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This doctoral project, directed and approved by the candidate's committee, has been accepted by the College of Graduate and Professional Studies of Abilene Christian University in partial fulfillment of the requirements for the degree

Doctor Of Nursing Practice

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Date: June 23, 2022

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Addressing Stress in Graduate Nurse Practitioner Nursing Students

A doctoral project submitted in partial satisfaction

of the requirements for the degree of

Doctor of Nursing Practice

by

Shandria K. Sawyer, MSN, FNP-C

August 2022

Dedication

This DNP project is dedicated to all nursing students who experience stress with academic challenges. My objective was to provide work that gives insight but also strengthens resilience. Contributing to the growth and improvement of nursing education and the nursing curriculum was the aim of this project. I empathized with this initiative as a student and professional nurse because I have had similar struggles.

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I want to thank God for blessing me with wisdom and knowledge. I will always be grateful for how you carried me when I was weakest. I thank the Lord for his wisdom, courage, and flawless design for my life. I am capable of anything because of you.

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Abstract

This project was developed to address the issue of high stress levels among graduate nursing students, which is a common phenomenon that increases the risks of mental health disorders, professional burnout, and poor-quality patient care among students and professional nurses after earning their degrees. This project sought to utilize a simple educational intervention delivered online to impart coping skills to graduate nursing students to assist them in reducing their stress levels. The intervention was a brief, single-session, self-guided educational module featuring informational and participative elements related to stress causes, the impacts of stress, and stress reduction techniques. In total, 11 graduate nurse practitioner students from one nursing program took part in the project. The analytical results indicated that the participants experienced significant ($p < .05$) improvements in their usage of healthy coping skills after taking part in the intervention compared to before. Moreover, the participants reported lower levels of stress at postintervention compared to pre-intervention. These findings suggest that nursing programs should screen for stress among graduate students and offer options for stress education and reduction to students. The findings could therefore help to improve stress outcomes and related patient care outcomes for graduate nursing students through offering ways for students to learn healthy coping techniques.

Keywords: stress, professional burnout, nursing, coping, intervention

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Chapter 1: Introduction

Nursing students experience many stressors during their academic careers, and these stressors commonly lead to high stress levels among nursing graduate students. Factors such as the rigorous nature of nursing programs alongside financial concerns, concerns about the support students receive from faculty, difficulties attaining work-life balance, and worries related to one's present or future professional career in nursing are the most frequently reported among nursing students (Boulton & O'Connell, 2017; Volkert et al., 2018). Researchers have estimated that 32% to 43% of graduate nursing students in the United States experience levels of stress that are high enough to have adverse impacts on the students' lives (Enns et al., 2018; Olvera Alvarez et al., 2019).

Nursing students who experience excessive stress for a prolonged period may also experience a wide range of negative outcomes. These adverse impacts include effects on the students' academic, professional, and social functioning, as well as on the students' physical and mental health (Olvera Alvarez et al., 2019). For example, roughly 40% of nursing graduate students are lost to attrition before they complete their degrees, which is often a choice made based on high stress (Volkert et al., 2018). Volkert et al. (2018) found in their study of 835 graduate students from across the United States that most individuals who expressed the intent to leave their programs experienced excessive stress and cited this stress as a factor in their decision. Nursing students who experience stress are also more likely to experience depression, anxiety, and substance abuse disorders as negative mental health outcomes (Olvera Alvarez et al., 2019). Stress can also influence the development of a sense of detachment from the nursing discipline and contribute to professional burnout, which can seriously impede nurses' capacities to deliver compassionate, effective, patient-centered care services (Preto et al., 2018; Stillwell et

al., 2017). These harmful impacts on the health and functioning of nursing students show why it is important to understand what students perceive to be their stressors. However, once stressful perceptions have been identified, it is essential to implement interventions to manage those stressors for overall success.

Higher education is a demanding and transformative time for nursing students (Tollefson et al., 2017). Graduate education has been reported as being perceived as isolating and overwhelming for more than 60% of nursing students involved in master's or doctoral programs (Volkert et al., 2018). Stress is often produced by the extensive demands of balancing nursing work and the intensive course loads of graduate level nursing education, coupled with a perceived lack of sufficient support from one's educational program (Volkert et al., 2018). Additionally, nursing students face a variety of other stressors that can often vary according to their life situations (Boulton & O'Connell, 2018; Enns et al., 2018). As a nursing educator, being able to identify stressors and act accordingly is relevant to a successful and productive teaching-learning environment. Nursing is a demanding career choice, and rigorous training is necessary to produce competent professionals. Personal experiences from both perspectives (as a student and as an instructor) have influenced this project.

Being prepared for stressful situations is not only useful for academic preparation but also for the future of the professional career of study (Van Vliet et al., 2017). The reflective practice of preparedness and self-awareness are regarded as essential elements of professionalism (Van Vliet et al., 2017). Nursing faculty can be helpful in being active participants in identifying stressors and promoting healthy learning environments. This idea makes this study appropriate for further research. Stress levels should be minimized to a level that encourages the student to grow and progress through the nursing curriculum. This DNP

project addressed this issue by identifying stress in graduate nurse practitioner (NP) nursing students and introducing and implementing an educational intervention.

Nature of Project

This research project is needed to add to current literature on graduate students and stress experiences as the current literature review is limited in respect to stress education intervention for graduate students. I discuss the project's relevance, the need for the project, and its significance. In this chapter, I also identify the problem of interest (POI) that the project addressed, while the subsequent sections discuss the purpose of the project in relation to the POI, and the significance of the POI. Also, key terms used in the project are defined, along with the project's scope and limitations, and the project's theoretical framework. The final component of the introduction chapter summarizes the relevant points. The nature of this DNP project was to evaluate the impact of an education intervention to nursing students who experience stress.

Problem of Interest

The POI that the DNP project addressed is the need to identify stressors perceived by graduate NP nursing students and provide an educational intervention to likely reduce identified stressors. Although all students experience stress (either positive or negative) at some point during their academic careers, applying education may provide insight into a detailed stress management approach.

Purpose of the Project

The purpose of the DNP project was to evaluate the impact of an educational intervention about stress and how to manage and reduce it. This project will assess any changes in stress levels among graduate NP nursing students currently enrolled in their graduate education studies and evaluate the effectiveness of the implemented education intervention. Psychological stress

can involve environmental factors that exceed the individual's physiological, social, and emotional resources for managing them (Senturk & Dogan, 2018).

Differences in stressors and stress levels were expected. Some participants may even deny that stress affects them. However, the results provided insight to the coping strategies necessary to assist with any identified stressors. Everyone will experience various levels and diverse types of stress. Developing effective coping strategies can prove to be effective in problem-solving efforts (Labrague et al., 2017). Although some stress is necessary for learning to take place, levels of negative stressors can affect an individual physically and emotionally and therefore impact their learning abilities and concentration levels. When students are unable to concentrate, one's professional identity as a nurse could be threatened. Prompt intervention is necessary for learning to be restructured. It is vital to identify and minimize stress levels to prevent harsh stressors on the body to avoid health complications. With successful attempts at stress reduction, students can facilitate a healthy learning environment.

PICOT Question

The PICOT question that guided this project was the following: Among graduate NP students (P), does an intervention on stress (I) (C) change their perceived stress levels (O)?

Population (P). The population that was considered in this project was graduate NP nursing students in a Southeastern region of the United States. This area is inhabited by a diverse population. The participants were both male and female. The total number of participants approximated 50 students. Typically, nursing curriculums admit less than 30 students per semester. At least half of the enrolled population would provide sufficient data. These students were selected because of their willingness to participate.

Intervention (I). The intervention was to administer an educational intervention on stress management.

Comparison (C). The comparison was to evaluate stress levels before and after an educational intervention.

Outcome (O). The outcome of interest was a reduction in perceived stress levels of participants.

Time frame (T). The time frame for the project was during the spring 2022 session.

Practice-Guided Question

The PICOT question that was described in the previous section was used as the basis for developing the research question.

RQ1. Will implementing an educational intervention that includes stress coping strategies reduce stress levels among graduate NP nursing students?

Definition of Key Terms

This project has several key terms that are necessary to define. Each of the terms are listed below along with a definition derived from the source or sources cited.

Coping. The means by which attempts are made to control perceived levels of demand or threat (Bailey & Clarke, 1989).

Stress. The body's reaction to a change that requires a physical, mental, or emotional, adjustment or response (Dyer, 2006).

Scope and Limitations of the Project

The scope is limited to examining the perceived stress levels pre- and posteducational intervention in a sample of graduate NP students. The accessible population was all enrolled NP students at a university in the Southeastern United States. All students in this category, including

students that were repeating courses were eligible to participate in the study. However, students that are repeating courses could only participate in the interventions, but I collected no data from these students. The admission period for the university is once a year in August. This criterion limited a potential larger sample population. Another potential limitation was online delivery of the educational intervention. Due to remote delivery, limitations might have included improper representation of the study. With data being gathered according to the participants' schedule and availability, lack of control of the environment for which data was collected is an identified limitation. The expense for use of extra resources to analyze data and small time frame to collect data were significant limitations to this study. Exclusion criteria was students not at the freshman level.

Theoretical Framework Discussion

Hans Selye (1976) introduced a stress response model, or what he termed the general adaptation syndrome (GAS) that explains how adaptation to stressful situations occur. He further classified stress into acute or chronic stressors. In the acute phase of stress, there is more of a shock that could result in immediate physical changes in the body. Over time, as stress continues and/or increases, the body adjusts to these changes and adapts. Often, this adaptation to stress is managed using ineffective measures. Harkreader (2004) stated that Selye's stress model suggests that stress is unavoidable. Selye emphasized that there is no such thing as "no stress." He defined *eustress* or *positive stress* as manageable stress, which can lead to growth and competence. He defined *distress* or *negative stress* as uncontrollable, prolonged, or overwhelming, which can be destructive.

According to Harkreader (2004), Selye explained GAS to be a three-stage bodily response—stage one is the alarm stage, stage two is the resistance stage, and stage three is the

exhaustion stage. The alarm stage occurs when an individual has encountered a stressor. The body reacts with a fight-or-flight response and the sympathetic nervous system is then activated. This fight-or-flight response is sustained by the hypothalamic-pituitary-adrenal axis, which releases cortisone, norepinephrine, and epinephrine in the blood. With sympathetic nervous system activity, heart rates, cardiac output, respiration rates, muscle tension, glucose levels, and mental alertness all increase.

Harkreader (2004) continues to explain the second stage of Selye's theory as being the resistance stage. In this stage, the body attempts to adapt to the stressor. The parasympathetic nervous system returns many of the physiological functions back to normal levels. However, blood glucose levels remain high while cortisol and adrenaline continue to circulate at elevated levels, which can lead to harmful effects on the body.

As a result of the resistance stage and with continued stress, an individual becomes exhausted. In this third stage of exhaustion, the body cannot function defensively against the stressor and physiological regulation decreases. In this stage a person is more susceptible to disease and death (Harkreader 2004). This phase would be considered the chronic phase of stress management.

Selye's theory has clearly identified that stress is always experienced whether it is good or bad stress. However, it is important to identify and minimize stress levels to prevent harsh stressors on the body. With successful attempts at stress reduction, students can better facilitate a healthy learning environment.

Summary

Chapter 1 introduces the proposed DNP project. This project addressed the POI of

identifying stress among graduate NP nursing students, identified current coping strategies, and introduced new ways of coping strategies for stress management utilizing an educational intervention. The project is guided by the following research question: Is there a difference in the stress and coping levels of graduate NP nursing students after implementing an educational intervention? I anticipated that after administering an educational intervention, participants would be able to implement more effective coping strategies. The population of students considered in this project were graduate NP nursing students at a university located in a region with fewer resources. The university is located in a southeastern region of the United States. This area is inhabited by a diverse population. In this DNP project, I used an educational intervention to identify stress levels in participants, assess their current coping strategies, and implement an educational intervention. With this perspective, I wanted to convey the need for alterations or improvements to the curriculum for perceived stressful experiences. The outcome of interest was a reduction in perceived stress as expected by adequately educating on stress. The time frame for the project was during spring 2022 while participants were enrolled in their nursing courses. The evaluation period began in the spring semester. The final evaluation took place a few weeks after the educational intervention (spring session).

Chapter 2: Literature Review

This review of literature discusses factors of stressful experiences and coping measures that are pertinent to learning concerns. A combination of search terms was used to locate articles for this review. The references and materials were found and collected over the course of a year using a variety of resources supplied through a number of sources and databases. Internet searches yielded articles, textbooks, journals, and other resources. The online library at Abilene Christian University was heavily used, as were the EBSCOhost and ProQuest databases. Other search engines used were Academic Search Complete and The Cumulative Index of Nursing and Allied Health Literature (CINAHL®) Complete. I searched the terms *nursing student*, *nursing school*, *nursing curriculum*, and *adult learners*. I also searched using these terms: *stress in nursing school*, *graduate school*, *stress in nursing students*, *burnout* and *coping*. The initial search attempted to capture historically relevant research over the last two decades yielding 195,569 citations. The search was then narrowed down to produce 68,901 citations to include the years from 2015-2020 and using full text and peer-reviewed journals. Additionally, I conducted a search using the terms *nurse practitioner student stress* and *PhD nursing students*. This search yielded 17,954 citations. This resulting search generated a total of 6,028 relevant articles between the years 2017-2021. This search was further narrowed to academic journal articles. Limiting the search captured 156 articles which was filtered to capture approximately 20 relevant articles where 3-4 were chosen for consideration in this study. I performed another search to obtain information on the Perceived Stress Scale (PSS), and the Ways of Coping Questionnaire (WAYS). The articles chosen for this study consisted of research about students in nursing school, regardless of semester, as well as nursing students at the graduate level. Stress that could be characterized and evaluated, coping strategies, and interventional display were given top

priority. The following review of literature included coping, relaxation, and mindfulness techniques as stress management interventions. Mentoring and peer assistance were stressed in certain articles. However, there has been little to no study on educational tools and products for stress management.

Identification of Stressful Situations

Research on stress and nursing students has primarily concentrated on undergraduate nursing students, particularly students enrolled in two-year associate degrees, four-year baccalaureate, or three-year diploma programs. However, there is a limited amount of research that has focused on graduate nursing students. Karmelita (2020) reported that adult learners are typically apprehensive and challenged by their insecurities, and further reported that there are barriers that impede their learning experiences, which include childcare, work, daily routines, relationships, and ways of thinking.

Stress in Nursing Students

Labrague et al. (2017) utilized a cross-cultural comparative study to compare the perceptions of stress and quality of life using nursing students from three different countries. The countries used for the analysis were the Philippines, Greece, and Nigeria. The author's focus in this study was clear to capture diversity perspectives. The sample consisted of a convenience sample of 547 nursing students from the total of the three countries. The inclusion criteria included currently enrolled in the second to fourth level of nursing education and willing to participate. First year nursing students were not included due to their limited clinical exposure. The instruments utilized in this study were self-reporting scales: the PSS and the QOLES (quality of life evaluation skill). The PSS was developed by Sheu et al. and was designed to identify stress levels and stressors in nursing students during their clinical training (Labrague et

al., 2017). The tool was found to be reliable. After comparing the nursing programs, the researchers determined that the degree of stress and the type of stressors differ. To specify, the authors reported that Filipino nursing students had significantly higher levels of stress when compared to students from Nigeria and Greece. The assumption was that Filipino nursing students have higher amounts of clinical hours to complete, which can lead to longer periods of case reporting, nursing care plans, more exposure to patients and the clinical environment, which are sources of stress (Labrague et al., 2017).

Nursing education is considered a stressful event due to high academic demands, clinical requirements, and complex challenges in clinical settings (Hamaideh et al., 2017). In another study, researchers sought to identify levels and types of stress experienced by Saudi Arabian undergraduate nursing students in clinical training, and the types of coping behaviors they used to deal with stress in clinical training (Hamaideh et al., 2017). The authors anticipated that identifying the levels and types of stress in addition to coping skills would allow a better understanding of the source but also provide relief efforts. The goal was to assist nursing educators and clinical instructors in developing effective teaching and learning strategies in clinical settings that could reduce levels of stress and to employ adaptive coping behaviors to deal with it. The authors used a descriptive correlational design with a sample of 110 nursing students performing clinical care. Of the total sample, 45 were male, and 55 were female. The ages ranged from 22–27 years old. Other important variables to consider with this study were students' year (2nd, 3rd, or 4th), living status, and presence of financial problems. The instruments utilized in this study were: self-reported questionnaires, the PSS, and the Coping Behavior Inventory. Like previous studies by Labrague et al. (2017), the PSS was used to assess the level and types of nursing students' perceived stress. The Coping Behavior Inventory (CBI)

was used to identify nursing students' coping behaviors. This study's results showed that the highest sources of stress in clinical training were assignments and workloads.

Some limitations of the Labargue study include that a cross-sectional design limited the usability of results. The researchers suggest that using a longitudinal study would strengthen the understanding of how students experience stress and use coping behaviors. The Pearson Correlation Coefficients test was used to determine the strength and direction of relationships between students' perceived stress and coping behaviors. The t test was used to assess the differences between students' demographics and both types of stress and coping behaviors. This study used two multiple regression analyses. The first one detected the predictors of perceived stress and the other predicted the coping behaviors. The first regression analysis was used to detect the variables that predict perceived stress (as a dependent variable). The other demographic variables and the types of coping behaviors were entered together as independent variables. Both variables accounted for 12.4% of the total variance of the perceived stress. A second multiple regression analysis was used to detect the variables that best predict coping behaviors (as dependent variable). The other demographic variables and the types of stress were entered together as independent variables. Both variables accounted for 13.5% of the total variance of coping behaviors. For perceived stress, *way of choosing nursing* was the only demographic variable that was significantly different ($t = 3.387, p = .001$), showing that those students who choose nursing by themselves experienced lower stress levels than those who did not. For coping behaviors, three demographic variables were significantly different. Those who had relatives in nursing used coping behaviors more than those who did not ($t = 2.052, p = .043$). Participants who lived alone or with peers used coping behaviors more than those who lived with

their families ($t = 2.048, p = .043$). Also, coping behaviors were found to be used more among students whose mothers' formal educational level was lower than six years ($t = 2.250, p = .016$).

As seen, many factors can contribute to high-stress levels in many students. Cestari et al. (2017) conducted a study similar to Hamaideh et al. (2017) by evaluating the relationship between the presence of stress in nursing students and their sociodemographic and academic vulnerabilities (Cestari et al., 2017). The authors felt this research was relevant to nursing because identified stress levels among students can be a predictive factor that allows for planning and restructuring the program by the educational institution.

The authors sought a large population of students by using only one educational institution. The sample size chosen was a population of 455 students from first, third, and fifth years of an undergraduate course in nursing. Of this group, 94.06% were female. This is similar to the study by Hamaideh et al., (2017) in the distribution of female subjects. Stress levels were found to be more significant in the female population than in males (Cestari et al., 2017). Other essential variables evaluated were age groups, marital status, presence of a child, living situation, and payment source for schooling. The association between the variables and the presence of stress was evaluated using the Pearson chi-square test. The relationship between stress and the other variables of the study showed a higher prevalence of stress in women academics. In the analysis of marital status, academics without partners were in the majority (81.3%). The presence of at least one child was reported by 13.2% of the students, of whom 85% presented stress. Approximately 25.5% of the students were employed, and nearly 22% lived alone.

There were two instruments used in this study: a questionnaire with sociodemographic and academic information, and Lipp's Stress Symptoms Inventory (LSSI), which evaluates the state of stress and whether stress is present or not (Cestari et al., 2017). The results of this study

showed that, historically, women were seen as dominant in this nursing profession, and the prevalence of women indicates this fact. Many students who lived alone were without children, not working, and did not have family responsibilities. A limitation of this study was that it was conducted within only one educational institution. Implications for nursing are clear as this allows faculty to evaluate factors that could be contributing to student struggles. Identification of these factors can assist in facilitating functional teacher-learner interactions and improve college readiness.

Burnout in Nursing Students

Historically, overwhelming amounts of stress has progressively led to burnout. Stress and burnout have also been commonly linked to poor motivation and academic performance. According to Galdino et al. (2020), “Burnout syndrome among students is characterized by a sense of overload, called emotional exhaustion, accompanied by the perception of being an incompetent student who exemplifies a reduced academic effectiveness” (p. 4). In an exploratory sequential mixed method study, Galdino et al. (2020) investigated the burnout syndrome among 114 undergraduate nursing students. This evaluation was significant in determining the prevalence of the burnout syndrome. Using a questionnaire to gather sociodemographic variables, the researchers obtained data by utilizing the Maslach Burnout Inventory-Student Survey (MBI-SS) to evaluate burnout in students. Galdino et al. (2020) used a mixed method, explanatory sequential study combining quantitative and qualitative approaches with qualitative data (interviews) providing a greater understanding of the quantitative data (questionnaires).

The data were analyzed using SPSS software, version 20.0 (Galdino et al., 2020). Frequencies and percentages were calculated for categorical variables, as were measures of central tendency and dispersion for continuous variables. Three multiple linear regressions were

performed by the stepwise forward method, considering the dimensions of burnout syndrome as dependent variables and all independent variables (sociodemographic and academic characteristics) that presented $p \leq .20$ in the bivariate analysis by simple linear regression. Like previous studies by Hamaideh et al. (2017) and Cestari et al. (2017) in their large distribution of stress levels among the female subjects, Galdino et al. (2020) reported that the female population for this study totaled 89.5%, which is significant. Regarding the MBI-SS dimensions, it was found that 76.3% of participants had high emotional exhaustion, 31.6% had high depersonalization, and 21.1% had low academic effectiveness (Galdino et al., 2020). Limitations included the use of self-report measures that are prone to socially desirable responses, and the cross-sectional design (Galdino et al., 2020).

In nursing education, stress levels are high among nursing students. There are varying levels of stress and, per theorist Hans Selye, stress is characterized as good or bad. Identifying stress perceptions to reduce the potential for burnout is critical to prevent exhaustion and academic failure. Liebana-Presa et al. (2018) conducted a cross-sectional descriptive study to analyze the relationship of burnout in nursing students and academic engagement. Liebana-Presa et al. (2018) described burnout syndrome by categorizing it into three basic dimensions: emotional exhaustion, depersonalization, and a lack of personal fulfilment. Exhaustion, which is the most declared dimension of the three, describes a progressive loss of energy as tasks are carried out. Depersonalization manifests itself in the form of irritability, negative attitudes, and insensitive responses to people. The third dimension of burnout, a lack of personal fulfilment, is characterized by negative responses toward oneself and towards activities undertaken. Individuals express a lack of productivity at work and shortcomings regarding professional tasks.

The researchers used the MBI-SS to measure the level of burnout in the students and the Utrecht Work Engagement Student Survey (UWES-S) to measure the level of engagement (Liebana-Presa, 2018). The data analysis techniques used were descriptive statistics, linear correlation analysis (Pearson correlation coefficient), *t*-test analysis with Student's *t* test and multiple linear regression analysis, to develop predictions on a variable based on others. The Cronbach's alpha reliability coefficient was analyzed. Statistically significant differences were found in the comparison of means between women and men for scores in cynicism ($p = .000$), academic efficacy ($p = .007$), absorption ($p = .037$) and dedication ($p = .009$). Women scored significantly higher in these variables than did men, except in the case of cynicism, where they scored lower. The findings indicate that with burnout the association is positive and moderate for exhaustion and depersonalization, and negative and weaker in the case of academic efficacy (Liebana-Presa, 2018). Regarding the relationship between burnout and engagement, the results support other empirical research.

Allen et al. (2021) studied the role that sleep plays in stress and burnout among the graduate nursing student population. The researchers assessed whether sleep duration and quality moderated the relationship between stress and burnout among graduate students. Research has shown that doctoral students are more affected by mental health problems than the highly educated general population, frequently citing constant strain, feeling unhappy and depressed, and losing sleep over worry (Allen et al., 2021). The researchers chose to sample students enrolled in a graduate degree program from two different public universities in the same region. Exclusion criteria were graduate students considered advanced special students and those enrolled in a graduate certificate or online programs. The total sampling among both institutions was 56% female and 41% White, with 48% of students enrolled in master's programs and 47%

enrolled in doctoral programs. The PSS was used to determine if students were experiencing stress. The PSS consists of ten items rated on a 5-point Likert-type scale, ranging from *never* (0) to *very often*. Scores range from 0 to 40, with higher scores indicating higher levels of stress. Cronbach's alpha internal consistency of the PSS-10 has gone from 0.78 to 0.91 among national adult samples. In the current study, the Cronbach's alpha for the PSS-10 scale was 0.87, indicating good internal reliability. Burnout was measured using three subscale scores of the MBI-SS. The MBI-SS consists of fifteen items that are grouped into three scales: exhaustion (five items), cynicism (four items), and inefficacy (six items). Each item was scored on a 7-point scale ranging from *never* (0) to *always* (6), with higher scores indicating higher levels of burnout. Cronbach's alpha values for the internal consistencies of the MBI-SS subscales have ranged from 0.62 to 0.84 in other student samples. In this study, Cronbach's alpha values were 0.89, 0.89, and 0.83 for the exhaustion, cynicism, and inefficacy subscales, respectively. Sleep was measured using two questions from the Pittsburgh Sleep Quality Index (PSQI). Sleep duration was assessed by asking participants how many hours of sleep they got per night on average during the past month and was analyzed as a continuous variable. Sleep quality was assessed by asking participants how they would rate their sleep quality during the past month, with response options of *very poor*, *fairly poor*, *fairly good*, or *very good* (Allen et al., 2021).

Researchers used linear regression models to examine the relationships between stress and burnout, while examining moderation by sleep duration and quality (Allen et al., 2021). A point-biserial correlation assessed the correlation between sleep duration and sleep quality. Multivariate linear regression models were implemented to explore the associations between stress, sleep duration, and sleep quality with exhaustion, cynicism, and inefficacy. Additional linear regression models were run on the associations between stress and all three dimensions of

burnout, including interaction terms between stress and sleep duration and sleep quality. SPSS Version 25.0 was used for all analyses with an alpha level set at 0.05. Results of linear regression models showed that higher levels of stress were associated with higher levels of exhaustion ($\beta = 0.11$), cynicism ($\beta = 0.10$), and inefficacy ($\beta = 0.08$; Allen et al., 2021). Concerning sleep quality, 38% rated their sleep as fairly poor or very poor, and 62% rated their sleep as fairly good or very good. Sleep duration and sleep quality were moderately, positively correlated ($r = 0.44$, $p < .001$). Students with good sleep quality had lower mean levels of stress and burnout and slept about one hour more per night than students with poor sleep quality. Sleep duration was negatively associated with exhaustion ($\beta = -0.11$), positively associated with cynicism ($\beta = 0.08$), and not significantly associated with inefficacy. Compared with students with good sleep quality, students with poor sleep quality had significantly higher levels of all three dimensions of burnout. This study concluded that students slept an average of 6.4 hours per night, with 62% indicating good sleep quality. Stress had remarkable, positive relationships with exhaustion, cynicism, and inefficacy (Allen et al., 2021). The relationship between stress and exhaustion decreased with an increase in sleep duration. The relationship between stress and exhaustion was weaker among students with good sleep quality when compared with those with poor sleep quality. Neither sleep duration nor sleep quality moderated the relationships between stress and cynicism or stress and inefficacy (Allen et al., 2021).

Coping in Nursing Students

Onan et al. (2018) conducted a study among a group of nursing students to evaluate a stress-coping course for psychological resilience. This study was done with the concept that a stress-coping course for nursing students might influence their psychological resilience. In this study, the effect of teaching stress coping on increasing psychological resilience among nursing

students was investigated, and the relationship between stress symptoms and psychological resilience was examined (Onan et al., 2018). The researchers conducted a quantitative study with a pretest and posttest design to evaluate a stress-coping course given to first-year nursing students.

The study included 78 students who had completed the stress coping course in their first year (Onan et al., 2018). A convenience sample of all students who agreed to participate that did not have a psychiatric diagnosis was included. Data was collected using an information form, the Stress Self-Assessment Checklist, and the Psychological Resilience Questionnaire for Adults. The information form is a form that gathered the sociodemographic details of the students. The Stress Self-Assessment Checklist was used to detect the individuals under stress conditions. The Psychological Resilience Questionnaire for Adults analyzed the relationship between stress symptoms and psychological resilience (Onan et al., 2018). Based on the results, it is possible that a correlation exists between stress coping skills and psychological resilience. Some limitations of this study were its small convenience sample and the restriction of the study participants to first-year students. Again, as seen in previous studies, 94% of the participants were women. As this was a descriptive study, the use of a self-report questionnaire presents the potential for response distortion.

Campbell (2015) evaluated a way to improve student experiences and to promote peer support systems by creating a student buddy system. This study would pair first-year students with second-year students. By doing this, second-year students could assist in alleviating anticipated stressors through shared experiences. Another goal of this system was to reduce the chances of students not completing or leaving the program. To evaluate the success of the implemented system, the researcher used questionnaires to assess whether the interactions were

helpful. The researcher also used questionnaires to determine the effectiveness of the program set-up. The outcomes were found to be beneficial overall. This was found to be helpful for first-year students (56%) although only a minority (12%) maintained contact after the initial pairing. First-year students were able to learn from their second-year peer group about the professional expectations in practice as first-year student nurses (Campbell, 2015).

Foley and Lanzillotta-Rangeley (2021) evaluated stress and anxiety in nurse anesthesia students. With the assumption that the negative effects of stress and anxiety cause poor academic performance and contribute to lowering the quality of life of the student registered nurse anesthetist (SRNA), the need for coping was deemed necessary. Stress management techniques introduced during nurse anesthesia education may reduce the need for maladaptive coping strategies, such as substance use, which has been documented to have a higher incidence in anesthesia providers (Foley & Lanzillotta-Rangeley, 2021). Of the many positive coping mechanisms, practicing mindfulness meditation was determined to be the most underutilized stress mitigation technique in this population (Foley & Lanzillotta-Rangeley, 2021). Seventy-four SRNAs enrolled in a program were sought for this study. The researchers utilized a meditation application called Headspace as the intervention for stress management. They compared the pre-intervention survey and postintervention survey to determine effectiveness. A Wilcoxon signed rank test showed significant reductions in depression ($Z = -3.36, p < .01$), anxiety ($Z = -3.07, p < .01$), and stress ($Z = 3.46, p < .01$) scores.

The Depression Anxiety Stress Scales 21-item (DASS21) questionnaire was chosen as the standardized stress scale because of its tested validity and reliability. The DASS-21 is a combination of three self-report scales: measuring depression, anxiety, and stress with scores of normal, mild, moderate, severe, or extremely severe. This instrument allows separate

measurements of each scale. This scale was used to assess the effectiveness of the use of Headspace as an emotional wellness tool for SRNAs and to determine if there was a significant decrease in the metrics of depression, anxiety, and/or stress after the intervention. Depression and anxiety scores were noted to be significantly decreased. Depression scores normalized. Anxiety scores changed from severe to moderate. A 47% reduction in stress was found in this project. These results indicated that the intervention was successful.

Noble et al. (2019) believes that mindfulness training can positively impact holistic well-being and improve mood, focus, and resilience. The researchers suggest that engaging in mindfulness techniques may positively impact the psychological well-being of healthcare students. The study consisted of undergraduate and postgraduate students. All medical students participating in consolidative learning in preparation for summative assessment and all Ph.D. nursing students in any year of their study and preparing for annual reviews were invited to participate (Noble et al., 2019). The study included a mindfulness-based workshop, followed by five weekly 30-minute mindfulness training sessions, which included a 15-minute meditation exercise. Data were collected at baseline and postintervention, followed by a focus group discussion to explain qualitative experiences.

The students completed the Brief Resilience Scale (BRS) and the Mindfulness Attention Awareness Scale (MAAS) at baseline and postintervention. The BRS is a self-rating questionnaire aiming to measure the ability of an individual to recover from stress or adversity. The scale includes three positive valence items and three negative valence items. The items are rated on a 5-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. High total scores indicate higher levels of resilience. BRS internal consistency reliability

coefficients (Cronbach's alpha) have been reported, ranging from 0.80 to 0.91. Test-retest reliability has been reported to range from .61 to .69.

The MAAS is a 15-item instrument and a valid measure of trait mindfulness and involves what the researcher conceives as the two components of consciousness: awareness and attention. Awareness is described as what operates in the background of the mind and allows us to notice things around us without focusing exclusively on them. Attention refers to the ability to focus awareness on a specific experience. The scale measures an individual's tendency to enter a state of mindfulness and is a valid and reliable method for quantifying mindfulness. The scale uses a 6-point Likert-type scale (*almost always* to *almost never*), and respondents rate how often they act on automatic pilot, are preoccupied, and do not pay attention in the present moment. An internal consistency (coefficient alpha) of 0.82 was reported, as was the expected convergent and discriminant validity correlations. MAAS and BRS scores were collated and exported in standard (Excel) spreadsheet format for analysis. Following descriptive statistical analysis (mean, median, standard deviation, and standard error), a comparative study was undertaken using Mann-Whitney U non-parametric testing. Statistical significance was assumed at p -values of $< .05$ (Noble et al., 2019). MAAS scores improved from a median of 2.5 to 3.73 ($p = .04$), with a corresponding increase in median BRS scores from 18.5 to 22.0 ($p = .02$; Noble et al., 2019). For both mindfulness and resilience, there was thus a statistically significant improvement in score metrics, signifying improvements in coping with stress, accompanied by an enhanced awareness and attention to what is taking place in the present (Noble et al., 2019).

Theoretical Framework Relevance

Selye's stress response model provided the theoretical framework for this study. This model describes stress as a condition in which the human system responds to changes in its

normal balanced state. Fountaine (1999) elaborates on Selye's definitions of stress indicating that stress is defined as anything that is perceived as challenging, threatening, or demanding.

Stressors have the potential to produce physical and chemical changes in the body to which the person must adjust. Selye named this process of stress response the general adaptation syndrome or GAS.

Many researchers have evaluated nursing students' perceptions of stressors and possible stressful situations while enrolled in nursing programs. The evaluations included the identification, classification, and comparison of incidents that were perceived as stressful. This review of literature discussed factors of stressful experiences, burnout, and coping measures that are pertinent to learning concerns.

Moderate to high levels of stress that creates increased anxiety can impair thinking abilities and the ability to make appropriate judgments. Nursing students can be affected both physically and cognitively. This study provides useful information to gain consensus of stress perceptions, identify and measure burnout, and introduce and recommend effective coping strategies among graduate NP nursing students. In this research study, I selected a sample of graduate NP nursing students. With the selection of participants, the students were given a questionnaire survey to measure their perceptions of stress. Once I collected this information, I asked participants to complete a questionnaire to assess their coping processes.

Summary

Chapter 2 of this DNP project proposal describes the literature review that I conducted and details the literature search process, which examined all the relevant online databases for recent and peer-reviewed research on the project topic. The evidence from the literature identifies a need to gain consensus of understanding of nursing student stress and to implement

an effective educational intervention. Overall, stress perceptions in nursing students can impact the quality of life. Nursing student stress is a global concern, as identified by Labrague et al. (2017), and Hamaideh et al. (2017). There is correlation between stress and burnout according to Galdino et al. (2020) and Liebana-Presa et al. (2018). Campbell (2015) identified effective coping. Nursing education has always been deemed difficult and poses a significant challenge for many students. Researchers have studied different nursing education levels to better understand perceived stress, the causes of stress, identification of burnout, and the ability to evaluate and implement coping measures.

Chapter 3: Research Method

Research uses data obtained primarily by a researcher utilizing surveys, interviews, or participant observation. There are several methods to choose from. For this study, a quantitative, pre-intervention, postintervention method was relevant and captured the essence of studying perceived experiences.

Design

The purpose of this prospective, pre- and postintervention study was to obtain consensus on perceived stressors among nursing NP graduate students and evaluate the impact of an educational intervention that hopefully encourages healthy coping strategies. This project assessed for stress and coping among graduate NP nursing students currently enrolled, identified the coping strategies the students had been utilizing, and evaluated the impact of an educational intervention. Many investigations have been conducted to identify stressors, evaluate stressful experiences, and introduce coping measures among NP nursing students as the phenomena of stress experiences has been highly associated with the nursing profession. This study evaluated the fact that stress is evident and emphasized the impact that an educational intervention has on perceived stressors. This study considered conducting a pilot study due to a lack of literature regarding stress as experienced by graduate NP nursing students. I performed a power analysis using the criteria from previous studies involving perceived stressors in graduate NP nursing students and determined that a moderate to high sample size was required to obtain reliable results.

The intervention that this project considered was an educational intervention intended to reduce stress among adults. This educational intervention was hosted online, and it was selected based on research evidence regarding stress reduction and patient education techniques, but this

particular intervention had never been evaluated before any groups of nurses. The content of the intervention included general information on what stress is, how it adversely affects people, and how to identify cognitive and behavioral habits that contribute to stressors. Additionally, the intervention contained worksheets and participative features for the nurses involved with the project along with information on techniques to relieve stress. The following parts of this section describe the research method, subjects, data collection procedures, limitations, and ethical considerations.

Instrument/Measurement Tools

After obtaining permissions and approval from IRB (Appendix A) and informed consent from the participants (Appendix B), there were two main components that I used to analyze data for this study: the PSS (Appendix D) and the WAYS (Appendix E) questionnaire. To initiate the use of instruments and tools, I included a demographic tool (Appendix C). The demographic tool was based on current and previous literature that is relevant to statistical generalization.

The instrument I utilized in this study was a self-reporting stress scale: the PSS (Appendix D). The PSS was developed by Sheu et al. (1983) and was designed to identify stress levels and stressors (Labrague et al., 2017). The PSS tool addresses six factors: stress from taking care of patients; stress from teachers and nursing staff; stress from assignments and workloads; stress from peers and daily life; stress from lack of professional knowledge and skills; and stress from the clinical environment (Labrague et al., 2017).

The Ways of Coping Questionnaire (WAYS) was used to measure coping processes. This tool (Appendix E) was implemented to assess the thoughts and actions of the participants as they recalled stressful challenges. The WAYS can assist with developing coping skills, evaluating

strengths and weaknesses, and exploring alternative coping mechanisms (Folkman et al., 1986). This tool consists of a 66-item questionnaire.

Data Collection and Management

Data were collected with the assistance of the program director, who provided site/university instruction and permission to implement the study, and an administrative assistant appointed by the program director that acted as a liaison. The liaison did not provide me with the students' school email addresses to send them the study details. However, she opted to forward the study details to the students, acting as a liaison.

Details of the study were shared with the students using their school email to first deliver an electronic flyer (Appendix F). Then the introductory email (Appendix G) was sent, which served as their announcement to the study. The announcement included the purpose of the study, instructions to the study, and the timeline of events. Once the students were made aware of the study, the research process was initiated via electronic delivery. The students then participated in the educational intervention (Appendix H). I estimated that the research procedures would take approximately 15–20 minutes to complete. Once the initial surveys were completed, the students had access to the educational intervention. To improve response and active engagement with the educational intervention, a reminder flyer (Appendix I) was emailed to the students during the week after they have accessed the interventions. A follow-up survey was available one to two weeks later to determine if the intervention was beneficial. Data were collected upon completion of the surveys via the electronic application Survey Monkey. Once I collected the data, I stored and password-protected it until I completed an analysis of the results. The data will be kept and then destroyed and deleted, as outlined by ACU's IRB.

Analysis Plan

The statistical method used to analyze the study was a parametric model. This model was the most suitable because it is usually utilized to describe information within its parameters. From the study, the parameters in use included graduate learners in nursing school who were enrolled as NP students. Since the values involved in the research are discrete, the parametric model was the most effective when compared to the non-parametric model, which uses continuous values that are always seen to have infinite dimensions. The parametric model is the most effective to use because it is simple to understand, because it usually represents findings through linear regression.

Specifically, a paired t test was explored as it is designed to compare the means of the same group or item under two separate scenarios. The research study measured the effectiveness of the educational intervention pre- and postintervention. Paired t tests are used when the same item or group is tested twice, which is known as a repeated measures t test. It was appropriate to utilize a paired t test because I needed to take measurements at two separate times (e.g., pretest and posttest score with an intervention administered between the two time points).

The frequency of data collection was once during spring session 2022. The frequency of evaluating data was initially in mid-April 2022 for the pre-intervention and again in late-April 2022 for the postintervention.

Methodology

The initiation of contact with the graduate NP students began with the program director, who directly facilitated communication between myself, the liaison, and the students. The program director provided instruction to me how to engage students through use of the liaison only. The administrative assistant acted as a liaison between me and the graduate NP students

only. No one involved in the study held any power over the students, so coercion was not a concern. I drafted an electronic flyer to introduce the study (Appendix F). I sent the electronic flyer to the liaison to forward to the students the second week of April 2022. I then forwarded the drafted email (Appendix G) to the students within one day and posted the flyer announcement to alert the students to participate in the study. The surveys and tools were loaded into Survey Monkey and were attached to the email announcement (Appendix G) as a link. Once the introductory email (Appendix G) had been received by the students, I sent an email explaining in detail the purpose of the study, consent, steps to follow to complete study, survey questionnaires, educational interventions, and thanked the students for their participation.. Participants were informed in the introduction email of the study that their participation was voluntary and that they could withdraw at any time. I explained the time frame for completing the surveys and/or questionnaires. Each page of each part of every survey included a button located at the bottom right corner that allowed the student to proceed to the next section to permit continuance upon completion of the previous section. After reading the instructions of the study, the students selected the first link. This allowed entry into the survey, and that was considered their informed consent to participate in the study. The demographic tool (Appendix C) was the first survey and captured the participant information. For the purposes of anonymity, the option to create a unique identifier to link the pre- and postintervention surveys was encouraged and made available to the student.

Next, the proceeding section permitted the students into the PSS survey tool. With the completion of the PSS survey tool, the students no longer had access to the answers they indicated on the survey. Survey completion was projected to take up to 10 minutes. After completion of the survey, the students were able to complete the WAYS questionnaire, which I

projected would take about 10 minutes. Upon completion of the WAYS questionnaire, the students no longer had access to their answers. The students were then able to access the educational intervention (Appendix H) on stress management.

The educational intervention provided the students with a detailed description, classification, and definitions of stress. It also provided stress management strategies. The students had permission to download and print the educational intervention as a reference tool. A 1–3 week time frame was indicated with consideration of the students' schedules, finals, exams, clinicals, and/or other factors that are priorities to the students. This allowed time to view the educational intervention without the added stress of additional tasks. To improve response and active engagement of the educational interventions, I emailed a reminder flyer (Appendix I) to the students a few days after they had accessed the interventions.

Two weeks after the initiation of the educational intervention, the liaison alerted the students one day prior to complete the postintervention surveys via electronic flyer (Appendix F). The students were prompted with a link that directed them back to the PSS and WAYS. Navigating the postintervention survey was similar the pre-intervention process. After opening the email, the students were allowed to select the link that led into the surveys. By continuing into the surveys, this was considered their informed consent to participate in the study. The students were then prompted to complete a demographic survey. Next, the proceeding section led the students into the PSS. After completing the PSS, the students then completed the WAYS questionnaire. After completion of both surveys, the students were thanked for their participation.

Feasibility and Appropriateness

Stress is inevitable. As Selye (1976) has identified, there is good stress and bad stress. However, when faced with changing roles and careers in life, the stress one may experience changes. The assessment of the nature of the study, population, location, and design were feasible given the literature and historical background of the role that stress plays in high-demand career opportunities. Stress has commonly been associated with the nursing profession and is deemed appropriate in relevance to the graduate level students in this study. This study adds to the existing literature to further research in this area.

This research was feasible to accomplish as student stress is common among college students, and nursing school has been found to be stressful. The feasibility of this research had been determined by the approval of the program director pending IRB approval. The participants enrolled are sufficient in number to conduct a study during the spring session (2022) semester. The time to gather data was from mid- to late-April 2022, which was sufficient time considering that students were finishing the semester, and taking finals and exams. Although the timeframe was compressed into a two-week period, the response rate was attained. The costs incurred for this project was less than \$1,000.

IRB Approval and Process

Institutional Review Board (IRB) approval (Appendix A) was secured from my university, Abilene Christian University (ACU). When deciding to utilize the proposed site, I contacted the school of nursing graduate studies department, who was then asked by the program director to send details of study to be conducted. I sent over details via email and explained the nature of the study, participation requirements, design, procedures, and offered to answer any questions regarding the study. I explained that each participant would be assured confidentiality

and anonymity in the reporting process. Participants were informed in the introduction of the study that their participation was voluntary and that they could withdraw at any time. I explained the time frame for completing the two main surveys.

Collaboration

Collaboration in research is beneficial to its advancement and the expansion. This research study is appreciative of the collaboration efforts and partnership between ACU and me and the study's proposed university. The program director provided an email confirmation/letter in support of the research to be conducted pending IRB approval. The results of this study were utilized for research purposes only as mutually agreed upon by myself and the program director.

Practice Setting

The setting for this study was in a city (with a population of approximately 46,000 as of the 2019 census) in the Southeastern region of the United States. The school of nursing is located on the main campus in a health science building. The health sciences building contains the classroom for the graduate NP students and the nursing instructor offices. The dormitories are located at the main campus. However, most graduate students reside off campus and commute to the health science building occasionally as the graduate NP nursing students are required to attend seldomly for checkoffs and other skills, but the majority of the program is online. Students have access to a practice lab for simulation activities.

Target Population

The accessible population for this sample consisted of students from a diverse student population enrolled in a graduate nursing program in a city of the Southeastern U.S. region. Criteria for inclusion in the study was that participants were graduate NP students and currently enrolled in any semester and program. This area is inhabited by a diverse population. The project

consisted of participants that were both male and female. The selected sample included a total of approximately 50 students. This study population included family nurse practitioner students, psychiatric-mental health nurse practitioner students, and BSN-DNP NP students. Typically, nursing curriculums admit less than 30 students per semester. However, including all NP programs created more capacity for research inclusion.

The study used a G*power analysis to determine the required sample size. The study parameters were derived from the methodology section, where the study design I chose had already determined that a within-subjects t test was appropriate. As such, the conditions entered into the G*power analysis calculator were as follows: The test family was a t test with a statistical test selection that calculated the difference between two dependent means (matched pairs). This selection reflected that the study aimed to measure the difference between two variables within the same population over time. The type of power analysis selected was the a priori type as I wished to determine sample size with values of alpha, power, and effect provided. The tails section had the value = 1 selected as the study had a directional hypothesis that the students would portray a positive response to the educational intervention (Rafati et al., 2017).

The G*Power analysis results showed that the target population of 51 students participating in a study required a sample size of 45 to have a 95% power. This means that the study had high power and would likely to detect an effect size of 0.5 if it existed in the population. Additionally, the noncentrality parameter (3.3541020) indicates that the study was robust to deviations from normality in the population. The critical t -value (1.6802300) indicated that the study would likely detect an effect size of 0.5 or greater with a 95% confidence level. Finally, the actual power value (.9512400) indicates that the study will be able to detect an effect size of 0.5 or greater in the population with a 95% confidence level.

Risks and Benefits

I agreed to maintain the integrity, confidentiality, and transparency of the research study. There were no potential risks of physical harm to participants. However, a low/minimal psychological risk could include embarrassment and/or feelings of guilt. The benefits of this study included the desired goal to further research in graduate education.

Timeline

- Obtain support letters - June 2021
- Obtain tool permission - Fall 2020
- Initiate contact with liaison - June 2021
- Administer presurvey - April 2022
- Administer educational intervention - April 2022
- Administer postsurvey - April 2022

Summary

The materials and methods utilized in this study have been presented. The purpose of this prospective, pre- and postintervention study explored the relationship between stress and coping strategies among nursing graduate students and evaluated the impact of an educational intervention to impart healthy coping strategies to the students. The procedure, data collection, data management, data analysis, collaboration, feasibility and appropriateness, population, setting, and IRB approval processes were discussed.

Chapter 4: Findings

This chapter describes the current study's findings, which aimed to see if a stress intervention might effectively lower nursing students' reported stress at a single academic location. The first portion of this chapter explores the project's comprehensive goal. The demographic information from the sample is then described. Following that, is a discussion of data analysis methods and implementation challenges, a review of the guiding PICOT question, and a summary of the analytical results. The chapter ends with a brief overview of the findings presented in the preceding parts.

Purpose of the Project

I developed and implemented this DNP project to evaluate the impact of an educational intervention on stress among nursing students at the graduate level. As such, I examined whether reported stress levels and coping skills changed after exposure to an educational intervention among graduate NP students currently enrolled in courses to determine the effectiveness of the intervention. Evaluating both variables was relevant to the study because effective coping mechanisms are likely to be associated with reduced levels of stress, and the use of these mechanisms could potentially be imparted through educational interventions.

Research Design

The DNP project involved an online educational intervention, but there was also a specific location for the project. The project focused on a single nursing school that was part of a university in a single Southeastern U.S. city. All the participants were drawn from the graduate nursing program within that school. The scope of the project was therefore limited to graduate nurse practitioner students currently enrolled in the program at that campus. Nursing faculty and staff, non-nursing students, and undergraduate nursing students were excluded from the project.

The participants, after recruitment and completion of informed consent, were sent a link to the pre-intervention survey instruments, which they completed. Then, the participants were able to complete the intervention materials on their own time, which were sent to them as emailed links. The participants were subsequently asked to complete the postintervention survey instruments, which were also sent as emailed links.

Demographics

The project, in total, included 11 participants who provided responses. The original targeted population was 51 students to include all NP students in all NP programs. The graduate NP programs offered at the university are FNP, PMHNP, BSN-DNP. Only 11 participants responded. The gender of respondents included nine (81.8%) female, one (9.1%) male, and one (9.1%) participant who preferred not to answer. In terms of age groups, four (36.4%) participants were between 26 and 35 years of age, three (27.3%) were between 36 and 40 years of age, one (9.1%) was in the 41 to 50 years age range, two (18.2%) were between 51 and 65 years of age, and one (9.1%) participant was over 65 years old. Participants ranged in having 0–4 children at home, with a mean of 1.2 ± 1.4 children. Nine (81.8%) of the participants were married, while two (18.2%) were single.

Six (54.6%) participants indicated they did not work full- or part-time, four (36.4%) worked full-time, and just one (9.1%) participant worked part-time. When asked how many hours per week they studied, participant responses varied from 5–50 hours per week, with a mean \pm standard deviation (*SD*) of 24.4 ± 14.5 hours per week. Of the participants, five (45.5%) were in their first year of graduate school, one (9.1%) was in their second year, three (27.3%) were in their third year, and two (18.2%) were in their fifth year or above. Five (45.5%) participants worked in nursing for 6–10 years, three (27.3%) for 11–15 years, one (9.1%) for 16–

20 years, and two (18.2%) participants had worked in the nursing profession for more than 20 years.

Table 1

Participant Demographics

Demographic	<i>n</i>	%
Gender		
Male	1	9.1
Female	9	81.8
Prefer not to answer	1	9.1
Age Group (years)		
26–35	4	36.4
36–40	3	27.3
41–50	1	9.1
51–65	2	18.2
> 65	1	9.1

Table 2

Participant Work Statistics

Demographic	<i>n</i>	%
Work Schedule		
Not full- or part-time	6	54.6
Part-time	1	9.1
Full-time	4	36.4
Nursing Experience (years)		
6–10	5	45.5
11–15	3	27.3
16–20	1	9.1
> 20	2	18.2

Table 3

Participant Academic Statistics

Year of graduate school	<i>n</i>	%
1	5	45.5
2	1	9.1
3	3	27.3
> 4	2	18.2

Data Analysis

This project used paired-samples t tests to evaluate the outcomes of the participants' perceived stress levels and their usage of coping skills. The participants' stress levels were measured using the PSS instrument, and the coping skills usage was measured with the WAYS questionnaire. Participants completed the PSS and WAYS pre-intervention prior to taking part in the educational intervention and completed the PSS and WAYS instruments at the postintervention time point 1–2 weeks after completing the educational intervention. The total scores for each participant were summed for each survey at pre- and postintervention and used to generate pre- and postintervention sample mean scores for each survey. The mean scores at pre- and postintervention were then compared for each survey using a paired-samples t test and values of $p < .05$ to find statistically significant results.

Question Guiding the Inquiry

The guiding PICOT question was the following: “Among graduate NP students (P), will an intervention on stress (I) (C) change their perceived stress levels (O)?” This question was answered by using paired-samples, two-tailed t tests to compare participants' levels of perceived stress and their use of coping skills at postintervention compared to pre-intervention.

The two-tailed, paired-samples t test used to compare the sample mean scores on the PSS instrument at pre- and postintervention yielded significant ($p < .001$) results of $t = 4.98$. The pre-intervention mean score was 23.0 ± 4.47 for the PSS, while at postintervention, the mean score was 14.5 ± 3.48 . Table 4 below contains the results of this test.

Table 4*t-test Results for PSS Instrument*

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i> (2-tailed)
PSS1-PSS2	8.5	3.98	4.98	10	< .001

The two-tailed, paired-samples *t* test used to compare the sample mean scores on the WAYS instrument at pre- and postintervention yielded significant ($p = .01$) results of $t = 2.76$. The pre-intervention sample mean for the WAYS instrument was 69.14 ± 13.84 , while the postintervention sample mean was 87.23 ± 16.79 . Table 5 below depicts the *t*-test results.

Table 5*t-test Results for WAYS Instrument*

	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i> (2-tailed)
WAYS1-WAYS2	-18.09	15.32	2.76	10	.01

Conclusion

This chapter described the results from this project. The purpose of the project was to evaluate whether nursing graduate students' participation in an educational stress intervention was associated with changes in perceived stress and reported usage of coping mechanisms for stress. The findings indicated that there was a statistically significant decrease in the participants' mean PSS scores and a statistically significant increase in the mean WAYS score at postintervention compared to pre-intervention.

Chapter 5: Discussion of Findings

This chapter discusses what nursing leaders might do with the information from this study's findings. Chapter 5 discusses the results reported in the preceding chapter's data analysis. The data analysis outcomes are interpreted in the first section of this chapter. The chapter next discusses the findings and their implications for nursing leaders. Following that, this chapter gives recommendations for future research on the subject. This chapter's conclusion section summarizes the project's goals, the importance of the findings, and possible recommendations for future research studies.

Interpretation and Inference of the Findings

The findings from the data analysis in the previous chapter can be interpreted to answer the guiding PICOT question from the project. The PICOT question sought to determine whether nursing graduate students' participation in an educational intervention on stress would be associated with reductions in the participants' reported stress levels. The postintervention mean score on the PSS was found to be significantly ($p < .001$) lower than the pre-intervention mean score for this project's sample, indicating that participants did experience a decline in perceived stress levels after participating in the intervention.

Additionally, the statistically significant ($p = .01$) increase in the participants' WAYS mean score at postintervention compared to pre-intervention indicates that the participants showed an increase in their usage of coping mechanisms for stress after taking part in the intervention. These findings are consistent with previous studies that have found that taking part in educational interventions can improve nursing students' and nurses' usage of healthy coping skills for stress (Hamaideh et al., 2017; Labrague et al., 2017). Previous studies have found that graduate nursing students' usage of healthy coping mechanisms is associated with reductions in

reported stress levels (Allen et al., 2021; Noble et al., 2019). Those findings are consistent with this project's observed decrease in reported stress levels that coincided with an increase in the usage of coping mechanisms after participants had taken part in the educational intervention compared to before they had been involved in the intervention.

The findings from the project supported the theoretical framework. These findings indicated that coping skills were aligned with lower levels of perceived harmful stress, which is consistent with the predictions made in Selye's stress theory. Because that theory states that individuals must always experience some stress but can manage it to experience the stress as positive or negative, coping skills become essential to avoid unhealthy responses to negative stress (Harkreader, 2004).

Implications of Analysis for Leaders

The findings from this project have implications for nursing that would be useful for nursing leaders. Nursing students at the graduate level are exposed to high levels of stressors on a routine basis, including academic, workplace, and work-life balance stressors that can ultimately increase the risk of burnout and, thus, of the associated adverse outcomes tied to burnout, such as higher risks of leaving the nursing profession, reductions in compassion, and greater risks of patient care errors (Galdino et al., 2020). Nursing leaders have a real interest in preventing excessive levels of stress among nursing graduate students, which can be achieved by promoting the usage of healthy coping mechanisms to manage stress (Cestari et al., 2017). The findings from this project showed that even a relatively brief educational intervention for nursing graduate students could effectively increase the levels of usage of coping mechanisms for stress among participants, while substantially reducing the reported stress levels of the participants. Therefore, nursing leaders could implement similar brief educational interventions for stress that

target nursing graduate students in their own practice settings to offset the high levels of stress that these students are likely to experience on a day-to-day basis. The findings suggest that nursing leaders at the school where the project took place may wish to screen graduate nursing students more regularly for levels of unhealthy stress. Additionally, offering online or in-person stress education interventions for graduate nursing students at this school would probably help to improve the healthy management of stress among these students.

Recommendations for Future Research

Future studies on the use of educational interventions to reduce stress in nursing students could take several directions. First, because nursing undergraduate students also frequently experience high levels of stress that could lead to burnout, it would be worthwhile to replicate this project's protocol for the intervention at the undergraduate level to determine whether undergraduate students would experience similar benefits from participation in terms of stress reduction and greater usage of coping mechanisms. Another possibility might be to pair the educational intervention with other stress reduction approaches like mindfulness to determine whether participants might experience even greater improvements in their stress levels and uses of coping mechanisms.

Project Alignment With DNP Essentials

The project aligned with the first DNP Essential: Scientific Underpinnings of Practice. It aligned nursing knowledge with evidence and knowledge from other fields, like psychology and education. Moreover, it took a scientific approach to improving stress outcomes among nursing students and evaluated the results.

Essential II is Organizational and Systems Leadership. This essential was found in the project by introducing a project to improve nursing student health as a quality improvement

initiative. Also, aspects of finance and business were used to create the implementation plan for the project.

Essential III is known as Clinical Scholarship and Analytical Methods for Evidence-based Practice. This project used an analysis of the available evidence in research literature as the basis for the methodology, theory, and data collection. The intervention design and implementation also followed the guidelines of the evidence-based practice framework.

Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care, was also relevant. This project used information systems to deliver an intervention to the participants. Moreover, all data collection and analysis in the project made use of information systems.

Essential V is Health Care Policy for Advocacy. The project advocated for the nursing profession by targeting stress and burnout, which are widespread but an under-recognized phenomena that drastically affect nurses and, through them, patients as well. Also, the project was used to develop recommendations for policymakers in the nursing education sector.

Essential VI is Interprofessional Collaboration for Improving Health Outcomes. One way this project addressed this essential was by utilizing evidence based on studies involving interprofessional collaboration. Also, the implementation of the project involved consulting interprofessional leaders.

Essential VII: Clinical Prevention and Population Health was addressed by taking a preventative health approach to stress. Also, the intervention in the project imparted preventative health techniques to the participants.

Essential VIII is Advanced Nursing Practice. The project aligned with the essential by utilizing clinical judgment to identify stress among graduate nursing students as an issue

affecting these students as well as patients. Also, the project sustained the intervention through steps taken in the project setting.

Conclusion

The purpose of this project was to evaluate whether taking part in an educational intervention for stress would be associated with decreases in stress levels among graduate nursing students. This project was significant for nurse leaders to consider because stress frequently and adversely affects nursing graduate students and can create a very real risk of professional burnout, which can threaten patient care quality and safety as well as making nurses' departure from the profession more likely. This project used a pre- and postsurvey design to compare stress levels and coping skills usage before and after participation in an educational intervention for 11 graduate nursing students.

The findings from this project showed that participants, after taking part in the educational intervention, showed significant decreases in reported stress and increases in their usage of coping mechanisms. These findings suggest that nursing leaders working with nursing graduate students should consider implementing brief stress reduction interventions involving education to address excess stress levels among students. Additionally, future research should combine educational interventions with other stress reduction approaches and attempt to replicate this project among a sample of undergraduate nursing students.

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Appendix A: Institutional Review Board

ABILENE CHRISTIAN UNIVERSITY

Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

April 5, 2022

Shandria Sawyer
Department of Nursing
Abilene Christian University



Dear Shandria,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled "Identifying and addressing stress in graduate NP nursing students",

(IRB# 22-030) is exempt from review under Federal Policy for the Protection of Human Subjects.

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

Sincerely,

Megan Roth

Megan Roth, Ph.D.
Director of Research and Sponsored Programs

Appendix B: Informed Consent

You may be able to take part in a research study. This form provides important information about that study, including the risks and benefits to you as a potential participant. Please read this form carefully and ask the researcher any questions that you may have about the study. You can ask about research activities and any risks or benefits you may experience. You may also wish to discuss your participation with other people, such as your family doctor or a family member.

Your participation in this research is entirely voluntary. You may refuse to participate or stop your participation at any time and for any reason without any penalty or loss of benefits to which you are otherwise entitled.

PURPOSE AND DESCRIPTION: The purpose of this prospective, pre-intervention, post intervention study is to explore the relationship between stress and coping strategies among NP

Introduction: Identifying and addressing stress in graduate NP nursing students

graduate students and evaluate the impact of an educational intervention to impart healthy coping strategies to the students. This project will assess any changes in stress levels and coping levels among graduate NP nursing students currently enrolled in graduate education, identify which coping strategies the students have been utilizing, and evaluate the impact of a coping strategy intervention. This research project is needed to add to current literature on graduate NP students and stress experiences as the current literature review is limited.

Data will be collected with the assistance of the administrative assistant acting as a liaison to facilitate communication. The liaison will provide the students' school email addresses to send them the study details. This information will be kept private as the researcher's computer access is password protected. Details of the study will be shared within the students' school email via an electronic flyer. This will be their announcement to the study. This announcement will include the purpose of the study, instructions to the study, and the timeline of events. Once the students have been made aware of the study, the research process will be initiated via electronic delivery. The study will identify stressors experienced via the Perceived Stress Scale (PSS) and will also include the WAYS coping scale to better manage those stressors. The students will then receive educational interventions. The research surveys will take approximately 15-20 minutes to complete. Once the initial survey is completed, the students will have access to the educational interventions. A follow-up survey will be available after about two-three weeks to determine if the intervention was beneficial. Data will be collected upon completion of the surveys via the electronic application the Survey Monkey. Once data has been collected, it will be held in the storage system in a password protected until analysis of the results have been completed. Once the study is over, the data will be destroyed and deleted.

RISKS & BENEFITS: There are risks to taking part in this research study. Below is a list of the foreseeable risks, including the seriousness of those risks and how likely they are to occur:

The researcher has agreed to maintain the integrity, confidentiality, and transparency of the research study. There are no potential risks of physical harm to participants. However, a low/minimal psychological risk could include embarrassment and/or feelings of guilt.

There are potential benefits to participating in this study. Such benefits may include the desired goal to further research in graduate education. The researchers cannot guarantee that you will experience any personal benefits from participating in this study.

PRIVACY & CONFIDENTIALITY: Any information you provide will be confidential to the extent allowable by law. Some identifiable data may have to be shared with individuals outside

of the study team, such as members of the ACU Institutional Review Board. Otherwise, your confidentiality will be protected by ensuring that all electronically submitted data is password protected by the researcher in the online survey software. In addition, the researcher has sole password protection via computer software. Once the research data has been collected, all information of participants will be destroyed and/or deleted permanently. Only the researcher has access to the passwords.

The researcher will be using the electronic application called the Survey Monkey. The primary risk with this study is breach of confidentiality. However, we have taken steps to minimize this risk. We will not be collecting any personal identification data during the survey. However, Survey Monkey may collect information from your computer. You may read their privacy statements here: <https://www.surveymonkey.com/mp/policy/privacy-policy/>.

COLLECTION OF IDENTIFIABLE PRIVATE INFORMATION OR BIOSPECIMENS:

Your data, with or without identifiers, will **not** be used for any other research purposes other than those described herein.

CONTACTS: If you have questions about the research study, the lead researcher is Shandria Sawyer, APRN, FNP-C and may be contacted at xxx-xxx-xxxx, xxxxxxxxxxxxxxxx. If you are unable to reach the lead researcher or wish to speak to someone other than the lead researcher, you may contact Dr. Sandra Cleveland, xxxxxxxxxxxxxxxx. If you have concerns about this study, believe you may have been injured because of this study, or have general questions about your rights as a research participant, you may contact ACU's Chair of the Institutional Review Board and Executive Director of Research, Megan Roth, Ph.D. Dr. Roth may be reached at (xxx) xxx-xxxx

xxxxxxxxxxxxxxxxxxxxx

320 Hardin Administration Bldg, ACU Box 29103
Abilene, TX 79699

HIPAA AUTHORIZATION Abilene Christian University requires that private information about you be protected. This includes all demographic data and participant study information that identifies you collected by the researcher. The researcher will only use information that does not identify you personally. Health information about you that may be used or shared for this research study includes name, age, marital status, emotional/stress concerns. The contents and details of the research data will remain accessible to the researcher until the study is complete to include approximately one year. This authorization cannot be used for unspecified reasons or future research.

Additional Information

There may be unexpected risks associated with your participation in this study and some of those may be serious. We will notify you if any such risks are identified throughout the course of the study which may affect your willingness to participate.

Your participation may be ended early by the researchers for certain reasons. For example, we may end your participation if you no longer meet study requirements, the researchers believe it is no longer in your best interest to continue participating, you do not follow the instructions

provided by the researchers, or the study is ended. You will be contacted by the researchers and given further instructions if you are removed from the study.

Consent Signature Section

Please let the researchers know if you are participating in any other research studies at this time. Please sign this form if you voluntarily agree to participate in this study. Sign only after you have read all the information provided and your questions have been answered to your satisfaction. You should receive a copy of this signed consent form. You do not waive any legal rights by signing this form.

For electronic consent to complete an online survey: Please click the button below if you voluntarily agree to participate in this study. Click only after you have read all the information provided and your questions have been answered to your satisfaction. If you wish to have a copy of this consent form, you may print it now. You do not waive any legal rights by consenting to this study.

_____	_____	
Printed Name of Participant	Signature of Participant	Date
<u>Shandria Sawyer</u>	_____	
Printed Name of Person Obtaining Consent	Signature of Person Obtaining Consent	Date

Appendix C: Demographic Tool

1. Gender:
 - a. Male b. Female c. Transgender d. Non-binary/non-conforming e. Agender
(does not identify with any gender) f. Gender not listed g. prefer not to respond
2. Age:
 - a. 18–25 b. 26–35 c. 36–40 d. 41–50 e. 51–65 f. 65+
3. Do you work Full time or Part time? If you work, how many hours per week do you work?
4. How many hours per week do you study?
5. Do you have kids? If so, how many? How many do you care for?
6. Are you married? Single? Widowed? Divorced?
7. Do you live in the dormitory? Or commute?
8. What NP program are you enrolled?
 - a. BSN-DNP b. MSN/FNP c. FNP-DNP d. MSN/PMHNP e. PMHNP-DNP
9. What year are you enrolled?
 - a. First year? b. Second year? c. Third year? d. Fourth year?
10. How long have you been a nurse?
 - a. 1–5 years b. 6–10 years c. 11–15 years d. 16–20 years e. 20+ years
11. How long has it been since you have been enrolled in school?
 - a. within the last year? b. less than five years? c. greater than five years? d. greater than 10 years?
12. Were you enrolled in online courses during your previous enrollment?

Appendix D: Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

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? 0 1 2 3 4
2. In the last month, how often have you felt that you were unable to control the important things in your life? 0 1 2 3 4
3. In the last month, how often have you felt nervous and “stressed”? 0 1 2 3 4
4. In the last month, how often have you felt confident about your ability to handle your personal problems? 0 1 2 3 4
5. In the last month, how often have you felt that things were going your way? 0 1 2 3 4
6. In the last month, how often have you found that you could not cope with all the things that you had to do? 0 1 2 3 4
7. In the last month, how often have you been able to control irritations in your life? 0 1 2 3 4
8. In the last month, how often have you felt that you were on top of things? 0 1 2 3 4
9. In the last month, how often have you been angered because of things that were outside of your control? 0 1 2 3 4
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? 0 1 2 3 4

Appendix E: Ways Coping Scale

For use by Shandria Sawyer only. Received from Mind Garden, Inc. on December 7, 2020.

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0 = *Does not apply or not used*; 1 = *Used somewhat*; 2 = *Used quite a bit*; 3 = *Used a great deal*

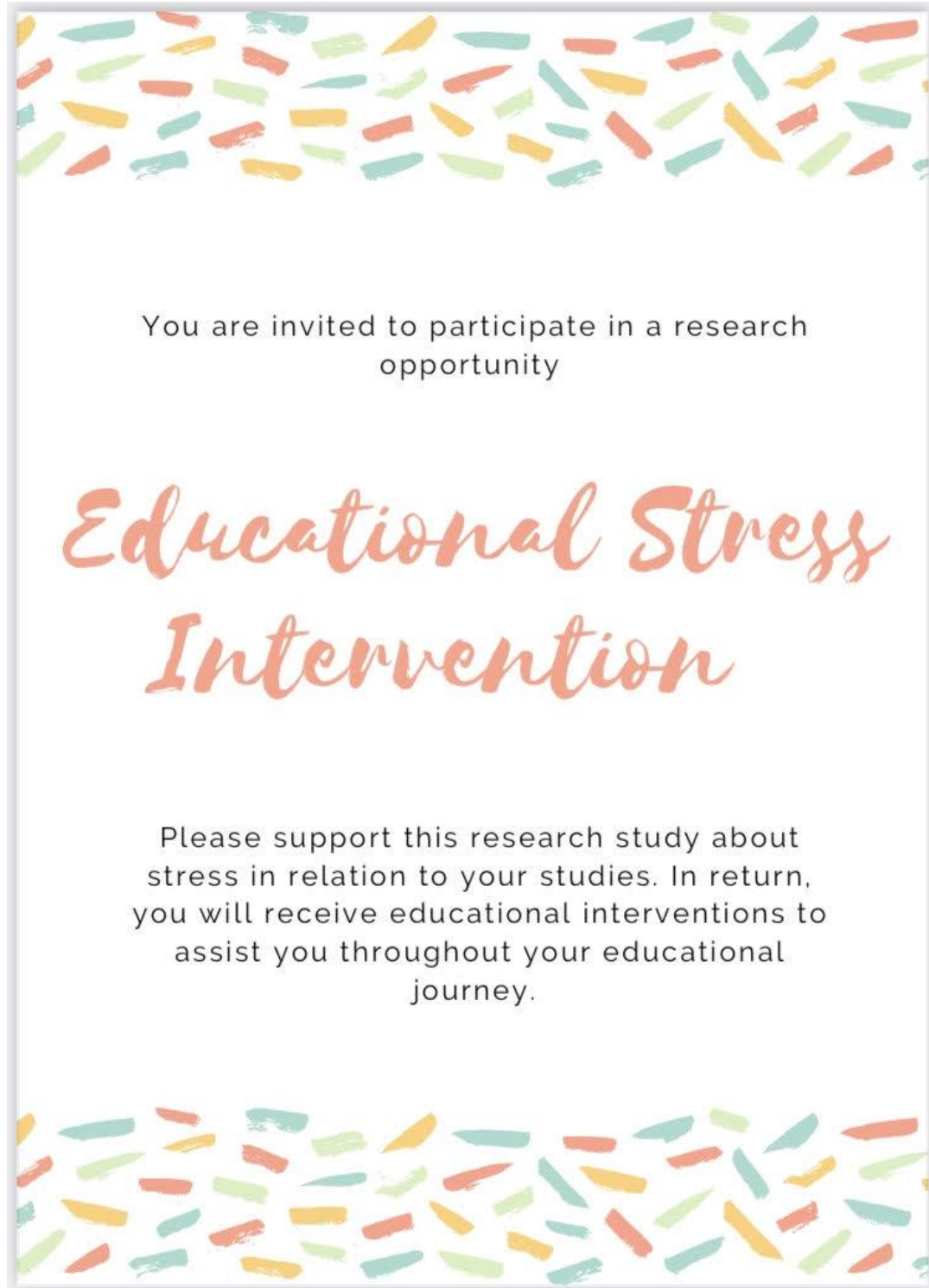
1. I just concentrated on what I had to do next – the next step. 0 1 2 3
2. I tried to analyze the problem in order to understand it better. 0 1 2 3
3. I turned to work or another activity to take my mind off things. 0 1 2 3
4. I felt that time would have made a difference –
the only thing was to wait..... 0 1 2 3
5. I bargained or compromised to get something positive
from the situation. 0 1 2 3
6. I did something that I didn't think would work,
but at least I was doing something..... 0 1 2 3
7. I tried to get the person responsible to change his or her mind..... 0 1 2 3
8. I talked to someone to find out more about the situation..... 0 1 2 3
9. I criticized or lectured myself. 0 1 2 3
10. I tried not to burn my bridges, but leave things open somewhat. 0 1 2 3
11. I hoped for a miracle..... 0 1 2 3
12. I went along with fate; sometimes I just have bad luck. 0 1 2 3
13. I went on as if nothing had happened. 0 1 2 3
14. I tried to keep my feelings to myself..... 0 1 2 3
15. I looked for the silver lining, so to speak.

- I tried to look on the bright side of things. 0 1 2 3
16. I slept more than usual. 0 1 2 3
17. I expressed anger to the person(s) who caused the problem..... 0 1 2 3
18. I accepted sympathy and understanding from someone..... 0 1 2 3
19. I told myself things that helped me feel better..... 0 1 2 3
20. I was inspired to do something creative about the problem..... 0 1 2 3
21. I tried to forget the whole thing. 0 1 2 3
22. I got professional help..... 0 1 2 3
23. I changed or grew as a person. 0 1 2 3
24. I waited to see what would happen before doing anything. 0 1 2 3
25. I apologized or did something to make up. 0 1 2 3
26. I made a plan of action and followed it..... 0 1 2 3
27. I accepted the next best thing to what I wanted. 0 1 2 3
28. I let my feelings out somehow..... 0 1 2 3
29. I realized that I had brought the problem on myself. 0 1 2 3
30. I came out of the experience better than when I went in. 0 1 2 3
31. I talked to someone who could do something concrete
about the problem..... 0 1 2 3
32. I tried to get away from it for a while by resting or taking a vacation 0 1 2 3
33. I tried to make myself feel better by eating, drinking,
smoking, using drugs, or medications, etc..... 0 1 2 3
34. I took a big chance or did something very risky
to solve the problem. 0 1 2 3

35. I tried not to act too hastily or follow my first hunch..... 0 1 2 3
36. I found new faith. 0 1 2 3
37. I maintained my pride and kept a stiff upper lip..... 0 1 2 3
38. I rediscovered what is important in life.0123
39. I changed something so things would turn out all right. 0 1 2 3
40. I generally avoided being with people. 0 1 2 3
41. I didn't let it get to me; I refused to think too much about it. 0 1 2 3
42. I asked advice from a relative or friend I respected..... 0 1 2 3
43. I kept others from knowing how bad things were. 0 1 2 3
44. I made light of the situation; I refused to get too serious about it. 0 1 2 3
45. I talked to someone about how I was feeling. 0 1 2 3
46. I stood my ground and fought for what I wanted. 0 1 2 3
47. I took it out on other people. 0 1 2 3
48. I drew on my past experiences; I was in a similar situation before. 0 1 2 3
49. I knew what had to be done, so I doubled my efforts
to make things work..... 0 1 2 3
50. I refused to believe that it had happened 0 1 2 3
51. I promised myself that things would be different next time..... 0 1 2 3
52. I came up with a couple of different solutions to the problem..... 0 1 2 3
53. I accepted the situation since nothing could be done..... 0 1 2 3
54. I tried to keep my feeling about the problem from interfering
with other things. 0 1 2 3
55. I wished that I could change what had happened or how I felt. 0 1 2 3

56. I changed something about myself. 0 1 2 3
57. I daydreamed or imagined a better time or place
than the one I was in..... 0 1 2 3
58. I wished that the situation would go away or somehow
be over with. 0 1 2 3
59. I had fantasies or wishes about how things might turn out..... 0 1 2 3
60. I prayed. 0 1 2 3
61. I prepared myself for the worst. 0 1 2 3
62. I went over in my mind what I would say or do..... 0 1 2 3
63. I thought about how a person I admire would handle
this situation and used that as a model..... 0 1 2 3
- 64 I tried to see things from the other person's point of view. 0 1 2 3
65. I reminded myself how much worse things could be. 0 1 2 3
66. I jogged or exercised. 0 1 2 3

Stop Here.

Appendix F: Flyer Announcement

Appendix G: Drafted Introductory Email

Greetings,

I hope this email finds you, your family, your friends, and your colleagues safe and well.

I am emailing you to request your participation in my study on stress. The research is being conducted to identify stressors but also to provide educational interventions to better manage if identified. The research is being conducted by me as part of my project in my doctoral program at Abilene Christian University in Texas. All responses are confidential.

Your input is crucial to help guide future decisions and programs to provide continued value to nursing students globally. We need your participation, and we would appreciate your response.

In exchange for your valuable feedback, you will have access to the educational interventions that may be helpful throughout your educational journey.

The research surveys will take approximately 10–20 minutes to complete. Once the initial survey is completed, you will have access to the educational interventions. A follow-up survey will be available after about 2–3 weeks to determine if the intervention was helpful.

Thank you in advance for your time and your contribution to this important initiative. If you have any questions about this study, please contact me Shandria Sawyer at xxx-xxx-xxxx or xxxxxxxxxxxxxxxxxxxx or xxxxxxxxxxxxxxxxxxxx.

Sincerely,

Shandria Sawyer, MSN, APRN, FNP-C

Appendix H: Educational Intervention

The educational intervention used in this study has never been used before in a study and was developed by the content creator who is a licensed mental health counselor to assist mental health professionals by providing free evidenced-based education and therapy tools. The educational intervention detailed acute and chronic stress, educated on the acute and chronic symptoms of stress, and also educated on stress management techniques. The attached links are for the stress management worksheets and educational intervention guide.

<https://www.therapistaid.com/therapy-guide/stress-management-guide>

<https://www.therapistaid.com/worksheets/stress-management.pdf>

Appendix I: Reminder Flyer Announcement

