DEVELOPMENT AND EVALUATION OF A NURSE PRACTITIONER-DIRECTED MINDFULNESS PROGRAM FOR ADVANCED PRACTICE PROVIDERS IN AN ACADEMIC MEDICAL CENTER

An Evidence-Based Scholarly Project

Submitted to the College of Health Professions

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Nursing Practice

Wei Zhou

Wilmington University

February 2022
We hereby approve the Doctor of Nursing Practice project of

Wei Zhou

Candidate for the degree of Doctor of Nursing Practice

Date: 02/10/2022

Anne E. Lara, EdD, MSN, BS, RN
DNP Project Advisor

Date: 02/10/2022

Natasha Seth-McCoy DNP, CRNP, WHNP-BC
DNP Project Team Member

ACCEPTED

Date: 02/10/2022

Denise Z. Wells, EdD, MSN, RN
Dean, College of Health Professions
Title: Development and Evaluation of a Nurse Practitioner-Directed Mindfulness Program for Advanced Practice Providers in an Academic Medical Center

Author: Wei Zhou

DNP Project Advisor: Dr. Anne E. Lara

DNP Project Team Member: Dr. Natasha Seth-McCoy

Burnout is a problem that threatens many Advanced Practice Providers at some time in their career (Harris et al., 2018). This not only threatens their health and well-being but also significantly impacts their productivity, job retention, and ultimately the quality of patient care (Hoff et al., 2019). The study found that caring for women’s sexual and reproductive health was considered an especially sensitive area and exposure to higher risk factors presented a high level of burnout syndromes (De la Fuente-Solana et al., 2019). Many existing studies had demonstrated that using web- or mobile-based mindfulness meditation for nurses and providers significantly improved stress and burnout after 6-12 weeks of intervention (Champion et al., 2018; Fendel et al., 2019; Hersch et al., 2016; Persson Asplund et al., 2018; Roy et al., 2020). Moreover, web-based programs have proved to be convenient, flexible to practice, and cost less (Harrer et al., 2021). Based upon this evidence-based practice (EBP), the project aims were to use a mobile-based mindfulness meditation application, Headspace, to reduce burnout. The instrument of the Maslach Burnout Inventory (MBI) was used as a validated tool to evaluate burnout in this project. The results were collected and analyzed to determine the impact of this mobile-based mindfulness meditation on burnout for Advanced Practice Providers in the Department of Women Health.

Keywords: Burnout, Mindfulness Meditation, Headspace, Advanced Practice Provider
ACKNOWLEDGMENTS

First, I would like to thank my husband, parents, and two kids for their endless support and encouragement throughout this doctoral journey. Without my family’s steadfast love and belief in me, none of my achievements would have been possible.

Second, I want to acknowledge my program chair Dr. Aaron Sebach, project advisor Dr. Anne Lara, project mentor Dt. Natasha Seth-McCoy, and the Wilmington University doctoral faculties for their scholarly guidance, support, and tireless patience during this project.

Lastly, I thank my directors, manager, colleagues in my organization, and friends in my church for all their support and help throughout the process.
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ABBREVIATIONS

APP – Advanced Practice Provider
ARCC – Advancing Research and Clinical practice through close Collaboration
CNM – Certified Nurse Midwife
CI – Confidence Interval
DNP – Doctor of Nursing Practice
DP – Depersonalization
EBP – Evidence-Based Practice
ED – Emergency department
EE – Emotional Exhaustion
GYN – Gynecology
IBSM -Internet-based stress management
MBI – Maslach Burnout Inventory
MBI-HSS – Maslach Burnout Inventory-Human Services Survey
NP – Nurse Practitioner
OB – Obstetric
PA – Personal Accomplishment
PEC – Perinatal Evaluation Center
PICOT – Population, Intervention, Comparison, Outcome, and Time
QI – Quality Improvement
RCT – Randomized controlled trial
SD – Standard deviation
CHAPTER ONE. INTRODUCTION

Problem Description

Burnout in clinicians, especially nurses who comprise most of the healthcare workforce, is a major risk to the health of the United States (Shah et al., 2021). Similarly, Advanced Practice Providers (APPs) experience burnout threats in their careers at any time (Harris et al., 2018). Burnout is threatening health and well-being as well as significantly affecting staff members’ productivity, job retention, and associated patient quality and safety care (Hoff et al., 2019). Clinician burnout syndrome is a condition admitted by feelings of emotional exhaustion, depersonalization, and lower personal accomplishment that occurs from continuously related stressors on their environment (Abraham et al., 2021; De la Fuente-Solana et al., 2020). Many personal and job-related risk factors could induce burnout syndrome that negatively impacts healthcare workers (De la Fuente-Solana et al., 2020; Gomez-Urquiza et al., 2017).

A study found that caring for Obstetric and Gynecological (OB/GYN) patients displayed a higher level of burnout syndromes from exploring sensitive and higher risk factors (De la Fuente-Solana et al., 2019). Since last year, APPs in the women’s health department have experienced inadequate staffing, challenged scheduling issues, job demands, heavy workload, and other risk factors. Leaders in organizations might not recognize and consider seriously the short staffing and limited view of workers’ psychological safety-emotional distress that could have adverse impact on patient quality and safety of care, and staff retention especially during and beyond the pandemic (Rangachari & J, 2020). The organization might have limitations to adjust the quick change to provide safe and effective care to staff and to patients during the current...
pandemic (O'Kelly et al., 2020). The culture, beliefs, and values may affect how our quality of work-life and burnout are perceived (Wheeler & Bryant, 2017). This DNP project manager who is currently working for the department does not have a burnout metric on key performance indicators on the dashboard. The organization developed a renewal center to provide a Well-Focused program including a break room, relaxation room equipped with four massage chairs, and group fitness including Yoga, Zumba, weight training, Reiki, and instructor-guided mindfulness classes. However, the staff members had difficulty leaving their unit to attend a pre-scheduled one-hour of class in the renewal center. Therefore, an alternative method needed to be explored.

Work-related burnout syndrome has hit epidemic levels with rates that are an evidence-based public health problem (Friganovic et al., 2019; Moukarzel et al., 2019). Many factors affect the prevalence of burnout such as limited autonomy, poor nurse and physician relationship, long working hours, and other issues that increase a negative impact on nursing quality of patient care, job dissatisfaction, and turnover rates (Friganovic et al., 2019). The impact of nurse turnover was serious and the financial costs of one nurse leaving the position were estimated between $11,000 to $90,000 (Halter et al., 2017; Kelly et al., 2021). Concerns have given rise to attention to health care providers’ wellbeing that should have efforts and strategies targeting burnout (West et al., 2016). Many existing studies have demonstrated that using web- or mobile-based mindfulness stress management for nurses and providers significantly improves stress and burnout after 6-12 weeks of intervention (Champion et al., 2018; Fendel et al., 2021; Hersch et al., 2016; Persson Asplund et al., 2018; Roy et al., 2020). Moreover, internet-based programs have proved to be more convenient, flexible to practice, and cost less
compared to traditional in-person sessions in class (Harrer et al., 2021). Based upon this EBP, the purpose of this project was to utilize a mobile-based mindfulness meditation application, Headspace, to reduce burnout among APPs in a women’s health department as measured by pre and post-Maslach Burnout Inventory (MBI) scores.

**Rationale**

The population of women in the United States is anticipated to grow more than 20% by 2045; this will increase the demand for obstetric and gynecological healthcare services (Stonehocker et al., 2017). In the project manager’s hospital, the perinatal evaluation center is covered by APPs 24 hours 7 days a week. Postpartum, labor and delivery, and women’s health units are covered by APPs during the daytime from Monday to Sunday in inpatient settings. Currently, we are experiencing short staffing, a heavy workload, limited autonomy, and other issues. A study in the United Kingdom found that midwives experienced higher levels of emotional stress and burnout than others which caused difficulty to keep their emotional wellbeing (Hunter et al., 2019). The supply of APPs in women’s health services is needed to meet the demand and their wellness is critically important to provide high-quality patient care and less turnover. The health promotion intervention models could help to allow them to learn better coping skills to change behaviors and promote wellbeing.

Kurt Lewin’s Change Theory was first introduced in 1951 (Wojciechowski et al., 2016). The Change Theory was used as a theoretical framework to guide the Doctor of Nursing Practice (DNP) project and it was the best fit for this DNP project. Nursing theories have a foundation in health to promote and reduce risks (Chism, 2019). Theories provide special meanings to nursing practice in everyday life through health promotion
DNP graduates are prepared to have the ability to assess risks, collaborate with other professionals, evaluate and interpret theories and conceptual practice strategies to lead and improve the quality and safety of care in healthcare systems (AACN, 2006). Therefore, theories could help and guide an advanced nurse practitioners to obtain basic materials, interpret research findings to meet the needs of that targeted population. Lewin created a nursing theory with three distinct vital steps including the beginning step of unfreezing involved looking at the driving forces to find a method to facilitate change for people to let go of an old behavior; the 2nd step called moving or changing to look for demanding benefits of changes and reducing the forces affecting change negatively, and the 3rd step was to refreeze and stabilize the change becoming a habit (Wojciechowski et al., 2016). Under the framework of the first phase of unfreezing, the stakeholders and the leadership teams approached for buy-in that an issue of burnout existed with any possible levels. The first unfreezing step involved a comprehensive assessment of the current state of burnout using the Maslach Burnout Inventory instrument, and literature review to get the best evidence to support the reasons for a change to occur. Web-based mindfulness stress management has been proven and supported in reducing burnout levels (Champion et al., 2018). The proposed mobile-based stress management project was presented to stakeholders for support. It was critically important to control any resistance to increase the driving forces to make change happen and decrease restricting forces to affect the change negatively. The second step was in introducing and implementing the program. The intervention involved a process of change using mindfulness meditation daily to decrease burnout levels. Using voiced-guided mindfulness meditation would begin a feeling and behavioral change for
the nurse practitioners. The last step involved the change as a habit established and ensuring the mindfulness management continues becoming a standard. Without the refreezing step, the old behavior might return (Wojciechowski et al., 2016). One study demonstrated the effects of a brief 6 weeks of self-help internet-based stress management acceptable to help healthy employees better strengthen their ability to deal with daily stressors, coping skills, and decrease burnout levels of work-related stress (Stachele et al., 2020).

The quality improvement project utilized the Headspace application on smartphones as a mindfulness meditation intervention to allow APPs to perform meditation to reduce their stress and burnout daily at their own designated time and place. The independent variable was mobile-based mindfulness intervention and the dependent variable was burnout score. Pre- and post-intervention scores were evaluated by the evidence-based instrument of the MBI tool. All the measures were to identify the difference between pre-and post-intervention on burnout. The project results could predict a positive correlation between burnout and using the mobile-based mindfulness application. Ultimately the measured outcomes could prove reducing burnout with the intervention as the EBP from research studies. The metrics ensured an improvement in burnout that would be positively reduced on APPs’ burnout levels.

**PICOT Question**

Among advanced practice providers, how does the use of a mobile-based mindfulness meditation intervention, as compared to the providers’ current state influence burnout over a 12 weeks period?
Specific Aims

The specific aim of this EBP improvement project was to investigate the effect of mobile-based mindfulness meditation on burnout and demonstrate an improved burnout on Advanced Practice Providers in the women’s health department in 12 weeks.

Definition of Terms

Burnout

Burnout is defined as chronically responding to stressors of emotional and interpersonal environments that are characterized by a condition recognized by feelings of emotional exhaustion, depersonalization, and lack of social accomplishment (Maslach et al., 2001).

Mindfulness

Mindfulness is defined as paying attention purposely to one’s present moment of thought, feeling, and sensation without judgment to the openness of experiencing moment to moment (Champion et al., 2018; De la Fuente-Solana et al., 2020). In other words, mindfulness gives awareness to pay attention purposely in the present moment to moment without any judgment (Bianchini & Copeland, 2021).

Meditation

Meditation is defined as a state of a single human being to focus the mind on one particular object, thought or activity to practice or to be trained with attention and awareness, achieve mental cleansing, emotional calm, and stability. It is an act of self-regulating own body and mind into constant awareness and calm (De la Fuente-Solana et al., 2020; Lomas et al., 2018).
Mindfulness Meditation

Mindfulness meditation is defined as a mental training practice based on the Buddhist tradition that instructs individuals deep breathing to be aware of the self-body and mind, slowing down speedy thoughts, releasing low spirits, calm mind, and body (Diaz-Silveira et al., 2020; Roy et al., 2020).

Advanced Practice Providers

Advanced practice provider is defined as nonphysician providers including nurse practitioners, physician assistants, certified nurse midwives, certified nurse anesthetists, and clinical nurse specialists (Sarzynski & Barry, 2019).

Nurse Turnover

Nurse turnover is defined as nurses leaving their profession jobs in human resource terms. Turnover is voluntary such as retirement or involuntary, internal leaving for different positions, or external leaving for another position (Halter et al., 2017).

Chapter Summary

Clinician burnout is a problem affecting healthcare professionals including APPs. The consequences of burnout are not only limited to the APPs’ wellbeing, but also to the quality of patient care, increased staff turnover, job dissatisfaction, and cost to the organization. This chapter explored how offering a mobile-based mindfulness meditation might empower APPs to learn and practice mindfulness meditation to improve their well-being. The next chapter will describe detail about search strategy, the evidence-based practice model utilized for this project, and available knowledge from research studies.
CHAPTER TWO, LITERATURE REVIEW

Search Strategy

The conduct of article searches and reviews for this DNP project was based on the PICOT question ‘Among advanced practice providers, how does the use of a mobile-based mindfulness meditation program compare to current state influence burnout’. An extensive electronic database search was completed to find resources addressing the topic of utilizing a mobile-based mindfulness meditation program for burnout on APPs who working in the women’s health department. Five research databases including PubMed, SCOPUS, Web of Science, Ovid Medline, and Nursing and Allied Health Literature (CINAHL) were utilized to identify the literature in five years with full text and peer review. Keyword inputs included combinations of search terms that were chosen based on their relation to the stated PICOT question and included mindfulness and meditation and burnout and nurse.

Inclusion criteria selected research articles published in the last five years addressed the PICOT question. Chosen articles were assessed utilizing the Johns Hopkins Nursing Evidence-Based Practice Model. The limitation of searching phrases included the English language and from the year 2016-2021.

The exclusion criteria included non-English language articles, not addressed the PICOT question. Exclusion criteria were selected to ensure that the literature search would provide high-quality evidence that could be interpreted in the English language. Based upon selection criteria, the search ultimately yielded 28 studies published from 2016 to 2021.
Evidence-based Practice Model

The Advancing Research and Clinical practice through close Collaboration (ARCC) model was utilized to evaluate the latest research findings and the best evidence-based practice for this scholarly quality improvement DNP project. This model was designed to synthesize available evidence and identify the gaps between literature and the clinical real setting to have a change. The purpose of using this model was to guarantee the DNP project supported and appropriately applied the highest quality, most effective, and feasible to translate the evidence into a real clinical setting. Studies showed that available knowledge supported the using mobile-based mindfulness meditation for burnout prevention.

Available Knowledge

Effect of Burnout

Burnout in clinicians is a crucial issue threatening the United States health and health care that leads to cause and effect of wellbeing and risks of patient care in the health care settings (Bianchini & Copeland, 2021; Shah et al., 2021). Burnout was studied extensively which was one of the most major occupational health issues in many professions involved in working and caring for other human beings (Gomez-Urquiza et al., 2017). Han’s study found that prevalence of burnout in Operation Room (95% CI) 62.1% age <55 and 49.4% age >55 in primary physicians; 62.7% age <55 and 49.7% age >55 in surgical specialties; approximately $4.6 billion in costs related to physician burnout and reduced clinical working hours attributed to burnout each year in the US; ranged about $2.6 billion to $6.3 billion in multivariate probabilities sensitivity analyses;
each year about $7600 per employed physician associated with burnout related to turnover and reduced clinical hours (Han et al., 2019).

Occupational burnout is well studied and documented the problem in nurses, doctors, and advanced practice providers that the effects of burnout consequence including job dissatisfaction or job dysfunction, bad quality of life, high rate of job turnover, potential negative patient care outcomes (Fendel et al., 2021; Ireland et al., 2017; Kapu et al., 2019). Completed a cross-sectional survey of 433 APPs including Nurse Practitioner, Certified Nurse Specialist, Certified Nurse Midwife, Physician Assistant, and Certified Registered Nurse Anesthetist found that current burnout was more than 50% ($p < .0001) and associated with an increased turnover. Turnover could cost a healthcare organization from one nurse leaving a position estimated from $11,000 to $90,000 (Kelly et al., 2021). Shah et al. (2021) completed a cross-sectional survey of 50,273 nurses in the US from April 30 to October 12 in 2018 to evaluate the burnout levels and associated leaving or consider leaving their nursing jobs due to burnout. The study results demonstrated that 31.5% of nurses reported leaving their positions as a reason of burnout; 63% reported due to inadequate staffing, 68.6% reported due to a stressful working environment, and working 40 hours per week had a higher burnout level to leave their jobs.

Currently, the burnout defined by Maslach and Jackson’s three dimensions including the feeling of low personal accomplishment, depersonalization, and emotional exhaustion was the most accepted and worldwide knowledge definition (Gomez-Urquiza et al., 2017; Maslach et al., 2001). Gomez-Urquiza et al (2017) completed a Meta-Analysis study that reviewed thirteen studies that used the MBI tool to survey 1586
emergency nurses and the study results demonstrated the prevalence of 31% for emotional exhaustion, 36% for depersonalization, and 29% for lower personal accomplishment. Clinician burnout is an adverse result of an extended response to prolonged emotional and interpersonal stressors in working settings (Firanovic et al., 2019).

Firanovic et al. (2019) completed a systematic analysis of literature reviews on 786 studies from databases Scopus and PubMed. The study tried to understand the burnout associated with different variables. The results found that job dissatisfaction was extremely one of the most major variables associated with burnout (Firanovic et al., 2019). Burnout could affect any health care workers who provided service to other people including APPs during their career at any time that not only threatened their health and well-being but also significantly impacted productivity, job retention, and ultimately on the quality of patient care (Firanovic et al., 2019; Harris et al., 2018). One study’s data collected from 2018 to 2019 in three hospitals of direct patient care nurses, 3,135 surveys showed that 54% of nurses suffered from moderate burnout (Kelly et al., 2021). One cross-section survey for staff in the emergency department (ED) found that the burnout prevalence was 34.6%; physicians affected at the most by a high level of depersonalization (DP) \( p = 0.001 \); Job strain 30.1% experienced and decreased quality of life for paramedical \( p < 0.001 \) compared to others \( p < 0.029 \) (Moukarzel et al., 2019).

Smith’s study found that 40-75% of OB/GYN providers suffered from professional burnout from a clinical office setting to an inpatient setting (Smith, 2019). Hunter et al. (2019) completed a cross-sectional research design using an online survey of 1997 midwives in the United Kingdom and the results indicated that the midwifery
workforce experienced significantly high levels of emotional distress and burnout. The study result found that working-related burnout mean score 56.15% (a mean score above 50 considered representing burnout) (Hunter et al., 2019). Nicholls’s study of Secondary Traumatic Stress among Labor and Delivery nurses was conducted in this project manager’s department and the results found that 47.1% of nurses considered leaving their current labor and delivery job and 52.9% had called out sick with the scores of stress higher than 48 (Nicholls et al., 2021).

Studies indicated that at least more than 50% of providers experienced professional burnout in the USA, especially during the current pandemic facing more challenges with increased exhaustion, stress, and burnout levels (Kelly et al., 2021; Shanafelt et al., 2019). Many organizations had limitations in their abilities to be resilient in adapting to the rapid changes of the pandemic to provide safe and effective care to patients and communities (O’Kelly et al., 2020). The stressful environment likely added additional stressors to increase the risks of burnout (Kelly et al., 2021). It is critically important to address the pervasive burnout problem, develop and implement the most effective and well-designed interventions to reduce burnout to promote staff’s wellbeing (West et al., 2016). Kelly’s study results provided growing evidence of nurse burnout and critically needed a supportive policy and program to assess burnout yearly, burnout prevention, improve staff members wellbeing, and associated quality of patient care (Kelly et al., 2021).

**Mobile-based Mindfulness Meditation**

Mindfulness meditation is a practice based on Buddhism’s tradition to pay attention to purpose and awareness through sitting meditation (Diaz-Silveira et al., 2020).
Recently Mobile-based digital mediums for mindfulness meditation training and practice including mindfulness-based smartphone applications or the internet have an effective and economic strategy, more affordable, easier engaged, broader to reach, and less time demanding to improve individuals’ wellbeing (Economides et al., 2018; Stachele et al., 2020). Economides et al. (2018) conducted a randomized controlled trial (RCT) that used mindfulness meditation via smartphone application-Headspace as a mindfulness intervention to compare two groups. The study sample size was 69 volunteers from the general population interested in using Headspace and stress measurement tools were Stress Overload Scale and the Brief Irritability Test. The stress scores were reduced largely in the Headspace mindfulness group at post-intervention \( t (40) = 4.13, p < 0.001 \), and the brief irritability test scores were reduced largely in the Headspace mindfulness group at post-intervention \( t (40) = 4.97, p < 0.001 \) (Economides et al., 2018).

Zollars et al. (2019) study on 92 pharmacy students using a mobile app Headspace for minimum of 10 minutes per day for total of 4 weeks found that participants reduced perceived stress, and increased mindfulness and mental wellbeing that positively promoted their healthy lifestyle behaviors. The study results demonstrated a positive correlation between the Health-promoting lifestyle profile and Five facet mindfulness questionnaire \( R=0.48, p < 0.01 \) (Zollars et al., 2019).

Champion et al. (2018) RCT study used self-guided mindfulness meditation application Headspace in 10 and 30 days for a general population of 74 participants. The study used measurement tools of Satisfaction with Life Scale, Perceived Stress Scales, and Wagnild Resilience Scale and found a significantly reduced stress \( p=0.0015 \),
significantly increased life satisfaction ($p=0.006$), and increased resilience ($p=0.003$) during the same period of time between 10 and 30 days (Champion et al., 2018).

Persson Asplund et al. (2018) conducted a RCT study for 117 participants working as managers employed in healthcare settings to evaluate the effects of a guided internet-based stress management intervention (iSMI) to compare an attention controlled group. The study used Perceived Stress Scale measurement to compare self-reported data pre-and post-treatment at 8 weeks. The study’s results demonstrated the perceived stress scale significantly decreased in the iSMI intervention group ($d=0.74, 95\% CI 0.30$ to $1.90, p < 0.001$) and burnout ($d=0.95, 95\% CI 0.53$ to $1.37, P < 0.001$) compared with the control group. The study $d=0.2$ is considered a small effect, $d=0.5$ a medium, and $d=0.8$ a large effect (Persson Asplund et al., 2018).

Stachele et al. (2020) conducted a RCT study on the effects of an internet-based stress management (IBSM) program for six weeks on perceived stress for a total of 105 participants in the IBSM group and 93 in the control group with inclusion currently working at least part-time above 18 years old who experiencing elevated stress-levels and interested in improving their stress management skills. The study results showed that the perceived stress scale was significantly decreased in the IBSM group ($p < .001$; stress coping abilities ($P=.001$) were significantly increased stress coping skills in the IBSM group; life satisfaction significantly increased in the IBSM group ($p <0.046$); sleeping quality had no different effects (Stachele et al., 2020). Therefore, the findings of brief self-helped IBSM could acceptable to prompt coping skills, help healthcare staff to power their abilities handling daily faced stressors better to decrease work-related stress and burnout, and improve the quality of life and well-being (Stachele et al., 2020).
Harrer et al. (2021)’s RCT study used an internet and application-based stress intervention on 100 students in the intervention group and 100 students in the active control group in a large German distance-learning university to assess post-intervention at seven weeks and three months. The study found a significant effect on depressive symptoms (Harrer et al., 2021). However, there were no significant effects at three months to follow up. Hersch et al. (2016) conducted a RCT study on 104 nurses in Virginia five hospitals to use web-based BREATHE stress management as an intervention to evaluate the effectiveness in three months intervention periods both at work or outside work. The study results showed that the group in a web-based stress management program significantly decreased stress than the control group: Nursing stress scale (full-scale $\alpha =0.90$, $t = -2.95$, $P =0.00$) (Hersch et al., 2016).

Fendel et al. (2021) conducted a systematic review and Meta-analysis on mindfulness-based intervention to reduce burnout and stress in physicians. The study reviewed 25 studies on 925 physicians. The results identified that mindfulness-based intervention significantly reduced in burnout ($p <0.01$), and decreased stress ($p <0.01$). MBIs were associated with significant reduction in burnout ($p =0.03$) (Fendel et al., 2021). Therefore, the mindfulness-based intervention had effects of decreasing burnout and stress on physicians.

Roy et al. (2020) conducted a RCT study to examine the efficacy of an App-based mindfulness program to reduce burnout and anxiety for 34 physicians in a large US health care network in eight weeks. The study resulted showed a significantly reduced burnout at post-intervention (at one month 48% reduced, $p < 0.01$ and three month follow up 57% reduced, $p < 0.001$); significantly decreased in cynicism 50%, $p < 0.003$
at posttreatment; 50% reduced, $p = 0.009$ at three month follow up; emotional exhaustion on both at one and three month (20% reduction, $p < 0.001$ at posttreatment and 19% reduction, $p < 0.003$ at follow-up) (Roy et al., 2020).

Evidence-based practice from many research studies has proved that a web-based or mobile application intervention can decrease stress and burnout scores (Hersch et al., 2016; Persson Asplund et al., 2018).

**Chapter Summary**

The literature search and review identified current available studies that addressed the issues of burnout in clinicians. Many studies had shown that the Mobile-based application or Web-based mindful meditation intervention reduced burnout in many specialties, but not many studies included APPs in women’s healthcare inpatient settings. This quality improvement project utilized the Headspace Application as a mindfulness meditation intervention to allow APPs to perform meditation to reduce their burnout daily. The next chapter will describe the context, intervention, measure, budget, and ethnic considerations for the projects.
CHAPTER THREE, METHODOLOGY

Context

The quality improvement project was conducted in the Women’s Health Department within a Northeastern United States academic health center. The center included six hospitals, ten multispecialty centers, clinical offices, and other services such as physical therapy, laboratory, and radiology. The culture of the organization was to enable racial, social, and cultural diversity, support equal opportunity and innovation, carry out intellectual honesty to provide the highest degree of professionalism through ethical principles and behaviors. The center also promotes widespread collaboration and self-education and demonstrates respect to all to promote the unique nature of the health system. The project population consisted of APPs in the women’s healthcare inpatient units. The current women’s health department has a total of twenty APPs including six certified nurse midwives, two physician assistants, and twelve nurse practitioners.

In an obstetrical emergency setting, higher acuity patients require additional staffing resources for evaluation, management, treatment, and discharge (Halm, 2019). Adequate staffing is an important function to ensure efficient performance by skilled and experienced human resources (Wolf et al., 2017). Studies found that heavy workload, inadequate staffing, long-hour shift, and less autonomy were associated with burnout in nursing, poor job performance, increased length of stay for patients, low patient quality of care, more risks and ominous events or errors, dissatisfaction of patient care, high infection rates, more patient falls, and high staff turnover (Dall'Ora et al., 2020; Ramsey et al., 2018; Schmitz-Rixen & Grundmann, 2020).
Currently, APPs in the project manager’s department are experiencing more burnout work-related stressors. The Perinatal Evaluation Center (PEC) is a unique obstetrical triage unit that is also called an obstetric emergency room. Obstetric patients visit PEC starting at gestational age six weeks to forty-two weeks for any kind of reasons. The patients’ load can vary from minute to minute and hour to hour in obstetric triage settings (Sandy et al., 2016). The PEC currently has five full-time and one per-diem APPs to cover the service 24 hours and 7 days a week. The anticipated goal is to have two APPs working for the heavy load during day and night shifts respectively. However, there are still five openings. It is clear that PEC is short-staffed and APPs are working double loaded duties. In general and oncology GYN units, we currently have two openings that cause current APPs to work extra load for a very sick population. The postpartum unit also preferred to have two APPs that one should work from 6 am to 6 pm and another APP works 7 am to 11 am to help the early discharges. Unfortunately, there was not enough staff for the second APP in the morning session. Newborn nursery currently is fully staffed. The call-out rate is higher than last year per department APP manager. In these two years, four APPs left in PEC and two in GYN units. PEC is required to work twelve hours per shift with day and night rotation, and other units are required to work ten hours shifts. Lack of a flexible working schedule is another dissatisfied and stressful issue that APPs in PEC have to face.

APPs in inpatient services are the frontline healthcare providers. Current workplace burnout has been exacerbated due to the issues stated above plus the ongoing pandemic. One longitudinal well-being study found that burnout was a common issue among APPs in critical care and increased during the COVID-19 pandemic from 35% to
58\% (Gomez et al., 2020). There are not many research studies about burnout for APPs in women’s healthcare inpatient settings. It is the best time to survey APPs’ burnout and promote a wellness program to decrease burnout. This DNP project aimed to decrease burnout and improve wellbeing among APPs working in inpatient settings in the department of women’s health. The EBP health promotion intervention would allow APPs to learn cognitive-perceptual behavior with guided mindfulness meditation to decrease burnout. Ultimately promoting continuity of healthy coping strategy, and sustaining the project would be beneficial to APPs and the organization as the results of reducing burnout, promoting staff wellbeing, less job turnover, improved job productivity, and patient safety and quality of care.

It was critically important to identify barriers and facilitators to implement and sustain the project. Potential barriers of this project were inadequate EBP knowledge and under-recognized burnout that might affect APPs’ availability to participate in the project. The organization might pay less attention to staff burnout. APPs might not have free minutes to use mobile-based mindfulness meditation daily. Their beliefs about the value of EBP might create some resistance to change, or not use the Headspace program consistently. To overcome these barriers, the project manager used the PICOT question terms to search articles for strong evidence, rapid analysis critique articles to get the best current evidence to support the project. The project manager used multiple methods to advocate the project such as conducting educational sessions at APP meetings, direct conversation with stakeholders to discuss the critical issues of burnout, and promoting a mobile-based application Headspace of mindfulness meditation to foster wellbeing. The initial introduction and continued ongoing education were important to sustain the project.
and to achieve the final goals. The project manager encouraged them to practice daily, sent emails weekly to remind them to practice meditation, and continued to present clear expectations to APPs about the project.

The project received full support from staff, physician leadership, director of practice, educators in advanced practice, and the department manager in the organization. The project was to translate the best evidence into practice in a real setting. APPs working in obstetric and gynecologic inpatient settings needed better strategies to reduce burnout. A review of the literature revealed using a mobile-based, Headspace, application was proven to reduce burnout, convenien, flexibility to practice, and cost-less (Champion et al., 2018).

**Interventions**

The project used the Headspace application as a tool for mobile-based mindfulness meditation. This tool was an app-based mindfulness meditation with proven positive potential to manage psychosocial symptoms (Champion et al., 2018). The application trial was free to use for 12 weeks. All the participants received instructions on how to download the Headspace on a mobile smartphone App. All the participants were encouraged to practice mindfulness meditation daily for a minimum of five minutes at their own convenient and flexible time and place. The practice was a personal activity and was not required to be completed on a specific schedule.

The project of inclusion criteria were all gender adult inpatient APPs aged 18 or older working in the Women’s health department who were able to access a mobile smartphone application, and download Headspace. Exclusion criteria included that participants did not complete all survey items, non-APP, non-direct patient care, or
temporary-employed APPs. Prior to implementing the mindfulness meditation intervention, all APPs in the women’s health department received an email invitation to complete a demographic survey through the REDCap database and another email invitation link through Mind Garden for the pre-intervention burnout survey. Supportive information for participants regarding where and how to seek help was included in the first MBI survey. Available resources included the EAP-employee assistance program, Chaplin services, the health system staff support specialists contact information, and Care for Care provider peer support services in OB. Upon completion of the demographic and pre-test surveys, participants received an email about how to access and use the Headspace application. Email instruction and one-on-one instruction by the project manager were available at any time during the daytime.

The DNP project manager’s role was to establish and maintain a project team (AACN 2006). The responsibilities of this role included initiating a collaborative relationship with the project advisor, mentor, and stakeholders, obtaining approvals to implement the project from school and organization, assessing and revising the project as needed, collecting and analyzing the data, and disseminating the project results as a manuscript.

Study of the Interventions

The study of intervention was to determine the effectiveness of a mobile-based mindfulness meditation intervention on burnout. In this project, the variable of interest and burnout scores were measured before and after the intervention in the same participants in twelve weeks. The Headspace consisted of a voice-guided mindfulness meditation app used for this project. Champion’s study demonstrated that 69%
participants reported an increase in satisfaction with life, 79% participants reported a
decrease in perceived stress, and 72% participants reported an increase in resilience
(Champion et al., 2018). Kashat’s study found that the Headspace mindfulness courses
were easily implemented into the wellness curriculum and results demonstrated a positive
correlation between practicing Headspace mindfulness meditation and the positive mood
of otolaryngology residents in six weeks ($P < .001$) (Kashat et al., 2020). Additionally,
the study results supported the feasibility and impact of mobile-based Headspace as a
wellness curriculum.

**Measures**

Maslach Burnout Inventory-Human Services Survey (MBI-HSS) was used as a
validated tool to evaluate burnout in this project. MBI-HSS is an evidence-based
instrument and widely scientifically proved and used as a validated and reliable tool
across the globe to evaluate the prevalence of burnout measuring jobs in human services
(Moalemi et al., 2018; Mukherjee et al., 2020; Wickramasinghe et al., 2018). MBI-HSS
has been identified in three dimensions including Emotional Exhaustion (EE),
Depersonalization (DP), and Personal Accomplishment (PA) that are the most accepted
and used to assess burnout as its reliability and internal validity in many studies (De la
Fuente-Solana et al., 2020; Gomez-Urquiza et al., 2017). Moalemi’s study showed the
Cronbach’s alpha for all dimensions greater than 0.7 that demonstrated a positive sign of
internal consistency high validity and reliability of MBI-HSS (Moalemi et al., 2018).
This DNP project was to use this tool to measure burnout scores on pre-and post-
intervention. Current existing studies demonstrated that using mobile-based mindfulness
meditation management for clinicians significantly decreased stress and burnout levels in
6-12 weeks (Champion et al., 2018; Fendel et al., 2021; Hersch et al., 2016; Persson Asplund et al., 2018; Roy et al., 2020). The quality improvement project was expected to reduce burnout among APPs in the women’s health department after using Headspace mindfulness meditation.

The project manager purchased licensed permission from Mind Garden Inc to administer the copyrighted instrument using an electronic survey link to collect the pre- and post-intervention burnout data. The survey addressed these three variables EE, DP, and PA with accomplishment from never (zero) to every day (six). The means of burnout scores from each item were calculated to reflect similar burnout levels from zero to six. The burnout data was directly obtained from Mind Garden Inc. The demographic profile data was collected and statistically analyzed via the REDCap program.

Analysis

In this project, a number of tests were utilized for statistical analysis. Mean indicated an average that could achieve a fast and concise view of the data. Pre-mean and post-mean were used for each item of the MBI survey 22 items and composite scores of EE, DP, and PA. The mean difference was to measure the absolute difference between the mean value of pre-and post-intervention. The $t$-test was able to determine how significant the differences between pre and post-intervention scores. A paired $t$-test was used to compare the relationship between the intervention and burnout both at the pre-and post-test levels. The $t$-test determined whether mindfulness meditation positively affected burnout. A $p$-value was used to tell the significant improvement or not from pre-intervention to post-intervention. The standard deviation (SD) was used in age and years of experience of APPs to tell how much variation there was from the average (mean).
Other demographic data was collected for descriptive statistical analysis. The metrics were used to demonstrate the changes in MBI burnout scores on APPs (Bianchini & Copeland, 2021). An improvement in the statistical results was expected post-intervention in both scores to qualify the difference between pre and post-intervention.

**Budget**

The budget for this DNP student project was limited. The project manager did not receive any financial reimbursement or funds to support this DNP project. The project did not generate any revenue. However, if the project is reproduced, the organization funds and/or grant dollars will be needed to support and sustain the project. The outline specific financial requirement of the project budget was presented in Table 1. The expense to purchase permission to use the MBI tool via electronic survey platform from Mind Garden was $2.50 per survey at one-time purchase including pre and post-intervention surveys and data reports respectively. The mindfulness meditation application Headspace used a free trial for this project in twelve weeks.

**Table 1**

*Proposed Budget for three years 2022-2024 (Based on 20 Participants)*

<table>
<thead>
<tr>
<th>Income</th>
<th>Item</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grant</td>
<td>$1,500.00</td>
<td>$1,500.00</td>
<td>$1,500.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td></td>
<td>$1,500.00</td>
<td>$1,500.00</td>
<td>$1,500.00</td>
</tr>
<tr>
<td>Expresses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager payment</td>
<td>$550.00</td>
<td>$550.00</td>
<td>$550.00</td>
<td></td>
</tr>
<tr>
<td>MBI from</td>
<td>$100.00</td>
<td>$100.00</td>
<td>$100.00</td>
<td></td>
</tr>
<tr>
<td>Headspace</td>
<td>$700.00</td>
<td>$700.00</td>
<td>$700.00</td>
<td></td>
</tr>
<tr>
<td>Office Supplies</td>
<td>$150.00</td>
<td>$150.00</td>
<td>$150.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td></td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
</tr>
</tbody>
</table>
Ethical Considerations

Project ethical considerations included maintaining anonymity, confidentiality, and information security. All project participants were Voluntary and free of force. Staff members were not penalized for failure to participate or withdrawal from the study. The demographic survey was customized on the organization’s REDCap website to obtain the data. No identifying demographics were recorded. Therefore the participants were unidentifiable. The collected data was analyzed using codes without identifiable information. All collected de-identified data was stored in a password-protected computer that only the project manager could access. When the information is no longer required, or a maximum time of three years, it will be destroyed by the secure shredding procedures enforced by the healthcare organization. Any remaining electronic files will be manually deleted.

The project manager completed Human Subject Research Training, received an approval letter from the organization to implement the DNP project, and an approval letter from the Human Subjects Review Committee from the educational institution at Wilmington University. The project was reviewed and granted by the organization’s Institutional Review Board as a quality improvement initiative project.

Chapter Summary

This chapter presented the context, intervention, implementation of the intervention and addressed potential barriers and methods to overcome. The methodology used to collect data and tests for statistical analysis were discussed. The project budget and ethical considerations for human subject protection were reviewed. Chapter four will present sample characteristics and the outcomes of this EBP project.
CHAPTER FOUR, RESULT

Sample Characteristics

A sample of APPs in the women’s health department at an identified region of a specific organization was recruited. The project sample consisted of APPs working in the women's health department inpatient setting. Twenty participants were initially recruited for the study. A total of eighteen participants completed the demographic profile survey, pre and post-intervention survey. The demographic profile data for the sample were obtained at the beginning of the project using a brief questionnaire. All these eighteen participants were full-time employees.

Demographic Profile

Table 1 provided a demographic description of the eighteen participants who completed the demographic survey, pre- and post-measures. This represented a 90% participant rate. The sample (N=18) was exclusively female (100%), predominantly white (72%), Master of Science in Nursing educated (83%), and DNP educated (17.6%). The mean age of the sample was 41.6 years old (SD=10.1), with a range of 28 to 67 years. The mean number of years of APPs’ experience was 10.0 (SD=6.4), with a range from 1.5 years to 22 years in women’s healthcare.
Table 2

*Participant Demographic Characteristics*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>41.6</td>
<td>10.1</td>
<td>28</td>
<td>66</td>
<td>18</td>
</tr>
<tr>
<td>Years of Experience</td>
<td>10.0</td>
<td>6.4</td>
<td>1.5</td>
<td>22</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>COUNT</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RACE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>3</td>
<td>16.6%</td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
<td>11.1%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>White</td>
<td>13</td>
<td>72.2%</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>100%</td>
</tr>
</tbody>
</table>

| **GENDER**     |       |            |
| Female         | 18    | 100%       |
| Male           | 0     | 0.00%      |
| Non-Binary     | 0     | 0.00%      |
| Prefer to self-describe | 0  | 0.00%      |
| Total          | 18    | 100%       |

<table>
<thead>
<tr>
<th><strong>HIGHEST DEGREE</strong></th>
<th>COUNT</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSN</td>
<td>15</td>
<td>83.3%</td>
</tr>
<tr>
<td>DPN</td>
<td>3</td>
<td>16.7%</td>
</tr>
<tr>
<td>Master</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>100%</td>
</tr>
</tbody>
</table>
Project Results

The post-intervention data collection was completed on November 30, 2021. A total of eighteen participants were included in the analysis for the pre-and post-intervention survey. A paired $t$-test with two-tailed distribution was used to determine the difference between two variables for the same group. The difference between pre-and post-intervention and standard deviation were used in each item and composition item. A $p$-value was calculated and used to assess the effectiveness of the intervention. In this study, a $p$-value less than 0.05 meant that the effect was observed. This project used the MBI tool to measure job burnout defined by three subscales including EE (9 items) (see table 3), DP (5 items) (see table 4), and PA (8 items) (see table 5). Each individual item with a 7-point Likert-type response scale from 0 to 6 (0 = never, 1 = a few times a year or less, 2 = once a month or less, 3 = a few times a month, 4 = once a week, 5 = a few times a week, 6 = every day) (Brady et al., 2020; Maslach, 2001). Thus, the higher scores on the EE and DP subscales indicated a higher burnout symptom weight and lower scores on the PA subscale indicated a higher burnout symptom burden.

There were significant differences observed in individual items ($p < 0.05$) including “I feel emotionally drained from my work” ($p = 0.0006$); “I feel used up at the end of the workday” ($p = 0.002$); “I feel fatigued when I get up in the morning and have to face another day on the job” ($p = 0.0001$); “I feel burned out from my work” ($p = 0.0003$); “I feel frustrated by my job” ($p = 0.038$); “Working with people directly puts too much stress on me” ($p = 0.004$); “I feel like I’m at the end of my rope” ($p = 0.015$); “I feel I treat some patients as if they were impersonal objects” ($P = 0.009$); “I’ve become more callous toward people since I took this job” ($p = 0.004$); “I worry that this
hob is hardening me emotionally” ( $P = 0.009$); “I can easily understand how my patients feel about things” ( $P = 0.031$); “I feel I’m positively influencing other people’s lives through my work” ( $P = 0.031$); “I feel very energy” ( $p = 0.015$); “I have accomplished many worthwhile things in this job” ( $p = 0.0007$). (see table 2).

No significant effects were found in these items including “Working with people all day is really a strain for me” ( $p = 0.069$); “I feel I’m working too hard on my job” ( $p = 0.226$); “I don’t really care what happens to some patients” ( $p = 0.202$); “I feel patients blame me for some of their problems” ( $P = 0.218$); “I deal very effectively with the problems of my patients” ( $P = 0.437$); “I can easily create a relaxed atmosphere with my patients” ( $p = 0.507$); “I feel exhilarated after working closely with my patients: ( $p = 0.078$); “In my work, I deal with emotional problems very calmly” ( $p = 0.276$).

Based on self-reported MBI survey results from pre-and post-intervention, there was a decrease in mean scores in these two domains: EE, and DP. A 38.5% reduction was disclosed in the EE domain from a pre-test mean score of 2.785 (SD = 0.960) to a post-test mean score of 1.710 (SD = 0.906). A 65.6% reduction in DP from a pre-test mean score of 1.4222 (SD = 0.777) to a post-test mean score of 0.489 (SD = 0.420). It was an improvement of mean score in the PA domain: 29.6% increased from a pre-test mean score of 3.965 (SD = 1.264) to a post-test mean score of 5.139 (SD = 0.418). Overall a significant differences between pre-and post-intervention were found in EE ( $p = 0.0005$), DP ( $p = 0.016$), and PA ( $p = 0.026$) respectively (see table 6 and figure 1).
Table 3

**MBI Human Services Survey for Medical Practitioners Scores**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Emotional Exhaustion Items</th>
<th>Pre-mean</th>
<th>Post-mean</th>
<th>Difference (Pre-Post)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I feel emotionally drained from my work</td>
<td>3.389</td>
<td>2.000</td>
<td>1.389</td>
<td>0.0006</td>
</tr>
<tr>
<td>2</td>
<td>I feel used up at the end of the workday</td>
<td>3.722</td>
<td>2.444</td>
<td>1.278</td>
<td>0.0020</td>
</tr>
<tr>
<td>3</td>
<td>I feel fatigued when I get up in the morning and have to face another day on the job.</td>
<td>3.333</td>
<td>1.833</td>
<td>1.500</td>
<td>0.0001</td>
</tr>
<tr>
<td>4</td>
<td>Working with people all day is really a strain for me</td>
<td>1.500</td>
<td>0.667</td>
<td>0.837</td>
<td>0.0690</td>
</tr>
<tr>
<td>5</td>
<td>I feel burned out from my work</td>
<td>3.278</td>
<td>2.000</td>
<td>1.278</td>
<td>0.0003</td>
</tr>
<tr>
<td>6</td>
<td>I feel frustrated by my job</td>
<td>3.500</td>
<td>2.611</td>
<td>0.889</td>
<td>0.0380</td>
</tr>
<tr>
<td>7</td>
<td>I feel I'm working too hard on my job</td>
<td>3.278</td>
<td>2.778</td>
<td>0.500</td>
<td>0.2260</td>
</tr>
<tr>
<td>8</td>
<td>Working with people directly puts too much stress on me</td>
<td>1.444</td>
<td>0.556</td>
<td>0.889</td>
<td>0.0040</td>
</tr>
<tr>
<td>9</td>
<td>I feel like I'm at the end of my rope</td>
<td>1.611</td>
<td>0.500</td>
<td>1.111</td>
<td>0.0150</td>
</tr>
</tbody>
</table>

Table 4

**MBI Human Services Survey for Medical Practitioners Scores**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Depersonalization Items</th>
<th>Pre-mean</th>
<th>Post-mean</th>
<th>Difference (Pre-Post)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I feel I treat some patients as if they were impersonal objects</td>
<td>1.278</td>
<td>0.056</td>
<td>1.222</td>
<td>0.009</td>
</tr>
<tr>
<td>2</td>
<td>I've become more callous toward people since I took this job</td>
<td>1.611</td>
<td>0.500</td>
<td>1.111</td>
<td>0.004</td>
</tr>
<tr>
<td>3</td>
<td>I worry that this job is hardening me emotionally</td>
<td>2.611</td>
<td>1.056</td>
<td>1.556</td>
<td>0.0009</td>
</tr>
<tr>
<td>4</td>
<td>I don't really care what happens to some patients</td>
<td>0.500</td>
<td>0.111</td>
<td>0.389</td>
<td>0.202</td>
</tr>
<tr>
<td>5</td>
<td>I feel patients blame me for some of their problems</td>
<td>1.111</td>
<td>0.722</td>
<td>0.389</td>
<td>0.218</td>
</tr>
</tbody>
</table>

Note. The *p*-values were obtained from a paired *t*-test between pre and post-intervention
Table 5

**MBI Human Services Survey for Medical Practitioners Scores**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Personal Accomplishment Items</th>
<th>Pre-mean</th>
<th>Post-mean</th>
<th>Difference (Pre-Post)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I can easily understand how my patients feel about things</td>
<td>4.889</td>
<td>5.722</td>
<td>-0.831</td>
<td>0.0310</td>
</tr>
<tr>
<td>2</td>
<td>I deal very effectively with the problems of my patients</td>
<td>4.778</td>
<td>5.611</td>
<td>-0.833</td>
<td>0.4370</td>
</tr>
<tr>
<td>3</td>
<td>I feel I'm positively influencing other people's lives through my work</td>
<td>4.611</td>
<td>5.500</td>
<td>-0.889</td>
<td>0.0310</td>
</tr>
<tr>
<td>4</td>
<td>I feel very energetic</td>
<td>3.389</td>
<td>4.667</td>
<td>-1.878</td>
<td>0.0150</td>
</tr>
<tr>
<td>5</td>
<td>I can easily create a relaxed atmosphere with my patients</td>
<td>5.167</td>
<td>4.833</td>
<td>0.333</td>
<td>0.5070</td>
</tr>
<tr>
<td>6</td>
<td>I feel exhilarated after working closely with my patients</td>
<td>4.111</td>
<td>4.944</td>
<td>-0.833</td>
<td>0.0780</td>
</tr>
<tr>
<td>7</td>
<td>I have accomplished many worthwhile things in this job</td>
<td>3.500</td>
<td>4.722</td>
<td>-1.222</td>
<td>0.0007</td>
</tr>
<tr>
<td>8</td>
<td>In my work, I deal with emotional problems very calmly</td>
<td>1.278</td>
<td>5.111</td>
<td>-3.833</td>
<td>0.2760</td>
</tr>
</tbody>
</table>

Note. The p-values were obtained from a paired t-test between pre and post-intervention

Table 6

**MBI Human Services Survey for Medical Practitioners Composite Scores**

<table>
<thead>
<tr>
<th>Composite Score</th>
<th>Pre-mean ± SD</th>
<th>Post-mean ± SD</th>
<th>Difference (pre-post) ± SD</th>
<th>P-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE</td>
<td>2.785 ± 0.960</td>
<td>1.710 ± 0.906</td>
<td>1.074 ± 0.320</td>
<td>0.00048</td>
<td>***: p &lt; 0.001</td>
</tr>
<tr>
<td>DP</td>
<td>1.422 ± 0.777</td>
<td>0.489 ± 0.420</td>
<td>0.933 ± 0.523</td>
<td>0.0160</td>
<td>*: p &lt; 0.05</td>
</tr>
<tr>
<td>PA</td>
<td>3.965 ± 1.264</td>
<td>5.139 ± 0.418</td>
<td>-1.174 ± 1.183</td>
<td>0.0263</td>
<td>*: p &lt; 0.05</td>
</tr>
</tbody>
</table>

Note. EE: Emotional Exhaustion; DP: Depersonalization; PA: Personal Accomplishment

Significant *P < 0.05. **P < 0.01. ***P < 0.001
Figure 1

*MBI Human Services Survey for Medical Practitioners Composite Scores*

Note.

EE: Emotional Exhaustion

DP: Depersonalization

PA: Personal Accomplishment

Significant *$P < 0.05$. **$P < 0.01$. ***$P < 0.001$. 

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The strength of the project included the project manager focused on a result-orientated manner, demonstrated EBP, and advocated the project implementation to successfully recruit all full-time eighteen APPs to complete the pre-and post-intervention survey, obtained invaluable data to evaluate the relationships between the intervention and outcomes. The outcomes from a mean score of these composite domains EE, DP, and PA demonstrated an improvement in burnout after mobile-based mindfulness meditation. The project aims to use this intervention to reduce burnout were achieved.

**Chapter Summary**

The project was successfully implemented with the same sample of APPs working in the women’s health department at an identified organization. A statistically analyzed data demonstrated a significant improvement between pre-and post-intervention surveys. Effects on burnout were sustained at twelve weeks. The next chapter described interpretation, limitations, the implication for advanced nursing practice, the plan for sustainability, and the application of AACN DNP essentials.
CHAPTER FIVE - DISCUSSION AND IMPLICATIONS

Discussion

The goal of this EBP project was to test the efficacy and sustained effects of a twelve weeks mindfulness meditation intervention using a mobile-based application Headspace to reduce burnout on APPs. My project results showed that a 12-week voiced guided mobile-based application Headspace reduced self-reported burnout. The findings demonstrated the significant difference between pre-and post-intervention. The purpose of the effectiveness of the intervention was accomplished with a greater reduction in two domains EE, and DP, and improvement in one domain PA. The significant effects were also found in most individual outcomes variables. The project had created an awareness that burnout prevention was necessary for APPs in the women health’s departments.

Hence, the project results suggested that brief voiced guided mindfulness meditation intervention delivered via mobile-based application Headspace application showed promise in reducing burnout on APPs. Ultimately APPs had more energy, less stress, and happy showing the results from the post-intervention survey. The intervention significantly improved work-related health outcomes such as easily understanding how my patients feel about things, positively influencing other people’s lives through work, and felt accomplished many worthwhile things in this job. The results indicated APPs had more satisfaction with their job and were happy taking care of their patients. In other words, APPs could potentially provide a better quality of patient care and less job turnover. The need to continue using this mindfulness meditation application was identified to continually keep and improve APPs’ wellbeing in this organization.
**Interpretation**

Job-related burnout was well studied and documented issues in health care providers that the effects could cause emotional draining from their work, fatigue, frustration by their job, increased job turnover, potential negative patient care outcomes (Fendel et al., 2021; Kapu et al., 2019). Numerous research studies demonstrated that mindfulness meditation strategies help to reduce burnout (Brady et al., 2020; Bianchini & Copeland, 2021). Recently, studies showed that a brief internet-based mindful meditation practice proved an effective and economic strategy, more affordable, easier engaged, feasible, flexible, and less time demanding to reduce burnout, and improve individuals’ wellbeing (Champion et al., 2018; Economides et al., 2018; (Roy et al., 2020; Stachele et al., 2020).

After twelve weeks intervention period, the project results supported a positive correlation between burnout and using a mobile-based mindfulness meditation application that was expected. Overall, this project resulted in similar findings to those of research studies using the internet or mobile-based application mindfulness meditation intervention for stress reduction and burnout.

The impact of reduced burnout from this intervention was proven to show a significant outcome of decreased burnout scores in EE, DP, and PA. The evidence-based intervention demonstrated the effectiveness in positively influencing work-related factors that affect APPs’ burnout with minimal impact on organizational budgets and resources.

Many evidence studied and supported traditional in-person mindfulness meditation training to reduce stress and burnout. However, there was rapidly increasing popularity and practical use and support of internet or mobile-based application
mindfulness meditation interventions in a clinical setting and non-clinical environments (Champion et al., 2018). The observed evidence from research studies and anticipated outcomes from this project were the same that mindfulness meditation had helped to reduce burnout. Of course, future studies are still needed to continue the advancement of this growing phenomenon with mindfulness meditation using mobile-based applications.

**Limitations**

This QI project had a number of potential and actual limitations. First, the sample size was small in a Northeastern academic medical center even though a relatively high rate of response. Second, the project did not have standardized methods to track the consistency and how often practicing Headspace mindfulness meditation. The relationship between the change in frequency using Headspace application and burnout scores may need assessment in future studies. Third, all the participants were recruited and participated in the intervention regardless of their previous used mindfulness meditation. The self-reported survey method might cause potential bias. These APPs were primarily working in women’s health care inpatient settings and the results might not represent the general population or other settings.

Clearly, factors that threaten internal validity were sample features, situational factors, and section bias. The project manager took efforts to minimize and adjust for the limitations. Thus, future studies may recruit a larger sample size to avoid this potential bias. Situation factors included the project implemented during a pandemic. The burnout scores might increase compared to non-pandemic time. The section bias might relate to the independent variable such as APPs’ motivation or willingness to do the survey, seriously read and answer each question. The project manager provided weekly
reminders and educational sessions to motivate APPs to practice mindfulness meditation and complete the post-intervention survey.

Extensive evidence from studies addressed the impact of mindfulness meditation on burnout before and during project implementation. Future replicated studies may implement among healthcare professionals in various settings to avoid confoundings.

**Implications for Advanced Nursing Practice**

The QI project results uncovered the important information of initiating a mindfulness mediation program on burnout among APPs in a single academic hospital at a women’s health department. Many organizations focus significantly on the patient experience and the potential underrecognized burnout of APPs (Bianchini & Copeland, 2021). Organizations should choose to prioritize the staff’s well-being in order to maintain professional strength and provide high-quality and safety of patient care. Therefore, organizational leaders should support and guarantee the resources available to reduce burnout. This project initiated mindfulness meditation Headspace to reduce burnout and maintain well-being. The results of this study encouraged organizations and other staff members to adopt this practice in their daily life. Reducing burnout is a strategy for organizations to consider strongly in the complexity of current patient care. To maintain less burnout, engagement, and happiness to work, APPs and other healthcare professionals need to have tools for managing daily challenges and providing better patient safety and quality care. DNP-prepared practitioners could be in a unique position to be role models to promote a wellness intervention in a realistic strategy helping staff to learn coping with stress and burnout. Mobile-based mindfulness meditation application was able to enhance participants’ ability to cope with burnout as the project resulted and
clearly demonstrated. Ultimately, the project provided a positive impact on APPs and the patients whom they care for.

**Plan for Sustainability**

Successful implementation of an innovative DNP project and subsequent sustainability were essential to this project. The DNP student’s project presented and demonstrated a rigorous investment in hours of working on literature searching, reviewing and critiquing articles, and collecting the best EBP to implement a QI project for the terminal degree (Ketron, 2019). Burnout is a serious issue that affects providers’ wellness and patient care quality in this organization. The purpose of this EBP project was to use the best available evidence to promote the best patient care outcomes. Therefore, the DNP-initiated project sustainability was important and should be supported seriously (Ketron, 2019). Sustainability was about the activities to ensure the project’s capacity maintenance and prevent the project from being phased out (Ibrahim & Wan-Puteh, 2018).

The project sustainability was maintained after being implemented by collaborating with stakeholders, having meetings with stakeholders weekly using the most effective, and efficient communication regarding the initiative project, and formulating a clear outline of objectives and benefiting the organization. The current pandemic, COVID-19, has risen again and added to those already high levels of burnout APPs to face daily. The organization is actively seeking different methods to improve clinical outcomes and notices the importance of a mindfulness meditation intervention to reduce burnout. The project’s results endorsed the need for continuity of the project in the organization. Under the organization’s support, all the APPs advocate the importance of
mindfulness meditation in their APPs meetings weekly and monthly. APPs continue to receive a daily automatic text message reminder from the Headspace application. The project manager launched a Mobile-based Meditation Wellness Champion to keep the project sustained. The goal was to not only sustain the project alive but also more important to promote healthy APPs and the healthy department ensuring optimal staff wellness and high-quality patient care. To reach the highest level of engagement, all the champions were invited to share their success stories in meetings. The outstanding APPs who went above and beyond on challenges could earn a Super Star “High Five” created by an internal website in the organization. During this holiday season, the project manager used a secret Santa gift exchange opportunity to give each APP a personalized coffee mug printed with meditation pictures and inspirational meditation words to remind and encourage them to practice meditation daily.

Application of the AACN DNP Essentials

**Essential I: Scientific Underpinnings for Practice**

DNP graduates undertake a complex terminal academic prepared education (Chism, 2019). DNP graduates are prepared scientific underpinnings of a data structure from sciences and able to translate new knowledge containing a group of elements quickly and effectively to benefit healthcare staff and patients in daily demanded practice environments (AACN, 2006). Theories provide special meanings to nursing practice in daily working life through health promotion and different nursing theories offer prospects for various methods and approaches to care that permit nurse to be innovative and creative in their practice approaches (Zaccagnini & White 2019).
The first essential was used mainly by the search of the underpinnings of mindfulness meditation as a burnout intervention. Mindfulness meditation is a practice based on the traditions of Buddhism that pay attention to purpose and awareness through sitting meditation (Diaz-Silveira et al., 2020). Mindfulness meditation as an EBP from many research studies has proved that a mobile-based application intervention can decrease stress and burnout scores (Hersch et al., 2016; Persson Asplund et al., 2018). The Mobile-based application Headspace consists of voice-guided mindfulness meditation that research studies have proved to decrease stress, burnout, increase resilience, and satisfaction with life (Champion et al., 2018; Kashat et al., 2020).

Searching for and deciding on appropriate tools to accomplish the DNP project was instrumental in achieving this first DNP essential. Kurt Lewin’s Change Theory was used as a theoretical framework to guide the DNP project. Lewin created an organizational change theory with three steps. DNP-prepared graduates were able to develop and evaluate strategies based on EBP and nursing theories to deliver and improve staff working environment and patient outcomes. The DNP project met this essential.

**Essential II: Organizational and Systems Leadership for Quality Improvement**

DNP prepared nurse practitioners to include not only provide direct patient care but also evaluate the cost-effectiveness of care, assess risks of the working environment, emphasizing evidence-based practice, identify systems’ issues and facilitate organizational changes in practice delivery (AACN, 2006). The project manager was able to use nursing science and practice as EBP to ensure accountability for the quality of healthcare for the population with whom the project manager working. The project was
presented to the key stakeholders, obtained an organizational approval letter, and received support from stakeholders. The project manager used innovative and effective communication methods to discuss the burnout issues related to implementing the project planning toward a goal to decrease burnout. Without organizational and stakeholders’ support, the project would be difficult to implement. Therefore, this DNP essential II was met for DNP students to design EBP interventions and promote better practice outcomes.

**Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice**

This essential was met by the actual research and literature review to analyze different potential burnout-reducing interventions. DNP-prepared nurse practitioners are unique in education and training to nursing science involve translating research new knowledge into practice, disseminating and integrating the new knowledge (Chism, 2019). From publications of research evidence to translate into practice, the gap often takes many years to improve the quality and safety of care (Melnyk & Fineout-Overholt 2019). DNP prepared students are able to analyze and critically evaluate existing literature to determine the best EBP, assist to generate new knowledge and affect EBP from real practice settings (AACN, 2006). In this project, the John’s Hopkins Nursing Individual Evidence Summary Tool was used to review researched articles, evaluate the EBP articles, rate their evidence quality levels, analyze their findings to support and relate to the DNP project. Cited articles and evidence were evaluated by an Evidence Synthesis Tool to assess the evidence levels consistently in findings. The key activities of the DNP preparing students involve the translation of research studies into practice, dissemination, and integration of the new knowledge (AACN 2006). The DNP project
implementation and sustainability met this essential using evidence-based knowledge to solve a problem via the scholarship of practice in nursing.

**Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care**

This essential was met by the utilization of a new technology called Headspace mindfulness meditation application. Using health information and technology strategies to help improve population health outcomes and health care quality is a goal identified by Healthy People 2020 (Healthy People 2020). DNP prepared nurse practitioners to play an important role in implementing health information technology in the hospitals, have the ability to combine nursing science, information science, and computer science in practice to manage and enhance health care data information and knowledge for a better working environment and patient care (McGonigle & Mastrian, 2020). DNP graduates can recognize factors influencing the health policies, advocate for the nursing profession through actively being at the forefront, influence healthcare financing, regulation, and advocating for ethical, equitable, and social justice across all healthcare settings (AACN, 2006). This DNP project used technology mobile-based mindfulness meditation, Headspace, application as an intervention to transform the evidence-based technology in a real practic setting. All the participants downloaded and used the app on their mobile devices providing step-by-step voice-guided instructions for meditation. This essential IV met the project by providing cost-effective, convenient, flexible, and easy to access technology to provide meditation for all the participants to be meditated and relaxed.
Essential V: Health Care Policy for Advocacy in Health Care

Health policies can influence various care delivery issues and working environments including health care disparities, cultural sensitivity, ethics, staffing ratios, pay rates, care access, care quality, health care financing, the equity, and social justice issues in the delivery of healthcare systems (AACN 2006). The current complexity of the healthcare environment and increased amount of scientific knowledge demand the involvement of nurses educated in the legislative process and prepared to influence policy on the local, state, and national levels (Zaccagnini & White 2019). DNP-prepared nurse practitioners have a unique position to empower the advocates for healthcare policy through their daily practice experience (Chism, 2019). In this DNP project, burnout issues provided an awareness of a need to decrease the level of burnout. Project managers and participants voiced the issues through shared governance council representatives, weekly staff meetings, and directly discussed with stakeholders about using the outcomes of EBP for future development of organizational protocols to improve the burnout. The DNP manager used this essential V to advocate and encourage stakeholders, and policymakers to help healthcare providers prevent burnout. This DNP project met this essential.

Essential VI: Inter-Professional Collaboration for Improving Patient and Population Health Outcomes

The essential was met with collaboration inter-professionally to improve wellbeing in APPs. Numerous research studies have well documented the impact of advanced practice providers on healthcare outcomes including the ability to deliver excellent quality, cost-effective care with high levels of patient satisfaction (Zaccagnini
& White 2019). The current complex and multi-tiered healthcare environment really depend on the contributions of highly skilled and knowledgeable individuals from multiple professions. A DNP-prepared advanced practice provider has advanced preparation in the interprofessional collaboration for safe, timely effective, efficient, equitable, and patient-centered care in complex health systems (AACN 2006). Therefore, DNP-prepared graduates have the ability to be effective team leadership and play an important role in establishing interprofessional teams, participating in the team works to improve patient and population health outcomes. Moreover, the role of this DNP project took a leadership role to develop and implement a practice model and scholarly project in the specific setting. Through collaboration, the project received approval and support to implement the DNP project successfully improve APPs’ wellbeing and to build strategies for burnout prevention. Finally, the DNP project met this essential.

**Essential VII: Clinical Prevention and Population Health for Improving the Nation’s Health**

This DNP essential was met by utilizing mobile-based mindfulness meditation to reduce burnout, and promote healthy coping strategies in a stressful working environment. The goal of the project was to decrease burnout in the population by providing and using meditation techniques in daily life to learn a coping strategy and self-care to improve the population’s health. Clinical prevention is to promote and prevent risks for any individual and family (AACN, 2006). DNP graduates have the ability to analyze evidence-based outcomes, synthesize concepts to develop, implement and evaluate clinical prevention and population health (Chism, 2019). Health promotion and disease prevention interventions can be focused on an individual level or a population
level (Zaccagnini & White 2019). The DNP project manager was prepared to have the ability to synthesize the various theoretical concepts and models when planning any health promotion interventions. DNP-prepared graduates were able to gather EBP that was unique to the population interest when performing an assessment as one of the initial steps in project planning (Zaccagnini & White 2019). The project focused on the impact of the population to improve their wellness by identifying a strategy of mindfulness meditation to lead a positive outcome. As a result, the DNP project met this essential.

**Essential VIII: Advanced Nursing Practice**

This essential was achieved by the completion of the DNP project that culminated in the DNP program. The knowledge gained from this DNP journey grew and afforded the specialized skill set to become a more proactive role in advanced nursing practice. DNP-prepared graduates are prepared for their abilities in the design, implementation and evaluation of therapeutic interventions based on nursing research science and other science (Chism, 2019). The foundational knowledge and experience gained from this DNP program were able to complete this project successfully. The project met the essential to improve staff wellbeing, patient quality, and safety of care and reduce expenses for the organization using EBP in this advanced nursing practice.
References

https://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf


Healthy People (2020). *Health communication and health information technology.*


https://doi.org/10.1080/0142159X.2017.1294749


https://doi.org/10.1097/OGX.0000000000000282


Shanafelt, T., Trockel, M., Ripp, J., Murphy, M. L., Sandborg, C., & Bohman, B. (2019, Feb). Building a program on well-being: key design considerations to meet the unique needs of each organization. *Acad Med, 94*(2), 156-161.
https://doi.org/10.1097/ACM.0000000000002415


Appendix A - CITI Human Subject Training Certificate

This is to certify that:

Wei Zhou

Has completed the following CITI Program course:

- Human Subjects Research
  (Curriculum Group)
- Health Professions - Human Subjects Research
  (Course Learner Group)
  1 - Basic
    (1 page)

Under requirements set by:

Wilmington University

Verify at www.citiprogram.org/verify?w07ceb3c9-0937-4a44-991a-836c5ae98c72:42371955
Appendix B - HSRC Approval Letter

August 3, 2021
Wei Zhou

Dear Wei,

Wilmington University’s Human Subjects Review Committee (HSRC) is pleased to inform you that your Doctor of Nursing Practice project proposal Development and Evaluation of a Web-based Mindfulness Meditation Program for Advanced Practice Providers in Women Health Department was reviewed on July 29, 2021. The project was categorized as Exempt and meeting the requirements of a quality improvement intervention. Your signed HSRC form is attached.

Now that your DNP project has been approved by the HSRC, there are multiple elements with which you must comply. Wilmington University adheres strictly to these regulations:

1. You must conduct your DNP project exactly as it was approved by the HSRC.
2. Any additions or changes in procedures must be approved by the HSRC before they are implemented.
3. You must notify the HSRC promptly of any events that affect the safety or well-being of subjects.
4. You must notify the HSRC promptly of any modifications to your DNP project or other responses that are necessitated by any events reported in items 2 or 3.
5. Your approval is provisional if you require Institutional Review Board approval from your organization. Once organizational approval has been obtained, please submit your signed approval and completed IRB application to DNP Administrative Assistant via email.

The HSRC may review or audit your project at random or for cause. In accordance with Wilmington University policy, the HSRC may suspend or terminate your DNP project if your project has not been conducted as approved and/or if other difficulties are detected.

While not under the purview of the HSRC, DNP students are responsible for adhering to US copyright law when using existing scales, survey items, and other works in the conduct of research/DNP projects.

In conclusion, you have developed an interesting evidence-based practice project aligned with the AACN DNP Essentials (2006). This is an important project for healthcare practices now and in the future. Best wishes for continued success.

Sincerely,

[Signature]

Angela Herman, DNP, RN
HSRC Committee Representative
Chair, Health Sciences Program
Assistant Professor
College of Health Professions

[Signature]

Aaron Sebach, PhD, DNP, MBA, AGACNP-BC, FNP-BC, NP-C, CLNC, CNE, CNEcl, SFHM
Chair, DNP Program
Associate Professor
College of Health Professions

COLLEGE OF HEALTH PROFESSIONS
31 Reads Way, New Castle, Delaware 19720

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Appendix C - Organization Approval Letter

July 28, 2021

To Whom It May Concern,

Wei Zhou, CRNP is enrolled at Wilmington University Doctor of Nursing Practice program and has asked for department support to implement her DNP project: Development and Evaluation of a Web Based Mindfulness Meditation Program. The tool will survey Advance Practice Providers in Women’s Health at the Hospital of the University of Pennsylvania with primary goals aimed at decreasing provider burnout and promoting overall wellbeing. This project aligns with Penn Medicine and our Women’s Health Advance Practice Provider staff overall goals. Wei will start her survey Fall 2021 and has the full support of staff, physician leadership and myself. We look forward to working with Wei on her project and hearing about her results when available. I encourage Wei to present these results throughout our Women’s Health Department when completed.

Sincerely,

[Signature]

Bridget Howard, CNM, MSN
Manager, Advanced Practice Providers Women’s Health
The Hospital of the University of Pennsylvania
Ravdin 7
215-821-5345
Appendix D - Organization IRB Approval Letter

From: IRB Quality initiative <PROVOST-IRB-QUALITY@pobox.upenn.edu>
Sent: Sunday, June 6, 2021 8:52 AM
To: Zhou, Wei (Labor & Delivery) <Wei.Zhou@pennmedicine.upenn.edu>; IRB Quality Initiative <PROVOST-IRB-QUALITY@pobox.upenn.edu>
Subject: RE: QI project application

Hello,

It was determined that this project entitled: Development and Evaluation of a Web-based Mindfulness Meditation Program for Nurse Practitioners in Department of Women's Health qualifies as a quality improvement initiative that does not meet the definition of human subjects’ research and therefore further IRB review is not required.

NOTE: This email serves as your documentation. Please save a copy of it for your records.

NOTE: Changes to the purpose, methods, or design of this project may alter the QI status and may require re-review.

Human Research Protections Program
Office of the Institutional Review Board
University of Pennsylvania
3600 Civic Center Blvd., 9th Floor
Philadelphia, PA 19104
https://irb.upenn.edu
Appendix F - How to Download and use Headspace

How to download and use Headspace

Mobile-based Headspace Mindfulness Meditation Application Downloading Instructions

• If you use your mobile device, iPhone goes to blue grounded big A letter and Android goes to a multicolored triangle on a white briefcase. Open the application, search for Headspace, select install (take few seconds) and click “open” the application. After the application is open, you need to create an account from, “welcome to Headspace”. To create a password, this step requires you to enter your name and email address.

• If you like to use computer or your phone is too old to download the application, go to www.headspace.com. The same way to create an account.

• Before starting, you can select begin and answer a question about your experience with meditation.

• You are required to practice at least one time per day from 1-10 minutes of voiced-guided meditation from Headspace.

• For this project, we should utilize the free sessions. You are not obligated to purchase any additional sessions in the application.

• You can set up a reminder to get notification to practice meditation or you like to practice at any time you feel you want to do after you have activated the account.

Managing your Headspace personal profile data

• Open your app.

• Tap the little head log on left upper corner

• You will see setting symbol on left upper corner

• Scroll to the bottom of the setting page to find the “My data” tab.

• Click on “my data” tab

• Click on the “permissions” tab located on the top right-hand corner of the “My Data” page.

• Click “Permissions” tab you can review and edit to manage your preferred personal data
Maslach Human Service Survey for Medical Personnel

How Often 0 1 2 3 4 5 6
Never A few time a year or less Once a month or less A few times a month Once a week A few times a week Every day

<table>
<thead>
<tr>
<th>How Often 0-6</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I feel emotionally drained from my work</td>
</tr>
<tr>
<td>2.</td>
<td>I feel used up at the end of the workday</td>
</tr>
<tr>
<td>3.</td>
<td>I feel fatigued when I get up in the morning and have to face another day on the job.</td>
</tr>
<tr>
<td>4.</td>
<td>I can easily understand how my patients feel about things</td>
</tr>
<tr>
<td>5.</td>
<td>I feel I treat some patients as if they were impersonal objects</td>
</tr>
<tr>
<td>6.</td>
<td>Working with people all day is really a strain for me</td>
</tr>
<tr>
<td>7.</td>
<td>I deal very effectively with the problems of my patients</td>
</tr>
<tr>
<td>8.</td>
<td>I feel burned out from my work</td>
</tr>
<tr>
<td>9.</td>
<td>I feel I'm positively influencing other people's lives through my work</td>
</tr>
<tr>
<td>10.</td>
<td>I've become more callous toward people since I took this job</td>
</tr>
<tr>
<td>11.</td>
<td>I worry that this job is hardening me emotionally</td>
</tr>
<tr>
<td>12.</td>
<td>I feel very energetic</td>
</tr>
<tr>
<td>13.</td>
<td>I feel frustrated by my job</td>
</tr>
<tr>
<td>14.</td>
<td>I feel I'm working too hard on my job</td>
</tr>
<tr>
<td>15.</td>
<td>I don't really care what happens to some patients</td>
</tr>
<tr>
<td>16.</td>
<td>Working with people directly puts too much stress on me</td>
</tr>
<tr>
<td>17.</td>
<td>I can easily create a relaxed atmosphere with my patients</td>
</tr>
<tr>
<td>18.</td>
<td>I feel exhilarated after working closely with my patients</td>
</tr>
<tr>
<td>19.</td>
<td>I have accomplished many worthwhile things in this job</td>
</tr>
<tr>
<td>20.</td>
<td>I feel like I'm at the end of my rope</td>
</tr>
<tr>
<td>21.</td>
<td>In my work, I deal with emotional problems very calmly</td>
</tr>
<tr>
<td>22.</td>
<td>I feel patients blame me for some of their problems</td>
</tr>
</tbody>
</table>

(Administrative use only)

EE Total score_________ DP Total score_________ PA Total score_________
EE Average score_________ DP Average score_________ PA Average score_________