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The Effects of Meditation on Perceived Self Efficacy in Student Registered Nurse Anesthetists

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THE EFFECTS OF MEDITATION ON PERCEIVED SELF EFFICACY IN STUDENT REGISTERED NURSE ANESTHETISTS

by

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ABSTRACT

THE EFFECTS OF MEDITATION ON PERCEIVED SELF EFFICACY IN STUDENT REGISTERED NURSE ANESTHETISTS

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Nurse anesthesia programs demand time and commitment for educational requirements and success. Student Registered Nurse Anesthetists (SRNAs) are encumbered with an exponential amount of stress in these programs. Research has shown that mindful-meditation is an effective method for stress reduction and improving attention and concentration. The purpose of this Doctor of Nursing Practice project was to determine if mindful-meditation has an influence on perceived self-efficacy in SRNAs.

A pre survey was administered via email to 56 nurse anesthesia students in different levels of one nurse anesthesia program. The survey included the Perceived Stress Scale to measure stress level and the General Self-Efficacy Scale to measure perceived self-efficacy. One week later, a link to a free 1-minute guided audio meditation was administered via email and participants were asked to use the intervention once a day for a period of 8 weeks. A post survey was administered that included the Perceived Stress Scale and General Self-Efficacy Scale. There was no observed statistical significance when comparing t-test results from the pre and post survey. Although significance was not demonstrated, a slight improvement was noted in the second year students General Self-Efficacy Scale scores as well as a slight reduction in Perceived Stress Scale scores. Further studies that assess stress reduction techniques and ways to

improve perceived self-efficacy are needed on this population. Effective coping methods and stress reduction techniques are essential to nurse anesthesia education.

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DEDICATION

I would like to thank my husband, Brent Miley, for his continual love and support through the course of attaining my Doctorate in Nursing Practice. I would also like to thank all of my friends and family who have pushed me to be my best and to always set my goals high. Without their guidance and influence in my life, completing this degree would not have been possible. I would also like to thank my son, Reed Miley. He has been the most patient and loving little boy throughout this process. I hope that he can learn from this to continually work hard and be consistent in achieving his goals.

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LIST OF ABBREVIATIONS

AANA	American Association of Nurse Anesthetists
ANT	Attention Network Test
CRNA	Certified Registered Nurse Anesthetist
DASS	Depression Anxiety and Stress Scale
DNP	Doctorate of Nursing Practice
GSE	General Self-Efficacy Scale
HADS	Hospital Anxiety and Depression Scale
IRB	Institutional Review Board
MBI	Maslach Burnout Inventory
MBSR	Mindfulness-Based Stress Reduction
NAP	Nurse Anesthesia Program
PSS	Perceived Stress Scale
SCBC	Santa Clara Brief Compassion Scale
SRNA	Student Registered Nurse Anesthetist

CHAPTER I – INTRODUCTION

Overview

Student Registered Nurse Anesthetists (SRNAs) have a tremendous amount of stress related to didactic requirements and to clinical performance (Chipas & McKenna, 2011; Tunajek, 2006). Nurse Anesthesia Programs (NAP) mandate a vigorous academic obligation in developing students into competent Certified Registered Nurse Anesthetists (CRNA). These curricula are rigorous, demanding time and commitment for success. Increased amounts of stress and the competitive nature of the field, along with time constraints can lead SRNAs to ineffective coping mechanisms and poor performance didactically and clinically (Tunajek, 2006). Although some stress may be a healthy way to provide academic motivation, prolonged, increased levels of stress may adversely affect students' ability to learn and to perform effectively as health care providers (Chipas, A., Cordrey, D., Floyd, D., Grubbs, L., Miller, S., & Tyre, B., 2012).

Background and Significance

As SRNAs transition from their roles as leaders in critical care environments to novice anesthesia providers, they experience academic and clinical stressors. Feeling overwhelmed with stress can lead SRNAs to feelings of failure and low levels of self-esteem (Tunajek, 2006). Throughout this transition, students must develop effective ways to manage an increased stress load (Chipas & McKenna, 2011). It has been documented that SRNAs report higher levels of stress than practicing CRNAs (Chipas & McKenna, 2011). The American Association of Nurse Anesthetists (AANA) has taken an active role in providing wellness education for students as well as CRNA providers to help raise awareness of this increased stress and to provide healthy suggestions for dealing with

stress (American Association of Nurse Anesthetists, 2017). The AANA stated, "A state of physical well-being is not just the absence of disease. It includes lifestyle behavior choices to ensure health, avoid preventable diseases and conditions, and to live in a balanced state of body, mind, and spirit" (American Association of Nurse Anesthetists, 2017, para. 1).

Mindful-meditation has been shown to enhance coping mechanisms, decrease stress, and improve intellectual ability (Spadaro & Hunker, 2016). Spadaro & Hunter (2016) reported that numerous studies have shown that mindful-meditation improves attention, concentration, and self-knowledge. Albert Bandura defines self-efficacy as an individual's belief of his/her capabilities to produce a designated level of performance (Bandura, 1997). Studies have shown high levels of self-efficacy can be used as a predictor for academic performance and success (Conner, 2015). Students with increased self-efficacy have improved academic functioning and ability to persevere in anesthesia programs (Conner, 2015). Studies that assess healthy ways in which SRNAs can improve stress management and enhance perceived self-efficacy during education could ultimately impact the excellence of education as well as the quality of care provided to patients.

Clinical Question

This project was developed to discuss ways in which stress can be relieved in SRNAs and healthy ways to handle challenges. Meditation was used as an intervention in improving self-efficacy. The clinical question stated, does mindful-meditation influence perceived self-efficacy in stress management in SRNAs enrolled in a doctorate level Nurse Anesthesia Program over period of 8 weeks?

Purpose

The purpose of this Doctor of Nursing Practice (DNP) project was to determine if mindful-meditation was an effective technique to improve perceived self-efficacy in coping with stressful situations for SRNAs. This project was intended to provide students with a healthy coping mechanism to better handle stress and, in turn, increase perceived self-efficacy and performance as a student and care provider. Despite a large number of studies regarding stress reduction through meditation on medical students as well as undergraduate nursing students, research is lacking in the use of meditation as a stress reduction technique in SRNAs. A thorough review of the literature was completed in determining if meditation influences perceived self-efficacy in SRNAs. Following the review of the literature and analysis of the data, an objective was set to introduce SRNAs at a nurse anesthesia program in the southeastern United States to a 1-minute guided audio meditation. A pre and post survey was administered to three cohorts of SRNAs, and the 1-minute guided audio meditation was sent via email. The purpose of the pre and post surveys was to determine if the stress level and perceived self-efficacy was influenced by the intervention. Mindful-meditation provides potential benefits of stress reduction and improved self-efficacy and an exceptional possibility for educational enhancement.

Literature Review

A review of the literature was conducted using Medline, Health Source, and CINAHL at The University of Southern Mississippi in order to obtain articles related to SRNA stress, mindful-meditation, and perceived self-efficacy. Combinations of search terms used were *nurse anesthesia students*, *medical students, nursing students, stress,*

meditation, burnout, and *self-efficacy.* A total of 90 articles were found using different combinations of these search terms. This number was further reduced to nine articles based on relevance to the project. Duplicate articles were excluded when using different combinations of the search terms. Articles were excluded if full text was not available or could not be obtained. Poster presentations were also excluded from the selected articles. Citation chasing resulted in three articles related to the information in this project.

Stress in Student Registered Nurse Anesthetists

Defined by the Mayo Clinic, "stress is a physical, mental, and emotional response to a challenging event" ("Stress management - Mayo Clinic," n.d., para. 2). The Mayo Clinic reported that stress is a normal part of life but that too much negative stress results in a lessened quality of life ("Stress management - Mayo Clinic," n.d.). The National Institute of Mental Health defined stress as "the brain and body's response to any demand" ("NIMH - 5 Things You Should Know About Stress," n.d.). Kendrick (2000) reported that stress in the workplace negatively impacts organizations and has negative financial implications as a result of a decrease in productivity, increase in absenteeism, and increased staff turnover. Kendrick (2000) reported that stress has the potential to cost $50 billion to $75 billion each year. The amount of stress that SRNAs experience often leads to maladaptive coping behaviors and negative health implications translating to poor student performance (Chipas & McKenna, 2011). Long-term exposure to stress can lead to physical illness like hypertension, myocardial infarction, gastrointestinal disturbances, and obesity (Chipas & McKenna, 2011). Stress can also have psychological implications such as depression, substance abuse, and inability to concentrate in learning environments (Chipas & McKenna, 2011).

Chipas et al. (2012) conducted a descriptive study utilizing a multifactorial questionnaire sent to all associate AANA members focusing on stress and its effects. Students who are enrolled in accredited nurse anesthesia programs are eligible to become Associate AANA members (American Association of Nurse Anesthetists, 2017). Respondents included 25.6% of all associate AANA members or 1374 responses. The mean overall stress in this study was 7.2 out of 10 and there was a statistical difference ($p < 0.05$) between men, having a mean of 7.1, and women, having a mean of 7.6. Although a higher level of stress was reported in divorced associate AANA members, no statistical significance was found related to marital status. There was a much greater reported stress in minority students as well as integrated versus front-loaded nurse anesthesia programs. In front-loaded nurse anesthesia programs, the didactic portion of education is completed first. In integrated nurse anesthesia programs, students receive didactic and clinical education concurrently. The difference in means from integrated versus front-loaded nurse anesthesia programs was 7.9 and 7.1, respectively; demonstrating statistical significance, $P < 0.05$. In this study, 47.3% of SRNAs reported being depressed at some point during their program with 21.2% reporting suicidal thoughts. Of the respondents, 17.1% sought medical help for stress management.

In a previous study, Chipas & McKenna (2011) sent a multifactorial questionnaire to 28,000 CRNAs and SRNAs assessing stress. There were 7,537 respondents, with 85% CRNAs and 15% SRNAs. Half of the respondents reported stress related to their job, and SRNAs reported a higher level of stress than CRNAs. Of the student responses, 31% reported seeking professional guidance for stress management and 18.9% reported taking

prescription medication to reduce stress. Chipas & McKenna (2011) recommended further studies to assess effective means of improving CRNA health and wellness.

In a similar study, Perez & Carroll-Perez (1999) surveyed 2,200 nurse anesthesia students in the United States assessing stress management programs of nurse anesthesia programs. There was a 68.4% response rate with a mean age of 34 years old with 70.9% female and 29.1% male. This study concluded that nurse anesthesia students experience significant amounts of stress and recommended that stress management programs should be implemented into nurse anesthesia education.

In a descriptive, correlational study using convenience sampling of 66 SRNAs and 15 practicing CRNAs, Kendrick (2000) found that stress negatively impacts communication. In this study, CRNAs were employed at a hospital on the Gulf Coast of Alabama and had between 0 and 20 years of experience. SRNAs were enrolled in a Master's level program accredited by the Council on Accreditation at a University Medical Center in the Southeastern United States. The mean age of participants was 34. This study found that second year students report a greater stress level than other SRNA students. He also concluded that practicing CRNAs have better access to coping resources. CRNAs with higher levels of stress reported less effective communication skills (Kendrick, 2000).

Mindful Meditation

Mindful meditation is based on an amplified sense of self and self-efficacy ("History of MBSR," 2014). Research has shown reductions in psychological and physical stress implications after mindful-meditation ("History of MBSR," 2014). Dr. Kabat-Zinn conducted the first mindful-meditation stress intervention in 1979 ("History

of MBSR," 2014). In a single-blinded randomized control trial completed in 2009 on senior medical students, mindful-meditation practice was found to be an evidenced-based intervention useful for managing stress (Warnecke, Quinn, Ogden, Towle, & Nelson, 2011). Students were randomized to either the intervention or control group. The intervention group was given a guided mindfulness video and instructed to use the intervention for a period of 8 weeks. The participants completed two self-reported questionnaires before the intervention and after. The Perceived Self-Stress Scale (PSS) was used as well as the Depression, Anxiety, and Stress Scale (DASS). Participants included 66 senior medical students in their final 2 years of study with a mean age of 23.92. Thirty-two students were in the treatment group and 34 in the control. Students with possible psychological distress, defined by a score of greater than 30 on the K10 questionnaire, were excluded from the study. Mindfulness practice decreased stress and anxiety levels in senior medical students. The group of students in the intervention group exhibited substantial declines in scores on the PSS (- 3.44, 95% confidence interval, - 6.20 to - 0.68); $p < 0.05$) and the anxiety section of the DASS (-2.82, 95% confidence interval, - 4.99 to - 0.64; $p < 0.05$) (Warnecke et al., 2011). This study supported recommendations that mindful-meditation is an effective stress reduction technique that should be utilized in other at-risk populations including other healthcare professionals (Warnecke et al., 2011).

Bamber & Kraenzle Schneider (2016) completed the first narrative review of the effects of mindful-meditation and stress, concentrating exclusively on college students. In this study, 57 studies were analyzed in a literature review. They determined that mindful-mediation techniques decreased stress levels of college students. They suggested a

possible decrease in attrition rate in college students by adding positive coping mechanisms from the beginning of education. Bamber & Kraenzle Schneider (2016) concluded support for mindful-meditation as an anxiety reduction tool to combat increased stressors in college students and recommended mindful-mediation education to begin during college program orientations.

As reported by Fortney, Luchterhand, Zakletskaia, Zgierska, & Rakel (2013), the increased number of patients with access to care through the Patient Protection and Affordable Care Act and the aging population in the United States poses challenges for primary care physicians and other providers. They found that increased stress and burnout in primary care physicians leads to negative impacts on care. In this study, 30 primary care physicians, recruited from UW-Madison departments of family medicine, internal medicine, and pediatrics, participated in a mindful-meditation course. Participants received an abbreviated version of the 8-week Mindfulness-based Stress Reduction (MBSR) program, developed at the University of Massachusetts Medical Center (Fortney et al., 2013). This study was a single-sample pre-post test design pilot where online methods were measured at baseline, 1 day, 8 weeks, and 9 months after the intervention. Linear mixed-effect method was used to evaluate modifications in outcomes. The surveys contained five measures including the PSS, DASS, 14 item Resilience Scale (RS – 14), Maslach Burnout Inventory (MBI), and the Santa Clara Brief Compassion Scale (SCBC). Participants demonstrated improved depression scores in the follow-up surveys ($P \leq .001$). There was a significant decline in perceived stress on the three follow-up surveys ($P = .001$, $P < .001$ and $P = .002$, respectively) after the intervention. Participants improved in each time interval when compared to baseline

measurement of anxiety, burnout, stress, resilience, and compassion. Participation in a mindful-meditation training course decreased stress, burnout, depression, and anxiety in primary care clinicians. This study was suggestive that mindful-meditation is an effective method to reduce stress and burnout in clinicians. Recommendations suggest additional research including randomized controlled trials should be completed, as management of burnout symptoms has the potential to impact patient care.

Stress and burnout negatively impact quality care (Goodman & Schorling, 2012; West, Shanafelt, & Kolars, 2011). Goodman & Schorling (2012) cited that there is a correlation between patient satisfaction, medical errors, and burnout. They conducted a pre-post observational study on physicians and other healthcare providers. The study included 93 participants comprised of 51 (55%) physicians and 42 (45%) other healthcare providers. Participants were recruited to participate in an 8-week MBSR training class. Mindfulness practice included body scan, mindful-movement, walking meditation, and sitting meditation. Participants answered the Maslach Burnout Inventory and the SF-12v2 instruments during the first and last class. Paired t-tests were utilized for analyzing physicians and other healthcare workers. Independent sample t-tests were used to compare the two groups and chi-square analysis was used for categorical differences. All elements on the Malsach Burnout Inventory Scale including mental health, emotional exhaustion, depersonalization, and personalization all improved for both groups from the first to the last class. Physicians were shown to have greater levels of emotional exhaustion and depersonalization. Mindfulness-based meditation courses can provide an effective method of stress reduction and improved mental well-being for a variety of healthcare providers.

Spadaro & Hunker (2016) completed a descriptive study on 26 nursing students enrolled in distance education, with 88% enrolled in a DNP program. An 8-week online mindfulness intervention was used and a follow-up assessment was completed at 16 weeks. The Perceived Stress Scale (PSS), Hospital Anxiety and Depression Scale (HADS), and Attention Network Test (ANT) were used in outcome measurement of stress, mood, and cognition. This study showed a reduced amount of stress in online nursing students at the end of the 8-week mindfulness training. This lower level of stress was retained at 24 weeks. Results suggested that there is a positive correlation between the time mindfulness is practiced and the amount of stress reduction. This study suggested that faculty should consider encouraging students to incorporate MBSR into their everyday lives. This study concluded that an online MBSR program is an easy and convenient method to offer as an intervention to decrease stress and improve mood and cognition.

Self-efficacy

Successful functioning involves both skills as well as efficacy beliefs in these skills (Bandura, 1997). Resilient efficacy enables individuals to complete extraordinary tasks even in the presence of significant barriers (Bandura, 1997). Self-efficacy has been defined as a person's belief that he or she is capable of completing a task (Bandura, 1997). When people believe that they are not capable of completing a task or producing results, they will lack motivation to attempt the task (Bandura, 1997). Studies have shown that greater self-efficacy can predict better academic performance and enhanced student retention (Conner, 2015). There are many ways in which self-efficacy can be improved. These may include social support, task mastery, vicarious experiences, and positive

emotional states (Conner, 2015). Students have a greater ability to persevere through challenges in an effort to complete tasks as a result of enhanced self-efficacy (Conner, 2015). Students also use more intellectual approaches to enable learning as a result of a greater self-efficacy (Conner, 2015). Students who believe they are competent display a greater inclination to apply more effort into learning experiences (Conner, 2015).

The influence of self-efficacy on student performance has been well documented. Choi (2005) conducted a study of 230 undergraduate students examining relationships between self-efficacy and self-concept and academic performance. Participants in this study completed a demographic survey as well as self-efficacy and self-concept measures in the beginning of the term. With student permission, at the end of the term, course grades were obtained and used as a measure of academic achievement. This study used standardized regression coefficients and showed that specific self-efficacy was the only significant predictor of end of term grades. This study supports that college students with high levels of self-efficacy tend to have better academic performance. When students experience accomplishment through task completion with increasing challenge, self-efficacy and self-concept experiences are improved. As a result, academic achievement is improved. This study suggests that teachers should examine their teaching practices and incorporate self-construct activities to improve self-efficacy and self-concept in students.

Increased concern over stress and burnout in healthcare professionals and professionals in training have driven studies focused on stress management (Richards, Hedberg, & Thoresen, 2008). Stress has been shown to decrease concentration and reaction time and reduce the ability to complete challenging tasks. Richards, Hegberg, & Thoresen (2008) conducted a randomized controlled trial and qualitative assessment on

58 healthcare professionals including nurses, physicians, chaplains, occupational therapists, physical therapists, and psychological counselors. Participants completed the Eight Point Program, also known as passage meditation. The 34-item Rational Caregiving Self-efficacy Scale was used to measure self-efficacy. Self-efficacy means increased in the treatment group from the pretest to the posttest by 0.84 and by 0.45 in the control group. This finding suggested that approximately one-half of the gain in the treatment group was because of the intervention on meditation. Findings were also positively noted at the 8 week and 19 week follow-up ($p < 0.05$). This study also found that increases in self-efficacy were much larger in participants who had lower initial self-efficacy. In the qualitative portion of the study conducted on 24 participants, 88% reported that the specific meditation program enhanced self-efficacy. In this study, statements by 10 participants suggested that meditation significantly reduced stress. The qualitative findings of the study support the quantitative findings of improved self-efficacy after the mediation intervention. Patient safety was reportedly increased as well as caregiver disposition after the intervention. This study suggested that other studies should be completed tailored to specific professions and self-efficacy. Findings from this study support that meditation enhances healthcare professional self-efficacy.

Theoretical Framework

Albert Bandura's social cognitive theory explains that human behavior is influenced by personal, environmental, and behavioral aspects (Bandura, 1997). Behavior reformation and change originate from the social cognitive theory (Bandura, 1997). Bandura's theory on self-efficacy evaluates human behavior and belief in self. Lack of self-efficacy can be a deterrent in behavior modification (Bandura, 1997). This theory

explains that people learn through personal experiences as well as observation of the engagements of others (Bandura, 1997). Bandura explained that self-efficacy is much like a person's self-confidence (Bandura, 1997). As self-efficacy is a principle component of the social cognitive theory, it enables one to persevere even in the presence of obstacles and is extremely essential in influencing behavior modification (Bandura, 1997). This theory fits within this project, as meditation was evaluated to improve self-efficacy. Improving self-efficacy is imperative to promote change and provide motivation for perseverance over complications and challenges (Bandura, 1997). As SRNAs are provided with an intervention to decrease stress and improve perceived self-efficacy, healthy behaviors and performance reform can be achieved. The framework of this theory provides structure for this project and influenced the design of the intervention by using a scale that specifically addresses self-efficacy.

SRNAs have exponential amounts of stress (Chipas et al., 2012; Chipas & McKenna, 2011). SRNAs have a need for a behavior modification intervention that improves self-efficacy in handling this increased amount of stress (Chipas et al., 2012). Mindful meditation is based on an amplified sense of self and self-efficacy ("History of MBSR," 2014). Research has shown reductions in psychological and physical stress implications after mindful-meditation ("History of MBSR," 2014). In this project, the theory of self-efficacy was applied, as mindful-meditation was evaluated as an effective intervention to improve perceived self-efficacy in SRNAs.

Doctorate of Nursing Practice Essentials

This project included the eight Doctorate of Nursing Practice (DNP) essentials that are required when obtaining this degree. These essentials validate the competencies

that are mandatory for completion. This project was developed with these essentials as a framework.

Essential One: Scientific Underpinnings for Practice

DNP nursing programs provide nurses the ability to integrate scientific theories with nursing science and to develop new approaches to nursing practice based on this integration (Zaccagnini & White, 2014). Albert Bandura's self-efficacy theory was utilized throughout this project. This project used the latest evidence to provide positive coping mechanisms and increase perceived self-efficacy in SRNAs.

Essential Two: Organizational and System Leadership for Quality Improvement and Systems Thinking

Organizational changes should be promoted by DNP prepared nurses to improve quality and delivery of care (Zaccagnini & White, 2014). This DNP project promotes a quality improvement practice change for educational systems. This project supports improving educational experiences that will indirectly improve care provided to patients. If students learn how to effectively manage stress from the beginning, this exercise will be continued in practice, ultimately decreasing burnout and turnover. It also has the potential to decrease organizational costs with decreased absenteeism and improved enthusiasm for employees.

Essential Three: Clinical Leadership and Analytical Methods for Evidenced-based Practice

This essential discusses that the DNP prepared nurse serves as an essential integration component from the creation of new knowledge, to the application of this knowledge in practice (Zaccagnini & White, 2014). Using evidence to guide best practice

is a key component in doctoral education. A literature review found that meditation is an effective means to decrease stress and that perceived self-efficacy is a key component to success. These results were disseminated, as a meditation intervention was provided to SRNAs to improve perceived self-efficacy

Essential Four: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Healthcare

DNP prepared nurses are equipped to be proficient in the use of healthcare technology in order to improve quality care (Zaccagnini & White, 2014). This project utilized a free guided-meditation available on the internet and as an mp3 as an intervention to improve perceived self-efficacy. Using an online tool is an example of how this essential was met in this DNP project.

Essential Five: Healthcare Policy for Advocacy in Healthcare

Healthcare policy can be influenced by this project, as evidence was disseminated to SRNAS during an educational program at a university. Policies regarding incorporation of stress reduction techniques could be persuaded by this project. Including meditation education in program orientations would promote healthy stress reduction from the beginning.

Essential Six: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

This essential was met as collaboration with educators as well as other SRNAS was used in developing coping strategies for students to improve perceived self-efficacy. Collaboration with the school of nursing and the NAP allowed this project to influence

students at this university. Future projects can be complete by collaborating with other nursing specialties in this university.

Essential Seven: Clinical Prevention and Population Health for Improving the Nation's Heatlth

By providing SRNAs with meditation as a healthy coping mechanism to better deal with stress, perceived self-efficacy can be enhanced. Improving perceived self-efficacy might lead to more confident and well-prepared students in the clinical arena. Decreasing symptoms of stress is key in clinical prevention and population health.

Essential Eight: Advanced Nursing Practice

This project met this essential by educating SRNAs on stress, meditation, and perceived self-efficacy. A meditation intervention was provided to SRNAs in order to improve the way that SRNAs handle stress. Improved perceived self-efficacy influences the confidence displayed by SRNAs in didactic and clinical settings.

CHAPTER II - METHODOLOGY

Design

A pre and post survey design was developed using the online survey tool Qualtrics through The University of Southern Mississippi. After approval from The University of Southern Mississippi's Institutional Review Board (IRB) and the director of the nurse anesthesia program, an email invitation to participate was sent to three cohorts of SRNAs enrolled in a nurse anesthesia program. The director of the nurse anesthesia program sent the email. The email included informed consent and an explanation of the project and intervention. The consent included that there would be no compensation for participation as well as no consequences for failing to participate.

A pre survey was included in the email and students were given a week to voluntarily participate. The pre survey included demographic information as well as the Perceived Stress Scale (PSS) and the General Self-Efficacy Scale (GSE). The intervention was then sent to all participants with instructions for use. The intervention for this study was a free guided 1-minute calming meditation audio. Participants were instructed to listen and participate in the guided meditation at least once a day for a period of 8 weeks. The audio meditation was easily accessible from the Internet for participants to listen when needed. The 1-minute calming guided meditation audio can be found at fragrantheart.com. A post survey was then sent by the director of the nurse anesthesia program to all SRNAs which also included informed consent and an explanation of the survey. The post survey also included the PSS and the GSE as well as demographic information. The SRNAs were given a week to voluntarily participate. Ethical considerations in this project included informed consent and confidentiality.

Participants were informed that there was no identifying information obtained in the pre and post survey. The consent stated that all data collected for the purpose of the project would be deleted six months after fulfillment of graduation requirements.

The GSE and the PSS are two reliable and previously validated tools that were utilized in the pre and post surveys. The GSE is a 10-item psychometric scale scored on a 4-point scale with final scores ranging from 10 to 40 ("The General Self," n.d.). The GSE Cronbach's alphas range from 0.76 to 0.90 with the majority in the 0.80s ("The General Self," n.d.). The scale is designed to assess self-beliefs in ability to cope with stressful demands. The GSE was developed in 1981 by Matthias Jerusalem and Ralf Schwarzer. It was originally developed in German but has been translated to 32 different languages ("The General Self," n.d.). Permission was granted to modify and administer the GSE for this DNP project.

The PSS, a classic stress assessment tool developed in 1983, is a 10-item questionnaire used for determining perceived stress. Scores range from 0 to 40 with higher scores indicating more perceived stress. The PSS uses a 5-point Likert Scale (0 = never, 4 = very often). This scale is a previously validated and publicly available instrument used for evaluating the perception of stress.

Target Population

The target population for this project was SRNAs enrolled in a 3-year doctoral level nurse anesthesia program in the southeastern United States. Participants were recruited by an email invitation to participate in the study. Inclusion criteria included all students enrolled in the nurse anesthesia program. The author was excluded from the project. Convenience sampling was utilized in this DNP project.

Data Analysis

After data collection, Microsoft Excel and SPSS were used for data analysis. Descriptive statistics was utilized to describe the sample in this study. Independent t-tests were calculated to measure the difference in the two means of the pre and post survey scores of the PSS and the GSE in all participants. $P < 0.05$ was used to exhibit statistical significance. The difference in these means was then computed to determine if there was a difference from baseline in the scores of the two tools. This information was used to identify if mindful meditation is an effective method to increase perceived self-efficacy in the SRNA. Participants were also separated by year of graduation and independent t-tests were calculated on each between their pre and post survey results. This separation was completed in order to determine if there was a difference in stress level or perceived self-efficacy based on a specific level in the anesthesia program.

CHAPTER III - RESULTS

The pre mindful-meditation intervention survey was sent on May 10, 2017 and closed on May 17, 2017. A total of 56 emails were sent out with a return rate of 44.6% (n=25). The final sample size of those who answered the pre survey was 25; of which, 40% were male (n=10) and 60% female (n=15). Of the respondents, 44% (n=11) were in the 2017 graduating class, 24% (n=6) in the 2018 graduating class, and 32% (n=8) in the 2019 graduating class. The sample included 48% (n=12) married, 4% (n=1) divorced, 4% (n=1) separated, and 44% (n=11) never married. The respondents reported 24% (n=6) having children and 76% (n=19) did not have children. The survey results indicated several methods of stress reduction with 80% of respondents using exercise (n=20), 68% engaging with support systems (n=17), 8% using meditation and deep breathing (n=2), 8% using therapeutic massage (n=2), 44% using regular consistent sleep patterns (n=11), 68% using prayer (n=17), 60% using vacations (n=15), 16% using anti-anxiety medication for stress relief (n=4), 44% using time-management techniques (n=11), and 64% using music (n=16). The results of the survey suggested 16% of the respondents had used meditation techniques for stress reduction in the past (n=4) and 84% had not (n=21).

The post mindful-meditation intervention survey was sent to 56 students on July 12, 2017 and closed on July 19, 2017. A final sample size on the post survey was 30 equating to a 53.6% return rate (n=30). The survey results indicated that there were 30% male (n=9) and 70% female (n=21). Of the respondents 33.3% were in the 2017 graduating class (n=10), 30% in the 2018 graduating class (n=9), and 33.3% in the 2019 graduating class (n=10). The post survey respondents also included 63.3% married

(n=19), 0% divorced (n=0), 3.3% separated (n=1), and 30% never married (n=9). The respondents reported 16.6% having children (n=5) and 80% did not have children (n=24).

An independent-samples t test was conducted to compare pre PSS scores and post PSS scores. There was not a significant difference in the scores of the pre PSS tool (M = 18.8, SD = 4.89) and the post PSS tool (M = 18.47, SD = 4.44); p = 0.79. Independent t tests were calculated to test stress reduction and improved perceived self-efficacy after the meditation intervention in a specific time in the nurse anesthesia program by comparing the means of the pre and post PSS and GSE scores of all three classes of students. There was not a significant difference in SRNAs graduating in 2017 pre PSS scores (M = 19.27, SD = 5.39) and the post PSS scores (M = 21, SD = 4.94); p = 0.45. There was not a significant difference in SRNAs graduating in 2018 pre PSS scores (M =21.17, SD = 3.55) and the post PSS scores (M =18.89, SD = 2.26); p = 0.20. There was not a significant difference in SRNAs graduating in 2019 pre PSS scores (M = 15.12, SD = 6.90) and the post PSS scores (M = 15.81, SD = 4.09); p = 0.80.

Table 1

Group Differences in PSS Scores from Pre and Post Surveys

Group	Pre PSS			Post PSS					
	M	*SD*	*N*	*M*	*SD*	*N*	*df*	*T*	*Sig.*
2017 SRNAs	19.27	5.39	11	21	4.94	10	19	-0.77	0.45
2018 SRNAs	21.17	3.55	6	18.89	2.29	9	8	1.40	0.20
2019 SRNAs	15.12	6.90	8	15.81	4.09	11	11	-0.25	0.80
Total SRNAs	18.8	4.89	25	18.47	4.44	30	49	0.26	0.79

An independent t test was conducted to compare the pre GSE scores and the post GSE scores. There was not a significant difference in the scores of the pre GSE tool (M = 31.48, SD = 4.04) and the post GSE tool (M = 31.33, SD = 2.89); p = 0.88. There was not a significant difference in SRNAs graduating in 2017 pre GSE scores (M = 31.64, SD = 4.27) and the post GSE scores (M = 30.4, SD = 1.78); p = 0.39. There was not a significant difference in SRNAs graduating in 2018 pre GSE scores (M =30.17, SD = 3.66) and the post GSE scores (M =31.44, SD = 3.17); p = 0.50. There was not a significant difference in SRNAs graduating in 2019 pre GSE scores (M =32.25, SD = 4.27) and the post GSE scores (M =32.09, SD = 3.44); p = 0.93.

Table 2

Group Differences in GSE Scores from Pre Survey and Post Survey

Group	Pre GSE			Post GSE					
	M	*SD*	*N*	*M*	*SD*	*N*	*df*	*T*	*Sig.*
2017 SRNAs	31.64	4.27	11	30.4	1.78	10	14	0.89	0.39
2018 SRNAs	30.19	3.66	6	31.44	3.17	9	10	-0.70	0.50
2019 SRNAs	32.25	4.27	8	32.09	3.44	11	13	0.09	0.93
Total SRNAs	31.48	4.04	25	31.33	2.89	30	42	0.15	0.88

When pre and post survey results were compared before the meditation intervention and after, significance was not demonstrated in on the PSS tool or the GSE tool. Statistical significance was not exhibited in any of the three classes of SRNAs. However, the SRNA class graduating in 2018 did show a decrease in stress level after the

intervention as measured by the PSS as well as an increase in perceived self-efficacy as measure by the GSE.

CHAPTER IV – DISCUSSION

Overview

The DNP project question inquired if mindful-meditation influenced perceived self-efficacy in stress management in SRNAs enrolled in a doctorate level nurse anesthesia program over period of 8 weeks. The expected outcome was that there would be a decrease in the overall stress levels after the meditation intervention as measured by post survey scores on the PSS and an improved perceived self-efficacy as measure by post survey GSE scores. The results of this project did not demonstrate significant decreased overall stress or significant increased perceived self-efficacy. When classes were grouped by year of graduation, there was also no significance found between pre and post PSS or GSE scores. Of note however, there was a decrease in the means of the PSS and an increased in the means of the GSE in the 2018 graduating class. Students in this class were in their second year in the nurse anesthesia program. They began their clinical rotations in January of 2017. Because of this finding, there should be further studies assessing correlation between level in an anesthesia program and stress reduction techniques. Other factors could have contributed to these results as well. These students took the pre survey in the beginning of the summer semester and the post survey at the end of the summer semester. Over this time period, these students may have become more comfortable in their clinical rotations leading to a decrease in stress level and contributing to an increase in perceived self-efficacy scores.

Several factors may have contributed non-significant results. One noteworthy aspect is the absence of group homogeneity. Because the pre and post surveys were voluntary and sent via email to the entire nurse anesthesia program student body,

homogeneity was not maintained. This absence of homogeneity contributed to the fact that the two groups may have not been comparable and independent t tests were required for statistical analysis. Another interesting aspect is the actual group of professional students that were taking the surveys. Nurse anesthesia students are characteristically highly confident and exhibit Type A personalities. Self-efficacy may have not been an issue with this particular population. The intervention accessibility may have also been a negative issue contributing to the non-significant results. Although the intervention was accessible through a link on the Internet, students have may have needed a better presentation of meditation and the benefits of stress reduction. More participation would have been encouraged if the intervention had been presented in a face-to-face educational session.

Limitations

Sample size was a limitation noted in this study. According to the SurveyMonkey and the sample size calculator, the intended sample size was 49 based on a population of 56. This included a 95% confidence level and a 5% margin of error. The sample size for this project was 25 participants in the pre intervention survey and 30 participants in the post intervention survey. This equates to a 44.6% response rate in the pre intervention survey and a 53.6% response rate in the post intervention survey. The greater the response rate, the greater representation the sample is to the total population. Because the response rate did not equal the calculated sample size, results from the project may not be indicative of the entire group of SRNAs. Selection bias is another limitation noted in the project. Selection bias occurs when a researcher decides who will be studied (Zaccagnini & White, 2014). Self-selection bias is possible barrier with this sample if there is a low

response or participation rate (Zaccagnini & White, 2014). With selection bias, the sample does not accurately represent the population. The study was based on voluntary responses from SRNAs. Time restraints and other academic requirements may have prevented some students from taking the pre and post surveys as well as from participating in the intervention, also contributing to a smaller sample size.

Future Studies

Future studies assessing stress reduction techniques are crucial in the educational development of SRNAs. Stress reduction techniques must continually be assessed in order to foster a healthy learning environment for anesthesia education. Future studies that include the comparison of the same group of students before and after a meditation technique may provide more accurate results. Using a paired sample t-test may allow a better illustration of a statistically significant study. Because there was a reduction in stress and an improvement in perceived self-efficacy in the 2018 graduating class, more studies that assess specific stress reduction and perceived self-efficacy in particular classes may be beneficial. A face-to-face educational presentation of meditation and its positive effects is an excellent idea for the future. This would help to promote more participation and ensure that the intervention was accessible and presented in a clear manner. Nurse anesthesia education will continue to advance and transform over time. It is therefore crucial that stress reduction techniques be explored as means to increase perceived self-efficacy in students pursuing nurse anesthesia as a career.

Conclusion

Through the extensive review of the literature, meditation has shown to be a successful method of reducing stress and cultivating perceived self-efficacy. Research demonstrates amplified stress levels in SRNAs and a need for stress reduction and health modification. The results of this project show no statistical significance of decreasing stress and improving perceived self-efficacy after a meditation intervention. However, a reduction in stress and an improvement in perceived self-efficacy were demonstrated in SRNAs in their second year of the educational program. There may also be a link between perceived self-efficacy and self-awareness with a specific level in educational development.

APPENDIX A Surveys

Pre Survey: The Effects of Mindful-Meditation on Perceived Self-Efficacy

Q1 Online Consent for Participation: You are invited to participate in a research survey about the Effects of Mindful-Meditation on Perceived Self-Efficacy in Student Registered Nurse Anesthetists. Your participation will require approximately 5 minutes and will be completed online. Once the pre-survey has been completed, a meditation intervention will be sent via email with instructions. A post-survey will be sent 8 weeks after the intervention is sent. Taking part in the survey is completely voluntary. If you choose to participate, you can withdraw from the study at any time without penalty, prejudice, or loss of benefits. All participant responses will remain strictly confidential. Digital data will be stored on a personal computer with password protection. Any report of this research that is made available to the public will not include any identifiable information. All electronic files will be deleted 6 months after graduation requirements have been fulfilled. Questions concerning the research, at any time during or after the project, should be directed to the Principal Investigator, Jessica Miley (jessica.miley@usm.edu). This project and the consent form have been reviewed by the Institutional Review Board, which ensures that research involving human subjects follow federal regulations. Any questions or concerns about rights as a research participate should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-5997.

Q1 Are you male or female?

- ❍ Male (1)
- ❍ Female (2)

Q2 What is your birth year?

Q3 What is your graduation year in the Nurse Anesthesia Program at The University of Southern Mississippi?

- ❍ 2017 (1)
- ❍ 2018 (2)
- ❍ 2019 (3)

Q4 What is your marital status?

- ❍ Married (1)
- ❍ Divorced (2)
- ❍ Separated (3)
- ❍ Never married (4)

Q5 Do you have children?

- ❍ Yes (1)
- ❍ No (2)

Q6 What techniques have you used in the past for stress management? Select all that apply.

- ❑ Exercise (1)
- ❑ Engage with support systems (2)
- ❑ Meditation or deep breathing exercises (3)
- ❑ Therapeutic massage (4)
- ❑ Regular consistent sleep patterns (5)
- ❑ Prayer (6)
- ❑ Vacations (7)
- ❑ Anti-anxiety Medication (8)
- ❑ Time management techniques (9)
- ❑ Music (10)

Q7 Have you used mindful-meditation techniques in the past for stress management?

- ❍ Yes (1)
- ❍ No (2)

Q8 In the last month, how often have you been upset because of something that happened unexpectedly?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q9 In the last month, how often have you felt that you were unable to control the important things in your life?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q10 In the last month, how often have you felt nervous and stressed?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q11 In the last month, how often have you felt confident about your ability to handle your personal problems?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q12 In the last month, how often have you felt that things were going your way?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q13 In the last month, how often have you found that you could not cope with all the things that you had to do?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q14 In the last month, how often have you been able to control irritations in your life?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q15 In the last month, how often have you felt that you were on top of things?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q16 In the last month, how often have you been angered because of things that happened that were outside of your control?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q17 In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

- ❍ Never (1)
- ❍ Almost never (2)
- ❍ Sometimes (3)
- ❍ Fairly often (4)
- ❍ Very often (5)

Q18 I can always manage to solve difficult problems if I try hard enough.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
- ❍ Moderately true (3)
- ❍ Exactly True (4)

Q19 If someone opposes me, I can find the means and ways to get what I want.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
- ❍ Moderately true (3)
- ❍ Exactly True (4)

Q20 It is easy for me to stick to my aims and accomplish my goals.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
- ❍ Moderately true (3)
- ❍ Exactly true (4)

Q21 I am confident that I could deal efficiently with unexpected events.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
- ❍ Moderately true (3)
- ❍ Exactly true (4)

Q22 Thanks to my resourcefulness, I know how to handle unforeseen situations.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
- ❍ Moderately true (3)
- ❍ Exactly true (4)

Q23 I can solve most problems if I invest the necessary effort.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
- ❍ Moderately true (3)
- ❍ Exactly true (4)

Q24 I can remain calm when facing difficulties because I can rely on my coping abilities.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
- ❍ Moderately true (3)
- ❍ Exactly true (4)

Q25 When I am confronted with a problem, I can usually find several solutions.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
- ❍ Moderately true (3)
- ❍ Exactly true (4)

Q26 If I am in trouble, I can usually think of a solution.

- ❍ Not true at all (1)
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- ❍ Moderately true (3)
- ❍ Exactly true (4)

Q27 I can usually handle whatever comes my way.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
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Post Survey: The Effects of Mindful-Meditation on Perceived Self-Efficacy

Q1 Online Consent for Participation: You are invited to participate in a research survey about the Effects of Mindful-Meditation on Perceived Self-Efficacy in Student Registered Nurse Anesthetists. Your participation will require approximately 5 minutes and will be completed online. Once the pre-survey has been completed, a meditation intervention will be sent via email with instructions. A post-survey will be sent 8 weeks after the intervention is sent. Taking part in the survey is completely voluntary. If you choose to participate, you can withdraw from the study at any time without penalty, prejudice, or loss of benefits. All participant responses will remain strictly confidential. Digital data will be stored on a personal computer with password protection. Any report of this research that is made available to the public will not include any identifiable information. All electronic files will be deleted 6 months after graduation requirements have been fulfilled. Questions concerning the research, at any time during or after the project, should be directed to the Principal Investigator, Jessica Miley (jessica.miley@usm.edu). This project and the consent form have been reviewed by the Institutional Review Board, which ensures that research involving human subjects follow federal regulations. Any questions or concerns about rights as a research participate should be directed to the Chair of the Institutional Review Board, The University of

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- ❍ 2019 (3)

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- ❍ Separated (3)
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Q5 Do you have children?

- ❍ Yes (1)
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Q6 In the last month, how often have you been upset because of something that happened unexpectedly?

- ❍ Never (1)
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- ❍ Exactly true (4)

Q25 I can usually handle whatever comes my way.

- ❍ Not true at all (1)
- ❍ Hardly true (2)
- ❍ Moderately true (3)
- ❍ Exactly true (4)

Q26 How many times did you listen to the 1 minute audio guided meditation intervention?

Q27 Did you use meditation during the clinical setting?

Q28 Did you use the intervention at the same time with each use?

Q29 How many times was meditation used?

APPENDIX B – General Self-Efficacy Scale Permission

Reply all | Delete Junk | •••

RE: GSE Permission

SR Schwarzer, Ralf <ralf.schwarzer@fu-berlin.de> Reply all |
Mon 11/21/2016, 3:08 PM
Jessica Miley

Inbox

yes

Prof. Dr. Ralf Schwarzer
Freie Universität Berlin, Psychology
Habelschwerdter Allee 45
14195 Berlin, Germany
Email | ralf.schwarzer@fu-berlin.de
WEB | http://my.psyc.de
ORCID | http://orcid.org/0000-0002-0069-3826
Twitter | https://twitter.com/schwarzer1
BLOG | https://theemeritus.wordpress.com/

From: Jessica Miley [Jessica.Miley@usm.edu]
Sent: Monday, November 21, 2016 19:15
To: health@zedat.fu-berlin.de
Cc: Marjorie Geisz-Everson
Subject: GSE Permission

Jessica Miley
University of Southern Mississippi
School of Nurse Anesthesia
148 Morrell Circle
Hattiesburg, MS 39402

Dear Sir/Madam:

I am a Student Registered Nurse Anesthetist in progress of my Doctor of Nurse Practice degree from The University of Southern Mississippi conducting my DNP project titled *The Use of Meditation to Increase Perceived Self-Efficacy in Student Registered Nurse Anesthetists* under the direction of my project committee chaired by Dr. Marjorie Everson, who can be reached at Marjorie.Everson@usm.edu.

I would like your permission to use and modify for student registered nurse anesthetists the General Self-Efficacy Scale: Personal Reflection in my DNP project. I would like to use and print your survey under the following conditions:
will use the tool only for my DNP project and will not sell or use it with any compensated or curriculum development activities.

will include the copyright statement on all copies of the instrument.

will send a copy of my completed DNP project to your attention upon completion of the project.

APPENDIX C – IRB Approval Letter

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
  Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 17041901
PROJECT TITLE: The Use of Meditation to Increase Perceived Self-Efficacy in Student Registered Nurse Anesthetists
PROJECT TYPE: New Project
RESEARCHER(S): Jessica Miley
COLLEGE/DIVISION: College of Nursing
DEPARTMENT: Advance Practice
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Exempt Review Approval
PERIOD OF APPROVAL: 04/27/2017 to 04/26/2018
Lawrence A. Hosman, Ph.D.
Institutional Review Board

APPENDIX D – Letter of Support

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI

COLLEGE OF NURSING

118 College Drive #5095 | Hattiesburg, MS 39406-0001
Phone: 601.266.5445 | Fax: 601.266.5927 | nursing@usm.edu | www.usm.edu/nursing

February 13, 2017

Dear Dr. Everson:

I have reviewed Jessica Miley's plan for her DNP Project. I understand that she plans to examine the effects of meditation on perceived self-efficacy in students enrolled in the Nurse Anesthesia Program. I understand she is asking students to view an education video on meditation and utilize strategies from the video for four weeks. I also understand that she is asking students to complete 2 questionnaires prior to the video and after the four-week implementation period.

The College of Nursing supports Ms. Miley's project. This project is sound and has merit. Please let me know if you need anything further as you move forward. Thank you for serving as her project chair. I look forward to learning of her results.

Sincerely,

Lachel Story

Lachel Story, PhD, RN
Assistant Dean for Research and Evaluation
Interim Chair, Advanced Practice Department
PhD Program Director
Associate Professor
The University of Southern Mississippi
College of Nursing

REFERENCES

American Association of Nurse Anesthetists (2017). *AANA Membership Categories, Fees, Privileges*. http://www.aana.com/aboutus/Pages/AANA-Membership-Categories-Fees-Privileges.aspx

American Association of Nurse Anesthetists. (2017). http://www.aana.com/resources2/health-wellness/Pages/Physical-Well-Being.aspx

Bamber, M. D., & Kraenzle Schneider, J. (2016). Mindfulness-based meditation to decrease stress and anxiety in college students: A narrative synthesis of the research. *Educational Research Review, 18*, 1–32. https://doi.org/10.1016/j.edurev.2015.12.004

Bandura A. (1997) *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman

Butts, J. B., & Rich, K. L. (Eds.). (2015). *Philosophies and theories for advanced nursing practice* (3rd ed.). Sudbury, MA: Jones & Bartlett.

Chipas, A., Cordrey, D., Floyd, D., Grubbs, L., Miller, S., & Tyre, B. (2012). Stress: Perceptions, manifestations, and coping mechanisms of student registered nurse anesthetists. *AANA Journal*, *80*(4), 49–55.

Chipas, A., & McKenna, D. (2011). Stress and Burnout in Nurse Anesthesia. *AANA Journal*, *79*(2), 122–128.

Choi, N. (2005). Self-efficacy and self-concept as predictors of college students' academic performance. *Psychology in the Schools, 42*(2), 197–205. https://doi.org/10.1002/pits.20048

Conner, M. (2015). Self-Efficacy, Stress, and Social Support in Retention of Student Registered Nurse Anesthetists. *AANA Journal*, *83*(2), 133–138.

Fortney, L., Luchterhand, C., Zakletskaia, L., Zgierska, A., & Rakel, D. (2013). Abbreviated mindfulness intervention for job satisfaction, quality of life, and compassion in primary care clinicians: a pilot study. *Annals of Family Medicine*, *11*(5), 412–420. https://doi.org/10.1370/afm.1511

The General Self. (n.d.). Retrieved from http://userpage.fu-berlin.de/~health/engscal.htm

Goodman, M. J., & Schorling, J. B. (2012). A mindfulness course decreases burnout and improves well-being among healthcare providers. *The International Journal of Psychiatry in Medicine*, *43*(2), 119–128. https://doi.org/10.2190/PM.43.2.b

History of MBSR. (2014, February 25). Retrieved from http://www.umassmed.edu/cfm/stress-reduction/history-of-mbsr/

Kendrick P. (2000). Comparing the effects of stress and relationship style on student and practicing nurse anesthetists. *AANA Journal*, *68*(2), 115–122.

Mayo Clinic Staff. (n.d.). Stress Management. Retrieved from http://www.mayoclinic.org/tests-procedures/stress-management/home/ovc-20255469

NIMH - 5 Things You Should Know About Stress. (n.d.). Retrieved from https://www.nimh.nih.gov/health/publications/stress/index.shtml

Perez EC, & Carroll-Perez I. (1999). A national study: Stress perception by nurse anesthesia students. *AANA Journal*, *67*(1), 79–86.

Richards, A. T., Hedberg, J., & Thoresen, C. E. (2008). Passage meditation improves caregiving self-efficacy among health professionals. *Journal of Health Psychology , 13 (8),* 1119-1135. http://dx.doi.org/10.1177/1359105308095966

Spadaro, K. C., & Hunker, D. F. (2016). Exploring The effects of an online asynchronous mindfulness meditation intervention with nursing students On Stress, mood, And Cognition: A descriptive study. *Nurse Education Today*, *39*, 163–169. https://doi.org/10.1016/j.nedt.2016.02.006

Student Wellness Homepage. (n.d.). Retrieved from http://www.aana.com/resources2/health-wellness/Pages/Student-Wellness.aspx

Tunajek, S. (2006, May). Student Stress: A Question of Balance. *Wellness Milestones*, 20-21. Retrieved from http://www.aana.com/resources2/health-wellness/Documents/nb_milestone_0506.pdf

Warnecke, E., Quinn, S., Ogden, K., Towle, N., & Nelson, M. R. (2011). A randomised controlled trial of the effects of mindfulness practice on medical student stress levels. *Medical Education*, *45*(4), 381–388. https://doi.org/10.1111/j.1365-2923.2010.03877.x

Zaccagnini, M. E., & White, K. W. (2014). *The doctor of nursing practice essentials* (2nd ed.). Burlington, MA: Jones and Bartlett Learning.