3)	40.65 ± 2.44 8 (26.6)	.148 1.18
High capacity of coping	54.10 ± 2.98 7(23.3)	55.80 ± 3.38 11 (36.6)	52.89 ± 2.96 10 (33.3)	52.97 ± 3.06 10 (33.3)	.905 .815
t & p	.021	1.873	.389	.704	

*One-way ANOVA test **t: Test Value; ***p: Significance Value p< 0.05

Table 4.5 Compare the experimental group (who received an online psycho-educational stress management program) and the control group (who didn't receive any intervention during the study period) according to the level of stress and coping

capacity. Also, this table compared the pretest and posttest findings for both groups. For the experimental group, the study found that the mean of the low level of stress was significantly decreased from (9.55 + .942) in pretest to (6.50 + .466) in the posttest, and the high level of stress was decreased from (36.38 + 4.16) in the pretest to (29.50 + 3.82) in the posttest ($p < 0.05$), while the moderate level of stress was slightly decreased from (17.17 + 2.40) to (14.92 + 2.41) in posttest for the same group. The low capacity of coping also has been significantly increased from (19.02 + 1.77) in pretest to (24.92 + 3.61) in posttest and the mean of the mild capacity of coping was increased from (38.00 + 2.95) in pretest to (43.05 + 2.47) in the posttest, while the mean of high capacity of coping is almost the same for pre and posttests with no significant changes ($p > 0.05$).

Regarding the control group; the study has shown no significant and only slight changes in stress level between pretest and posttest with ($p > 0.05$). So the mean of the low level of stress was slightly decreased from (10.05 + .511) in pretest to (9.50 + 1.08), and the moderate level of stress also decreased from (18.00 + 2.51) to (16.98 + 1.26) in the post-test, while the high level of stress was decreased from (36.23 + 3.51) in pretest to around (36.05 + 3.79) in the post-test. About the capacity of coping, the low capacity of coping has slightly increased from (21.24 + 2.01) in pretest to (22.02 + 1.99) in the post-test, while the high capacity of coping was increased from (52.89 + 2.96) in pretest to (52.97 + 3.06) in the posttest ($p > 0.05$).

Table 4.6. Perceived stress and coping capacity mean scores in pre and post tests for experimental and control groups

PSS/CAPS	Groups	Experimental Group (n= 30)	Control Group (n = 30)	Test Value & Significance Values (Between Groups)	
	Test	Mean± SD	Mean± SD	t	p
Perceived Stress	Pre test	21.03 ± 7.38	21.42 ± 8.74	.558	.579
	Post test	16.97 ± 6.00	20.84 ± 7.92	-3.30	.020
	t & p <i>Intergroup</i>	-1.205 .024	-.921 .189		
Coping Capacity	Pre test	37.04 ± 7.88	37.36 ± 9.51	-.828	.411
	Post test	41.25 ± 9.66	37.84 ± 8.64	2.71	.006
	t & p <i>Intergroup</i>	3.103 .002	1.003 .571		

*Test: Independent- sample T test

Table 4.6. The average mean of the perceived stress test and coping capacity was seen with variations in the degree of stress and coping capacity between the pre- and post-test testing and control groups. The above table showed the impact of the instructional program on the study community by the disparity between pre and post-test in the overall mean of stress and coping ability. Consequently, the mean of perceived stress test among the experimental group participants has been decreased from (21.03 ± 7.38) in pretest to (16.97 ± 6.00) in post-test, while the mean of coping capacity increased from (37.04 ± 7.88) in pretest to (41.25 ± 9.66) in posttest for the same group ($p < 0.05$).

There was no significant difference between the pre-test and the post-test in terms of perceived stress and coping capacity with respect to the control group ($p > 0.05$). The average mean perceived stress test declined significantly from $(21.42 + 8.74)$ in the pre-test to $(20.84 + 7.92)$ in the post-test, while the mean coping capacity improved slightly from $(37.36 + 9.51)$ in the pre-test to $(37.84 + 8.64)$ in the post-test.

Table 4.7. The descriptive analysis of stress and coping capacity for experimental and control group in pre and posttest.

Groups		Experimental Group (n= 30)			Control Group (n= 30)			Inter- groups
PSS/ CAPS		Min - Max	Median	Mean (SD)	Min- Max	Median	Mean (SD)	p
Perceived Stress min0 – max40 Mean= 20	Pre test	14 - 40	28.5	21.03 (7.38)	11 - 40	27.0	21.42(8.74)	.908
	Post test	9 – 29	19.0	16.97 (6.00)	10 - 38	25.0	20.84(7.92)	.033
	p + t		.024	4.06		.189	.589	
Coping Capacity Min15–Max 60 Mean =37.5	Pre test	17 - 46	30.5	37.04 (7.88)	16 – 49	32.5	37.36(9.50)	.908
	Post test	21 - 56	42.5	41.25(9.66)	18 - 50	33.5	37.84(8.64)	.018
	P + t		.002	-4.21		.571	-1.18	

*Min =Minimum; ** Max= Maximum; ***SD= Standard Deviation

The above table 4.7. Identified the minimum and maximum, median, and mean test results of perceived stress and coping capacity for intervention and control group in pre and posttest. The above study showed that there is a significant discrepancy

between the pre and posttests about stress and coping capacity in the experimental and control groups. So, there is a decrease in stress level and increase in coping capacity for the experimental group in posttest than the pretest ($p < 0.05$). While no significant difference in stress and coping capacity among the control group in pre and post-test ($p > 0.05$).

TABLE 4.8. Comparison of participated student's stress level to socio-demographical characteristics during pre and post tests for experimental group (n= 30).

	Level of Stress						Significance**
	Low level of stress		Moderate level of stress		High level of stress		
	n	%	n	%	n	%	
Actively practices spiritual/religious beliefs							P< 0.05
Always	3	(10.0)	1	(3.3)	0	(0.0)	No
Sometimes	8	(26.7)	13	(36.7)	3	(10.0)	Yes
Rarely	0	(0.0)	1	(3.3)	0	(0.0)	No
Never	0	(0.0)	0	(0.0)	1	(3.3)	No
*p value			(.047)				
"Marital Status"							
Married	0	(0.0)	1	(3.3)	1	(3.3)	No
Single	6	(20.0)	18	(60.0)	3	(10.0)	Yes
Separated	0	(0.0)	0	(0.0)	1	(3.3)	No
p value			(.042)				
Have a Children							
Yes	0	(0.0)	0	(0.0)	1	(3.3)	No
No	10	(33.3)	11	(36.6)	8	(26.7)	Yes
p value			(.002)				
Family Type							
Occupational situation							
Studying Only	8	(13.3)	10	(33.3)	5	(16.6)	No
Working and studying	0	(0.0)	2	(6.6)	4	(13.3)	Yes
was working before	1	(3.3)	0	(0.0)	0	(0.0)	Yes
p value			(.023)				
Type of accommodation							
Alone	6	(20.0)	9	(30.0)	7	(23.3)	Yes
with Partner	3	(10.0)	5	(16.7)	0	(0.0)	No
p value			(.039)				
Economic status							
Poor	1	(3.3)	3	(10.0)	3	(10.0)	Yes
Fair	5	(16.6)	14	(46.6)	1	(3.3)	Yes
Good	1	(3.3)	2	(6.6)	0	(0.0)	No
p value			(.020)				
Speak Turkish							
A little	10	(33.3)	6	(20.0)	5	(16.6)	Yes
Not at all	1	(3.3)	5	(16.6)	3	(10.0)	No
p value			(.039)				

*Crosstab Chi- square test; ** Post HOC test

Table 4.8. explain the relation between the socio-demographical characteristics and stress level for experimental group in posttest. The students who are actively practices spiritual/religious beliefs in sometimes 73.4% (n= 24), single 90% (n= 27) and have no children, working and studying or was working before 23.2% (n= 7), staying alone 73.3% (n= 22), with poor to fair economic status, and who are speaking a little turkish 69.9% (n= 21) were scientifically affected by the educational program with $p < 0.05$.

TABLE 4.9. Comparison of participated student's capacity to cope to socio-demographical characteristics during pre and post tests for experimental group (n= 30)

	Coping Capacity						Significance**
	Low level of Coping		Mild level of Coping		High level of Coping		P< 0.05
	n	%	n	%	n	%	
Actively practices spiritual/religious beliefs							
Always	0	(0.0)	1	(3.3)	3	(10.0)	Yes
Sometimes	2	(6.6)	13	(36.7)	8	(26.7)	Yes
Rarely	0	(0.0)	1	(3.3)	0	(0.0)	No
Never	1	(3.3)	0	(0.0)	0	(0.0)	No
p value	(.047)						
"Marital Status"							
Married	0	(0.0)	1	(3.3)	1	(3.3)	No
Single	6	(20.0)	5	(16.6)	16	(53.3)	Yes
Separated	0	(0.0)	0	(0.0)	1	(3.3)	No
p value	(.004)						
Have a Children							
Yes	1	(3.3)	0	(0.0)	0	(0.0)	No
No	4	(13.3)	11	(36.6)	14	(46.6)	Yes
p value	(.037)						
Occupational situation							
Studying only	3	(10.0)	10	(33.3)	10	(33.3)	No
Working and studying	0	(0.0)	2	(6.6)	4	(13.3)	Yes
was working before	0	(0.0)	0	(0.0)	1	(3.3)	No
p value	(.023)						
Type of accommodation							
Alone	2	(6.6)	4	(13.3)	16	(53.3)	Yes
with Partner	0	(0.0)	5	(16.7)	3	(10.0)	No
p value	(.039)						
Place of accommodation							
In Campus	1	(3.3)	1	(3.3)	1	(3.3)	No
Out of Campus	3	(10.0)	13	(43.3)	11	(36.6)	Yes
p value	(.047)						
Economic status							
Poor	0	(0.0)	3	(10.0)	4	(13.3)	No
Fair	1	(3.3)	14	(46.6)	5	(16.6)	Yes
Good	0	(0.0)	0	(0.0)	3	(10.0)	Yes
p value	(.017)						
Experience of Travel or Immigration before							
Yes	0	(0.0)	4	(13.3)	6	(20.0)	Yes
No	5	(16.6)	5	(16.6)	10	(28.3)	No
p value	(.044)						
Speak Turkish							
A little	7	(23.3)	6	(20.0)	8	(26.7)	Yes
Not at all	0	(0.0)	3	(10.0)	6	(20.0)	No
p value	(.033)						

*Crosstab Chi- square test ** Post HOC test

Table 4.9. explain the relation between the socio-demographic characteristics and coping capacity for experimental group in posttest. The students who are practicing the spiritual/religious beliefs sometimes or always 83.3% (n= 27), single and have no children 89.9% (n= 27), working and studying 19.9% (n= 6), staying with partner out of campus 26.7% (n= 8), have a fair or good economic status 86.5% (n= 23), experience of travel before 33.3% (n=10), and speaking a little Turkish 70% (n= 21) were scientifically affected by the educational program $p < 0.05$.

5. DISCUSSION

The goal of the study was to compare the coping capacities and perceived stress between international students enrolled in a baccalaureate and those who did or not engaged in online stress management in a psycho-educational context. Controlling fundamental variations between intervention and control groups and investigating the successful of psychoeducational online stress management program in the improvement of international students assigned to experimental groups' levels of stress, cope, and adaptability.

A recent research explored stress level and coping capacity among 60 students, with 100 per cent response rate, chosen and evenly distributed to the experimental and control group. Both students were international nurses registered students in the Spring Semester 2019/2020. Before completing the online six-week psychoeducational program, significant variations were not found in coping capacity and psychological stress between experimental control groups ($p > 0.05$).

Students from foreign countries should socialize beyond of their areas of comfort and decrease their propensity to live with international peers through the transition of skills to real-life circumstances to solve adaptation problems (Zahi, 2004; Alazzi & Chiodo, 2006). The results indicate that most students reported strong psychological distress and less capacity to deal with and cope with the new environment (*Table 4.5*). These results can be partially described in regards to the scarce potentials or limited social contexts of students with international perspectives.

In this study, the international student's participation in the online psycho-educational program significantly increased the level of coping capacity for the participants in the experimental group to $(41.25 + 9.66)$ compare to the other participants in a control group $(37.84 + 8.64)$ with ($p < 0.05$). (*Table 4.6*). The significant changes in stress level and the improvement in the coping capacity could be attributed to the possible contributions of six sessions of online stress management psycho-educational program that emphasized coping and adaptation skills. These sessions helped the participants of the experiment group to consider their problems, and then facilitated dealing with these issues as a challenge rather than a threat. These sessions may also have allowed participants who have received the training program to alter any of their stressful and ineffective thinking, to choose alternate coping

strategies to enhance their coping ability. Previous studies have also shown that reducing stress levels and enhancing the ability of international students to cope will effectively affect the development of their mental health (Akhtar and Kroener , 2017).

Most of participants (85%) were under the age of 25 and their average age was 18.8. In addition, with more than 93 percent, most of the participants are African (Table 4.1). In addition to the undergraduate university research course workloads and the minimal social support for learners, we predicted that it may be difficult to pass the acquired skills to handle stress and cope with difficulties in six weeks. In addition, going through a phase of coping and adaptation earlier may involve resilience, open-mindedness to changes, cultural awareness (Kağnici, 2012), and altering some idealism in the participants attitudes. Therefore, in coping earlier and relieving stress, comparatively younger, agile, and open-minded international students can have good advantages. In addition, while the most of the community members were from different nations, the earlier coping and adaptation may have been strengthened by being abroad to study in Northern Cyprus, which has a collectivist society and cultures' (Bektas et al., 2009). This was clear as a socializing obstacle in the first sessions interactions of the group members was complaining from potential stress and cultural gaps.

In addition, the variations in coping and adaptation outcomes could be partly linked to the study participants' homogeneous context (Pane et al., 2016; Smith & Khawaje, 2015) because most of the participants are from African countries. It was stated that the degree of stress and adaptation were correlated with cultural differences (Bastien et al., 2018). The similarity in cultures may have resulted in the growth of group relationships, as participants would share more beliefs and values. Therefore, it could take time to turn the insights learned in the lessons into actual life and major changes in the adjustment levels for the group members were not noticeable in the post-test assessments. The findings of follow up, however, showed the lengthy impact of the program on enhancing tolerance and dealing with self-efficacy though reducing the level of anxiety, which could be attributed to extending the duration of stay and increasing comfort with the new environment over time.

The results revealed substantial differences in all the two variables linked to intra-group differences, e.g., coping capacity and level of stress for the experimental

group. The online psycho-educational intervention participation has also led to a decrease in stress levels from (21.03 +7.38) to (16.97 +6.00) and an improvement in coping ability levels from (37.04 +7.88) to (41.25 + 9.66), as shown in Table 4.7. In comparison with the baseline findings. The psychological stress results findings were similar with those of Pane et al. (2016) and were opposite to study of Smith and Khawajaa (2015). Therefore, in this research, the web-based psycho-educational program contributed to substantial improvements in the levels of stress for the participants who obtained post-test intervention. In addition, the coping capacity and adaptation findings seem to be consistent with Smith and Khawajaa findings (2015). The possible reason for these findings may be consistent with the methodology of "cognitive-behavioral therapy". Based on this strategy, people can learn to more realistically and adaptively evaluate their dysfunctional thinking and experience alterations in their thought pattern and actions (Beck., 2011). It is also safe to believe that participating in the online psycho-educational program could have modified the views of the group member regarding adaptation challenges and cope with them. If the respondents continued to reflect through of the sessions on their challenges and tension causes, they may have reshaped their beliefs and confronted some of their feelings that create stress, such as blaming their stress on other people or external events, or believing that stress is permanent as in Table 4.2.

An interesting finding from this research was the strong association between stress and coping ability, so when the mean stress decreased from 21.03 to 16.97, the mean coping capacity increased from 37.04 to 41.25. Compatible with another research done by Hirasch et al., 2015 and Tully, 2004. More directly, as a high reactive coping capacity, the overall stress correlated with coping capacity, less productive methods in adapting with high and moderate stress were less productive. These dysfunctional coping capacities had a greater effect on levels of stress. Although the less stress perceived by the participants was associated with high coping capacity. This seemed to indicate that their coping capabilities behaviors are less improved or activated when international students are faced with highly stressful school conditions and accommodation. Previous research findings have linked consistent employment of coping practices with lower awareness of stress (Yildirim, 2017; Chane, 2009). Likewise, Rossi et al. (2014) study show that the regular use of coping techniques has

been shown to be effective in - learning achievement and minimizing stress.

The information supported the hypothesis of to expect a low level of stress, predict a high level of self-reported Turkish language proficiency. It was shown to be a moderately good indicator of stress, a result shown in previous research as well. (Cao et al., 2016; Duru & Poyrazli, 2007), it was derived that the stress triggers for Students with international perspectives were to communicate in a new language. In addition, during their transition, one another problem related to limited uses for other languages in Northern Cyprus by Turkish and Cypriot students or by the host population (Goldberg & Hoyt, 2015). In order to contribute to the socialization of international perspectives students, the use of Turkish was suggested not only as a medium of instruction but also as a means of contact in their everyday lives (Cura & Işık, 2016). Future research should also explore ways to assess the achievements of psycho-educational groups have not only have psychological traits, but also the ability to use local languages in a therapy process to communicate their emotional experiences.

The current study provided a several findings related to stress level and coping capacities in relation with socio-demographic variables for international students (*Table 4.8 & Table 4.9*). Age, Gender, nationality, ethnicity, and religious background identity did not show up as a significant predictive factor in the level of stress and coping capacity in pre and post-tests ($p > 0.05$). While active spiritual or religious beliefs activities are an essential descriptive factor for the differences found in the degree of stress and coping ability, as 100% of participants who were seldom or never spiritual practices demonstrate high levels of stress and coping ability in the pretest with some improvement in the post tests ($p < 0.05$). In addition, this study found that stress and coping in international students vary because of prior travel or immigration experience. Those who have traveled or experienced immigration before are more capable of using coping mechanisms in stressful circumstances, while those who have not traveled or experienced immigration before are less likely to deal with and cope with stressful situations (*Table 4.9*) as in previous study of Mena et al., 1987. This research, on the other hand, adds that participating students who are married and have children, especially students who stay away from their families and children, 90 percent of them have shown a higher level of stress with low coping capacity than students who are single and have no children by 26.6%. Since the majority of students

in this study lived alone by 70% and did not share accommodation with friends or family, this could also be involved in raising stress levels and decreasing coping skills as staying and interacting with friends and family may help reduce stress and improve coping ability (Reeve et al. 2013). Moreover, an important descriptive factor for the variations found in the degree of stress is the economic status and the main source of financial support ($p < 0.05$). These findings indicate that respondents with poor economic status are more vulnerable to have high stress and low ability to cope. As most of the participants with low economic status are working to obtain their daily fees and tuition fees while studying 13.3 percent and most of those who have to survive on personal earnings are exposed to additional stresses, such as trying to explore an acceptable profession, dealing with the requirements of their research and real life problems, including their social life.

Further analysis of our data showed that there are no significant variations between students with a history of mental or physical illnesses in the areas of stress and coping capacity ($p > 0.05$), this study found that the international participating students have a history of mental or physical illnesses do not complain about more stress or low coping capacity than the participants who are physically and mentally fit.

The results of this research can provide valuable data for faculties in applying evidence based validated interventions that could avoid the repetition of distress and reduce the adverse effects. This can include providing stress control therapy (Chene & Hung., 2013), providing supporting services (Seyed-fateme et al., 2007), and developing or promoting friends and community support networks (Seyed-fateme et al., 2007). (L. Labrague et. al. 2018). Formulating policies for universities that help Students with international perspectives (Al-Zayat & Al-Gamal, 2014). It will help them well cope with stressor`s and boost their academic performance by reinforcing the positive coping strategies of international students. Labrague et al. (2017b) notes that it is helpful to relate particular coping mechanisms to the stressors of the school to better prepare students to effectively handle stress. Successfully coping not mean only decreases international students' level of stress levels, but also reduces the impact of stress on their psycho social and physical health (Klainin Y et al., 2014), so supporting student`s to strengthen their adaptation practices is important to enhance the self-efficacy of students through simulation will enhance and improve the coping

of international students (Zhao et al., 2015).

Our findings provide university counselors and other student support service providers with information about how international students can be helped to deal with their tension and the techniques they can use to reinforce their cross-cultural adjustment is assisted by psychologists and other student service providers. University support services by offering coping techniques instruction along with cross-cultural training seminars (Mak & Buckingham, 2007) could help international learners know not only the skills and knowledge they need to handle in the receiving environment, but also develop relevant and efficient methods to overcome the tension posed by migration, supporting their socio-cultural and cultural environment.

This research is one of the first researches connect perceived stress with adaptation from a multi-country perspective for international students, so this research has contributed to increasing awareness among international students about stress and coping. The results of this study could provide useful insight on the same subject. For those investigators who are working on the similar subject, a research that uses a longitudinal research method to find the improvements in the resilience capacities of international students may provide a clearer image of this concern. To assess the level to which stress influenced student`s, further research relating to experience of stress and coping abilities to the educational outcomes of students are needed. In potential researches to alleviate distress and increase coping abilities for students of nursing, research investigating empirically validated and culturally relevant approaches should be undertaken.

This study is a reference in several respects to the current publications on the coping and adaptation of students with international perspectives. First, this study is one of the first studies which evaluate the impacts of an online psycho-educational intervention and may be helpful in developing programs to facilitate the coping and adjustment of students with international perspectives in Northern Cyprus. Secondly, a cognitive-behavioral educational program was included in this research could therefore give some relevant observational data that may promote the training of psycho-educational programs oriented towards cognitive behavior. Thirdly, the supervision process during the online psycho-educational intervention in this study could have helped modify and/or add alternative lessons practices to match the needs

of the group participants in advance. Fourthly, in terms of use of the control group method, this study assumed the weaknesses of earlier studies, such as Smith and Khawajaa, 2015; Binder et al. 2013 and Pan et al., 2016.

Finally, becoming a member of an experimental group on its own may have had a positive impact on adaptation, as the participants were felt more convenient by getting a secure place to know how to deal with their recurrent stress and discovered that they were not the only one in the group with coping difficulty. In addition, the non-judgmental and welcoming character of the group setting may have assisted them to feel less stressed and more optimistic in taking small moves to face challenges in coping.

5.1.The Study Limitations

1. There may be other factors that impact international students' stress management and coping mechanisms negatively or positively. Follow-up studies may be needed for these variables to be determined.
2. The results belong to the sample group. It cannot be generalized to all international students.

6. CONCLUSION AND SUGGESTIONS

6.1. Conclusion

This thesis investigated the influence of an online psychoeducational stress management program on the coping abilities and stress levels of international students who study in the Turkish Republic of Northern Cyprus at Near East University.

Before the intervention:

In this study, before the intervention there were no significance variation between the control and experimental group in socio- demographic characteristics ($p > 0.05$). In this study, most of the participated students was female with 63.3% ($n=41$), aged from 17 – 20 years old by 51.7% ($n= 31$). Regarding the ethnicity 90% ($n=54$) of participants are black and African backgrounds. 76.6% ($n=47$) of them are Christian and 90% ($n= 54$) of participants are single and have no children. While, the majority of participants are staying alone and out of campus with 85% ($n=51$). 13.3% ($n= 8$) students are working and studying at the same time and for 63.3% ($n= 38$) of participants, this is the first time they experience travel or Immigration. 98.3% ($n= 59$) not speaking or speaking a little Turkish.

In pretest, there was no meaningful differences founded between the experiment and control group in stress level by mean point (21.03 ± 7.38) for experimental group and (21.42 ± 8.74) for control group and in coping capacity by mean (37.04 ± 7.88) for experimental group and (37.36 ± 9.50) for control group.

After the interventions

After the interventions there was a reducing in stress level and increase in coping capacity for experimental group in posttest than the pretest ($p < 0.05$). So, the mean of perceived stress test for the experimental group have been decreased from ($21.03 + 7.38$) in pretest to ($16.97 + 6.00$) in posttest. While the mean of coping capacity increased from ($37.04 + 7.88$) in pretest to ($41.25 + 9.66$) in posttest. Regarding the control group the study has shown there was no significant difference and only slightly changes in stress level coping capacity between pretest and posttest ($p > 0.05$).

Actively practices spiritual/religious beliefs, marital status, having children, occupational situation, economic status, experience of travel or immigration, and speaking the Turkish language were significantly affected on stress level and coping capacity among experimental group with $p < 0.05$.

Finally, these findings found that the educational intervention was passed in lowering the level of stress and improving the coping ability for interventional group participants. In addition, this research is significant in adds to the literature of international students in Northern Cyprus. This program could have enabled international students to understand and improve their dysfunctional feelings. Conclude, this research indicates that its online psycho-educational stress management intervention was successful in enhancing international student's adaptation ability.

6.2. Suggestions

1. More studies are recommended and to take the weaknesses of this study into consideration, and the educational program can used with caution to promote coping and adaptation for international students.
2. Because of the exponential rise in the international student's number worldwide, it is important to promote professional and non-professional support for international students to enhance their coping with the new environment.
3. Orientation about Psychological support services could improve the awareness of students to make informed decisions by engaging in such psycho-educational programs.
4. Psychiatric nurses may collaborate with international student associations and the international student's offices to make it easy to reach for international students.
5. Some international students may not readily agree that psychiatric support centers seek psychological support services. Consequently, counseling centers may recommend reaching out to international students instead of waiting for them to come on their own for psychological help.
6. Conducting workshops or seminars or searching for alternative types of students support programs which can promote access to resources for international students to facilitate international student's adaptation.
7. Psychiatric support centers should be provided by educated psychiatric nurses with knowledge in multicultural therapy who can also offer programs by using of English languages for international students.

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ENCLOSURE I

CURRICULUM VITAE

Name	TALAL	Surname	BANI AHMAD
Place of Birth	Amman- Jordan	Date of Birth	13/07/1982
Nationality	Jordanian	Tel	05428729352
E-mail	tahmad@neu.edu.te		

Educational Level

	Name of the Institution where he/she was graduated	Graduation year
Postgraduate/Specialization	Near East University/ Nursing Faculty (Mental Health & nursing)	-----
Masters	Near East University /Nursing Faculty (Mental Health & nursing)	2018
Undergraduate	Al-Albayte University / Nursing	2005
High school	Sakeb secondary school (Science) / Jordan	2001

Job Experience

	Duty	Institution	Duration (Year - Year)
	Nursing Lecturer	Cyprus International University	2019 – till Now
	BLS & First Aid Instructor	American Heart Association	2009 - 2017
	Nurse Educator	Dar Al-shifa Hospital	2007- 2009
	Clinical Instructor	Jerash University	2005- 2007

Foreign Languages	Reading comprehension	Speaking*	Writing*
English	Excellent	Excellent	Excellent
Arabic	Excellent	Excellent	Excellent

Foreign Language Examination Grade[#]								
YDS	ÜDS	IELTS	TOEFL IBT	TOEFL PBT	TOEFL CBT	FCE	CAE	CPE
Pass								

Computer Knowledge

Program	Use proficiency
Word, Excel and PowerPoint	Excellent
Internet Explorer	Excellent
SPSS Program	Very Good

ENCLOSURE II

Stress Management Educational Program Based on Roy Adaptation Model

Week Number	Sessions	Educational Subjects	Education Method	Material	Duration
WEEK 1	Session 1	<ul style="list-style-type: none"> ➤ Orientations ➤ Program introduction and objectives ➤ Signing the Consent Form ➤ Pre- test 	Question answer, Online discussion	Online Meeting program, Consent Form & Assessment scales	50min
	Session 2	Stress Overview: <ul style="list-style-type: none"> ➤ Stress definition ➤ Causes ➤ Effects of Stress ➤ Sign and symptoms of stress ➤ Complication ➤ Stress Management Strategies 	Power point presentation, Videos, question answer	Online educational Program, internet explorer access, Smart phone or Laptop	60min
WEEK 2	Session 3	Physiological adaptation mode with stress: <ul style="list-style-type: none"> ➤ Nervous system and endocrine system responses to the human stress ➤ Energy utilization and energy storage during stress exposure ➤ Sex – specific difference's in response and adaptation with stress ➤ The role of changing health behavior and lifestyles with maintaining a "healthy diet, avoiding smoking and engaging in regular physical activity in stress management". 	Power point presentation, Videos, question answer	Online educational Program, internet explorer access, Smart phone or Laptop	60min

WEEK 3	Session 4	Self-concept Adaptation mode: <ul style="list-style-type: none"> ➤ Self-Concept Meaning ➤ How one with stress can normally see his own physical being (Body sensation and Body image) ➤ "how one with stress can positively views his qualities, values and worth (Self-consistency, Self-ideal/self-expectancy and Moral-ethical-spiritual self)" ➤ "Effective coping methods, positive body image, functional self-esteem, physical changes, spiritual integrity in stress management". 	Power point presentation, question answer, videos	Online educational Program, internet explorer access, Smart phone or Laptop	60min
WEEK 4	Session 5	"Role Function Mode: <ul style="list-style-type: none"> ➤ "Evolution of roles one occupies in the society" ➤ "effective coping process in role change" ➤ "responsibility to fulfill roles" ➤ "combine effective roles, balanced role competence" 	Power point presentation, question answer, videos	Online educational Program, internet explorer access, Smart phone or Laptop	60min
WEEK 5	Session 6	Interdependence Mode: <ul style="list-style-type: none"> ➤ "Qualification of important persons and support systems" ➤ "effective coping methods in case of feeling loneliness" ➤ "adequate development for learning and maturation in relationships" ➤ "Intimate relationships and less intimate relationships Program ending" 	Power point presentation, question answer, videos	Online educational Program, internet explorer access, Smart phone or Laptop	60min
WEEK 6	Session 7	Post- test & Program evaluation and feedback	Question answer, Online discussion	Assessment Scales& Educational program evaluation Sheets	45 min

ENCLOSURE III

Educational Program Timetable

Sessions	Date & Time	Subjects	Duration
Session 1	11.05.2020 4pm	General Orientations, Program introduction and objectives	20 minutes
		Signing the Consent Form	05 minutes
		Pre- test	25 minutes
Session 2	13.05.2020 6pm	Stress definition	05 minutes
		Causes	05minutes
		Effects of Stress	07 minutes
		Sign and symptoms of stress	05 minutes
		Complication	08 minutes
		Stress Management Strategies	30 minutes
Session 3	18.05.2020 6pm	Nervous system and endocrine system responses to the human stress	10minutes
		Energy utilization and energy storage during stress exposure	10minutes
		Sex – specific deference’s in response and adaptation with stress	10minutes
		The role of changing health behavior and lifestyles with maintaining a healthy diet	30minutes
Session 4	25.05.2020 6pm	Self-Concept Meaning	02minutes
		How one with stress can normally see his own physical being (Body sensation and Body image)	15minutes
		"how one with stress can positively views his qualities, values and worth (Self-consistency, Self-ideal/self-expectancy and Moral-ethical-spiritual self)"	15minutes
		"Effective coping methods, positive body image, functional self-esteem, physical changes, spiritual integrity in stress management"	28minutes
Session 5	01.06.2020 6pm	Evolution of roles one occupies in the society	10minutes
		"effective coping process in role change"	20minutes
		"responsibility to fulfill roles"	10minutes
		"combine effective roles	10minutes

		balanced role competence"	10minutes
Session 6	08.06.2020 6pm	"Qualification of important persons and support systems"	12minutes
		"effective coping methods in case of feeling loneliness"	15minutes
		"adequate development for learning and maturation in relationships"	13minutes
		"Intimate relationships and less intimate relationships"	10minutes
		Program ending	10minutes
Session 7	15.06.2020 4pm	Post- test	25 minutes
		Program evaluation and feedback	20minutes

ENCLOSURE IV

Demographical Characteristics:

Age:	<input type="checkbox"/> 17-20 <input type="checkbox"/> 21-25 <input type="checkbox"/> 26-30 <input type="checkbox"/> > 30
Gender:	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other: _____
Nationality	
Ethnicity	<input type="checkbox"/> White <input type="checkbox"/> Black or African-American <input type="checkbox"/> Asian <input type="checkbox"/> Hispanic <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> Middle Eastern <input type="checkbox"/> American Indian <input type="checkbox"/> Other: _____
Religious Background:	<input type="checkbox"/> Christian <input type="checkbox"/> Jewish <input type="checkbox"/> Muslim <input type="checkbox"/> Other: _____
Actively practices spiritual/religious beliefs	<input type="checkbox"/> always <input type="checkbox"/> sometimes <input type="checkbox"/> rarely <input type="checkbox"/> Never
Marital Status:	<input type="checkbox"/> Married <input type="checkbox"/> Single <input type="checkbox"/> Divorced <input type="checkbox"/> Separated <input type="checkbox"/> Widowed
Do you have Children	<input type="checkbox"/> Yes <input type="checkbox"/> No
Family Type:	<input type="checkbox"/> Single Parent <input type="checkbox"/> Extended <input type="checkbox"/> Nuclear <input type="checkbox"/> Reconstituted
Occupational situation	<input type="checkbox"/> Working and studying <input type="checkbox"/> studying only <input type="checkbox"/> was working before
Type of living	<input type="checkbox"/> Alone <input type="checkbox"/> with Partner
Place of living	<input type="checkbox"/> In Campus <input type="checkbox"/> Out of Campus
Payment for school	<input type="checkbox"/> By her/himself <input type="checkbox"/> Scholarship/ Funding <input type="checkbox"/> Parent /Family <input type="checkbox"/> Loan
Economic status	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good
Do you Have experience of travel or Immigration	<input type="checkbox"/> Yes <input type="checkbox"/> No
Do you Speak Turkish	<input type="checkbox"/> Yes <input type="checkbox"/> A little <input type="checkbox"/> Not at all

Do you have history of mental health illnesses	<input type="checkbox"/> Yes <input type="checkbox"/> No
Do you have history of chronic physical illnesses	<input type="checkbox"/> Yes <input type="checkbox"/> No
"Do you explain away stress as temporary"	<input type="checkbox"/> Yes <input type="checkbox"/> No
"Do you define stress as an integral part of your studying life"	<input type="checkbox"/> Yes <input type="checkbox"/> No
"Do you blame your stress on other people or outside events?"	<input type="checkbox"/> Yes <input type="checkbox"/> No
Your Adaptive strategies with stress	<input type="checkbox"/> Complained <input type="checkbox"/> pursuing hobbies, reading or watching television. <input type="checkbox"/> Relied on others who have the ability to solve the problem. <input type="checkbox"/> Concluded that things could have been worse <input type="checkbox"/> Tried to relax or to take a break <input type="checkbox"/> Used medication to control anxiety or depression
Your Emotional coping strategies which used to handle feelings of distress	<input type="checkbox"/> Brood e.g. you accept but you keep complaining and saying it is unfair. <input type="checkbox"/> Imagine/Magic thinking e.g. You dream about a better situation <input type="checkbox"/> Avoid/Deny e.g. You avoid everything that is related to this situation <input type="checkbox"/> Blame e.g. You blame yourself or others for the situation. <input type="checkbox"/> Social support e.g. You talk to your best friend about your concerns.
Your Coping techniques with stress	<input type="checkbox"/> Listening to music <input type="checkbox"/> Physical activity <input type="checkbox"/> Reading <input type="checkbox"/> Meditation <input type="checkbox"/> Praying, going to church <input type="checkbox"/> Yoga <input type="checkbox"/> Getting a massage <input type="checkbox"/> Substance and alcohol use <input type="checkbox"/> Crying <input type="checkbox"/> Rest and sleep <input type="checkbox"/> Eating too much food <input type="checkbox"/> Smoking or use of caffeine <input type="checkbox"/> Other: _____

ENCLOSURE V

Perceived Stress Scale

For each question choose from the following alternatives:

0 - never

1 - almost never

2 – sometimes

3. - fairly often

4 - very often

- _____ 1. In the last month, how often have you been upset because of something that happened unexpectedly?
- _____ 2. In the last month, how often have you felt that you were unable to control the important things in your life?
- _____ 3. In the last month, how often have you felt nervous and stressed?
- _____ 4. In the last month, how often have you felt confident about your ability to handle your personal problems?
- _____ 5. In the last month, how often have you felt that things were going your way?
- _____ 6. In the last month, how often have you found that you could not cope with all the things that you had to do?
- _____ 7. In the last month, how often have you been able to control irritations in your life?
- _____ 8. In the last month, how often have you felt that you were on top of things?
- _____ 9. In the last month, how often have you been angered because of things that happened that were outside of your control?
- _____ 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

ENCLOSURE VI

The Coping-Adaptation Processing Scale

Directions: Sometimes people experience very difficult events or crises in their lives. Below is a list of ways in which people respond to those events. For each item, please circle the number closest to how you personally respond: 1 = never; 2 = rarely; 3 = sometimes; or 4 = always.

"When I experience a crisis, or extremely difficult event, I..."

1 = NEVER
2 = RARELY
3 = SOMETIMES
4 = ALWAYS

	Never	Rarely	Sometimes	Always
1. Can follow a lot of directions at once, even in a crisis	1	2	3	4
2. Call the problem what it is and try to see the whole picture	1	2	3	4
3. Generally, try to make everything work in my favor	1	2	3	4
4. Use humor in handling the situation	1	2	3	4
5. Am more effective under stress	1	2	3	4
6. Try to be creative and come up with a new solution	1	2	3	4
7. Brainstorm as many solutions, even if they seem far out	1	2	3	4
8. Find I become ill	1	2	3	4

9. Try to get more resources to deal with the situation	1	2	3	4
10. Don't seem to benefit from my prior experience for some reason	1	2	3	4
11. Gather as much information as possible to increase options	1	2	3	4
12. Can think of nothing else, except what's bothering me	1	2	3	4
13. Too often give up easily	1	2	3	4
14. Develop a plan with series of actions to deal with the event	1	2	3	4
15. Try to clear up uncertainties before doing anything else	1	2	3	4

ENCLOSURE VII

INFORMED CONSENT FORM FOR ADULTS (FOR THE STUDENTS / PARTICIPANTS)

You are invited to participate in a research study conducted by Assist. Prof. Meltem Meriç and Talal Bani Ahmad, from the Near East University Faculty of Nursing Dep. This study was planned to determinate the effect of an online psycho-educational stress management program on the international student's coping and adaptation. You were selected as a possible participant in this study, because findings of the study may be useful in improving the international nursing students' coping and adaptation with stress. If you decide to participate, a questionnaire will be used as data collection tool in this study. The questionnaire contains questions regarding for demographics, Precieved Stress Test (PST) include 10 items with 5 choices (0 – never 1 – almost never 2 – sometimes 3 – fairly often 4 – very often) and Copying & Adaptation Processing Scaleincluded 47-itemswith 4 choices (1–Never 2 – Rarely 3 –Sometimes 4 -Always), this questionnaire may take approximately 25 minutes to complete. However, I cannot guarantee that you personally will receive any benefits from this research. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Subject identities will be kept confidential by don't using the name, and using participant coding. Your participation is voluntary. Your decision whether or not to participate will not affect your relationship with Near East University. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time without penalty. If you have any questions about the study, please feel free to contact [05488711470- talol_2004@yahoo.com]. [05304199473– meltem.meric@neu.edu.tr]. If you have questions regarding your rights as a research subject, please contact the Near East Institutional Review Board. You will be offered a copy of this form to keep. Your signature indicates that you have read and understand the information provided above, that you willingly agree to participate, that you may withdraw your consent at any time and discontinue participation without penalty, that you will receive a copy of this form, and that you are not waiving any legal claims.

Participant

Name, Surname:

Address:

Phone:

Signature:

Researcher:

Name, Surname:

Address:

Phone:

Signature:

Witness

Name, Surname:

Address:

Phone:

Signature:

ENCLOSURE VIII


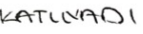










YAKIN DOĞU ÜNİVERSİTESİ BİLİMSEL ARAŞTIRMALAR ETİK KURULU

ARAŞTIRMA PROJESİ DEĞERLENDİRME RAPORU

Toplantı Tarihi : 23.01.2020
Toplantı No : 2020/76
Proje No :996

Yakin Doğu Üniversitesi Hemşirelik Fakültesi öğretim üyelerinden Yrd. Doç. Dr. Meltem Meriç'in sorumlu araştırmacısı olduğu, YDU/2020/76-996 proje numaralı ve "The Effect of an Online Psycho-educational Stress Management Program on the International Students Coping and Adaptation" başlıklı proje önerisi kurulumuzca değerlendirilmiş olup, etik olarak uygun bulunmuştur.

- | | |
|-------------------------------------|---|
| 1. Prof. Dr. Rüştü Onur | (BAŞKAN)  |
| 2. Prof. Dr. Nerin Bahçeciler Önder | (ÜYE)  |
| 3. Prof. Dr. Tamer Yılmaz | (ÜYE)  |
| 4. Prof. Dr. Şahan Saygı | (ÜYE)  |
| 5. Prof. Dr. Şanda Çalı | (ÜYE)  |
| 6. Prof. Dr. Nedim Çakır | (ÜYE)  |
| 7. Prof. Dr. Nurhan Bayraktar | (ÜYE)  |
| 8. Doç. Dr. Nilüfer Galip Çelik | (ÜYE)  |
| 9. Doç. Dr. Emil Mammadov | (ÜYE)  |
| 10. Doç. Dr. Mehtap Tınazlı | (ÜYE)  |