USING MINDFULNESS-BASED PRACTICE TO REDUCE WORK-RELATED STRESS AND
BURNOUT AMONG PSYCHIATRIC NURSES

Georgette Awo Gbeddy

A DNP Project submitted to faculty at the University of North Carolina at Chapel Hill
in partial fulfillment of the requirement for the degree of Doctor of Nursing
Practice in the School of Nursing

Chapel Hill
2021

Approved by:

Cheryl Giscombe

Grace Hubbard

David Gittelman

ABSTRACT

Georgette Awo Gbeddy: Using Mindfulness-based Practice to Reduce Work-related Stress and Burnout Among Psychiatric Nurses
(Under the direction of Dr. Cheryl Giscombe)

Background: Stress among healthcare workers is a significant problem linked to the prevalence of emotional and mental depletion, exhaustion, and job dissatisfaction among nurses. Nurses working in acute mental care settings are increasingly likely to experience stress due to challenging patient interactions. **Aim:** The purpose of this quality improvement project was to evaluate the feasibility of a free online VA Mindfulness Coach application (App) to reduce work-related stress and burnout in psychiatric nurses at the Fayetteville Veterans Affairs Medical Center (VAMC) in the Southeastern United States. **Method:** A qualitative quasi-experimental design was employed to address the clinical question. Fourteen nurses initially agreed to participate, and 13 completed the pre-and post-intervention Maslach Burnout Inventory (MBI). The MBI comprised 22 questionnaire items, which cut across various work experiences related to stress and burnout. **Results:** The mean MBI score decreased from 93.64 (SD=13.94) pre-intervention to 82.57 (SD=9.63) post-intervention, for a mean MBI score reduction of 11.07. The mean difference between pre-and post-intervention MBI scores of 11.07 points indicated that the App significantly reduced job burnout, $t(13) = 2.284$, $p = .040$. Also, 12 (85.7%) participants found the App useful to reduce stress and job burnout. **Conclusion**: Mental health nurses are exposed to prolonged stressful work environments, which causes stress and burnout. One-month post-intervention results of a mindfulness-based intervention show nurses' level of stress and   burnout was reduced. Continued application of mindfulness-based interventions in the workplace through mobile App with improved adherence rates can significantly lower stress and burnout.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank God Almighty for seeing me through this journey. Indeed, with God, all things are possible, and without his grace and favor, this would not have come to fruition. I thank my family for the support and understanding accorded me during this journey. My sincere gratitude and appreciation go to my dear husband, Elikem, for being my rock and most incredible support, not forgetting the constant encouragement every step of the way.

I would like to express my most profound appreciation to Dr. Cheryl Giscombe (DNP committee chair), Dr. Grace Hubbard, Dr. Donna Sutton, and Dr. David Gittelman for your valuable contributions to my career and for providing guidance and support with my project. Your leadership and guidance speak volumes, and without your wisdom and support, this project would not have made it this far. I am very thankful for your scholarly, professional, discerning perspectives and genuine support.

Finally, I would like to express my appreciation to my peers; Psychiatric nurses at the Fayetteville VAMC, for believing in my dream and coming on this mindfulness journey with me in these extreme times to find stillness even in the chaos. I cannot thank you enough; you are my champion for a successful project and instrumental in achieving my lifelong dream.

PREFACE

The successful completion of the quality improvement project was unique because mindfulness skills learned in a previous course were applied to my project. The knowledge gained post-implementation serves as a turning point for my career in realizing the project had beneficial results among psychiatric nurses.

"The best way to capture moments is to pay attention. This is how we cultivate mindfulness. Mindfulness means being awake. It means knowing what you are doing." Jon Kabat-Zinn

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

AACN	American Association of Colleges of Nursing
BITs	Behavioral Intervention Technologies
CINAHL	Cumulative Index of Nursing and Allied Health Literature
DBT	Dialectical Behavioral Therapy
EMS	Emergency Medical Services
ESP	Evidenced Based Synthesis Program
ICU	Intensive Care Unit
JD-RM	The Job-Demand Resource Model
LPN	Licensed Practical Nurse
MBCT	Mindfulness-Based Cognitive Therapy
MBI	Maslach Burnout Inventory
MBIs	Mindfulness-Based Interventions
MBPBS	Mindfulness-Based Positive Behavior Support
MBSR	Mindfulness-Based Stress Reduction
MBT	Maslach Burnout Theory
MBI-HSS (MP)	MBI Human Services Survey for Medical Personnel
MeSH	Medical Subject Headings
PTC	Post Traumatic Stress Disorder Clinical Team
QUERI	Quality Enhancement Research Initiative
RN	Registered Nurse
SD	Standard Deviation
VA	Veterans Affairs
VHA	Veterans Health Administration

VAMC   Veterans Affairs Medical Center

CHAPTER 1: INTRODUCTION

Background and Significance

Stress can be exceptionally high among psychiatric nurses working in acute inpatient mental health units, impacting nurses' wellbeing. Psychiatric nurses provide care to patients who may be verbally or physically threatening amid nursing shortages. The intense nature of nurse-patient interaction in inpatient mental health units can cause emotional exhaustion. (Khamisa, Oldenburg, Peltzer, & Ilic, 2015). Long-term exposure to stress and emotional exhaustion can lead to burnout, threatening psychiatric nurses' ability to provide optimal care.

Nurses who work in acute inpatient mental health at the Veterans Affairs (VA) Medical Center in Fayetteville, North Carolina, have been identified as facing prolonged stress (Duarte & Pinto-Gouveia, 2016), which leads to burnout and a reduction in job satisfaction (Dubale et al., 2019). Nurses who are experiencing stress and burnout would find it challenging to uphold the VA core values of "I CARE," which include Integrity, Commitment, Advocacy, Respect, and Excellence (US Department of Veteran Affairs, 2020a), as part of the culture of Fayetteville VAMC, which is captured in its mission and inspired by President Lincoln. The VA Medical Center seeks "to live by the former president's "promise to care for him who has borne the battle, and for his widow, and his orphan" by serving and honoring the men and women who are America's Veterans (US Department of Veteran Affairs, 2020a). Severe stress leads to burnout, compassion, fatigue, emotional exhaustion, and depersonalization. Unmitigated stress is also a significant cause of nurse attrition. Almost 40% of nurses leave the profession because they cannot cope with stress (Duarte & Pinto-Gouveia, 2016). The attrition rate in acute mental health settings can be higher because of the nurses' higher stress levels ((Duarte & Pinto-Gouveia, 2016).

Nurses at risk for burnout who work in acute inpatient mental health settings can benefit from evidence-based interventions that can reduce work-related stress.

Mindfulness is a stress-reduction technique that can help nurses working in acute mental health settings cope with stress. There is substantial and increasing evidence supporting the efficacy of mindfulness as a stress-reduction technique (Duarte & Pinto-Gouveia, 2016). Mindfulness practice supports an enhanced awareness of the present and helps develop adaptive and healthy ways of responding to stress instead of maladaptive reactions (Steinberg, Klatt, & Duchemin, 2016). There is considerable evidence supporting the use of mindfulness-based practice to reduce stress among nurses. It has been shown to reduce stress and burnout and enable nurses to provide patient-centered care. Mindfulness intervention for nurses can do more than support the wellbeing of nurses. Mental health patients will be beneficiaries of a mindfulness program, given mindfulness improves the quality of care provided to patients by reducing stress (Duarte & Pinto-Gouveia, 2016).

Purpose

This DNP program evaluation/quality improvement project evaluated the feasibility of a free online VA Mindfulness Coach application (App) to reduce work-related stress and burnout in nurses.

Clinical Question

The following clinical question guided this DNP program evaluation/quality improvement project: What is the impact of an online Mindfulness Coach application to reduce stress and job burnout among nurses in a VA acute mental health care unit?

CHAPTER 2: REVIEW OF THE LITERATURE

Purpose and Methodology for Review of Literature

The literature review included a search on PubMed, Psych Info, CINAHL, and Cochrane Library, with inclusion criteria focusing on studies and interventions for workplace stress reduction within the past seven years. The search was conducted in four main phases. In the first phase, several search terms, including effects and stress (All Fields), with the MeSH Terms burnout and psychologically linked to patient safety by the operators AND and OR. In the second round, the same search terms effects and stress (All Fields) and the MeSH Terms burnout and psychological were linked to the term's psychiatric nurses with the operator AND. In the third round, the same search terms, including effects and stress (All Fields) and burnout and psychological (MeSH Terms), were employed. However, during this phase, the above search terms were linked to veterans with the operator "and." The term veterans were preferred to the more extended concept of the "veteran affairs healthcare system" since the latter immensely narrowed down the search field, and it resulted in a small number of studies. The last phase included the following terms in all fields: mindfulness-based, practice, reduction, occupational stress, and nursing. The operator OR was used to expand the search terms, including occupational stress, work-related stress, burnout, psychological nurses, and psychiatric nurses. In all the searches, the study limited publication period to seven years, between 2013 and 2020, were included in the results. Moreover, only studies that had open access were considered in the review. The search returned 1472, 1082, 109, and 86 articles in the first, second, third, and fourth phases: since combining the results for all the four phases narrowed down the search results, a total of 43 articles were included in the literature review.

Review of Literature

Effects of Stress and Burnout on Nurses

Nurses who are stressed in the workplace are highly likely to experience burnout as well. The notion of burnout refers to a psychological syndrome characterized by emotional exhaustion, helplessness, feelings of depersonalization, and an aversion towards work (Dubale et al., 2019). In a systematic review that comprised 65 articles, researchers investigated the burden of burnout among sub-Saharan Africa health workers. The researchers concluded that a need for stress-management and resilience programs was evident. However, most studies included in the review were limited by methodological challenges. In another study carried out in Germany that employed a cross-sectional survey of 381 physicians and 567 nurses, the researchers reported that job satisfaction and leadership were significant predictors of health workers' perceptions of occupational safety (Wagner et al., 2018). According to Duarte and Pinto-Gouveia (2016), burnout can be as high as 40% among nurses. In mental health settings, the prevalence can be higher due to the challenging patient interactions and the workplace environment (Fischer, Kumar, & Hatcher, 2007). In addition to lowering nurse motivation and increasing turnovers, burnout adversely affects the quality and safety of services offered (Duarte & Pinto-Gouveia, 2016).

Nurses exposed to high-stress levels in the workplace are highly likely to experience emotional and mental depletion, job dissatisfaction, and physical exhaustion. Several stressors were identified in the workplace, including conflicts with patients and colleagues, high job demands, inadequate supervision, and working overtime (Khamisa et al., 2015). Burnout is also a significant predictor of job dissatisfaction (Alharbi, Wilson, Woods, & Usher, 2016), and workplace burnout can be classified into three clusters, including professional, organizational, and personal issues (Alharbi et al., 2016). In another Middle East-based study, researchers assessed the burden of burnout among healthcare workers in the region and whether MBI-based approaches could reduce stress levels among health employees. The systematic review used a sample of 138 articles accessed through various

databases, including PsycINFO and PubMed (Chemali et al., 2019). The researchers reported that burnout was prevalent among medical professionals in the Middle East, with mindfulness interventions only mentioned anecdotally by researchers. Moreover, many studies reported to have used the Maslach Burnout Inventory (MBI) lacked a consistent way of reporting since they, for instance, either listed the percentage of subjects with high rates of burnout on each scale or one scale only. Many studies confirm the negative effect of stress and burnout on nurses, but few have explored the use of intervention techniques, such as mindfulness-based interventions.

<u>Effects of Stress and Burnout on Patient Safety</u>

Nurses who experience stress and burnout in the workplace pose a safety risk to patients and healthcare workers. In one study, researchers investigated how physician burnout was related to quality healthcare services (Dewa, Loong, Bonato, & Trojanowski, 2017). Notably, the systematic review focused on whether physicians who experienced stress and burnout provided safe and acceptable services (Dewa et al., 2017). The study, which comprised articles from North America, the Middle East, Europe, and Asia, confirmed that burnout posed a moderate risk to the quality and safety of healthcare services (Dewa et al., 2017).

In another systematic review, which used a sample of 46 studies, researchers concluded that moderate to high levels of stress and poor healthcare professionals' wellbeing was linked to poor patient safety outcomes (Hall, Johnson, Watt, Tsipa, & O'Connor, 2016). Baier, Roth, Felgner, and Henschke (2018) carried out a cross-sectional survey to assess burnout and patient safety among emergency medical services (EMS) workers. EMS workers who exhibited depersonalization and emotional exhaustion were highly likely to compromise the safety of patients.

In the previous study, which included nurses and physicians working in intensive care units (ICUs), researchers investigated the relationship between teamwork, patient safety, and emotional exhaustion. The researchers confirmed that cognitive-behavioral teamwork positively impacted ICUs since it helped reduce clinician-related patient safety concerns (Welp, Meier, & Manser, 2016).

Caregivers who are comfortable in the workplace provide patients with excellent health services that are also safe.

Effects of Stress and Burnout on Veterans Affairs Healthcare Systems

Veterans' affairs healthcare systems face unique challenges, which affect the quality of health outcomes among patients. Several studies have investigated the effect of stress and burnout on veteran-related healthcare (Finley et al., 2015; Garcia et al., 2016; Kim et al., 2018; Profit et al., 2015). Kim et al. (2018) focused on the degree to which primary care providers shared responsibility for 14 different activities with other team members. Moreover, the researchers investigated whether any of the activities performed by these primary caregivers without further assistance from other team members were associated with caregiver burnout. The researchers relied on secondary data retrieved from the Veteran Health Administration (VHA) database assembled from 327 providers, 23 Veterans Affairs primary care practices in a single VHA regional network. From the results, the researchers concluded that overburdening primary caregivers with multiple duties, including self-management education and behavioral counseling, was likely to result in their burnout (Kim et al., 2018).

In a related study, researchers investigated whether post-traumatic stress disorder clinical team (PCT) providers' exposure to trauma content and patient characteristics were related to burnout among these providers. The researchers collected data through an electronic survey, which assessed participants' demographics, trauma content features, and burnout to measure the MBI scale. The study's findings stressed the need for VHA programs to institute programs to assess, prevent, and treat burnout among PCTs. Existing studies on burnout and stress in the veteran healthcare system have a methodological weakness since they employ systematic reviews of survey techniques. A need for experimental or quasi-experimental research arises to test the efficacy of mindfulness-based interventions.

Mindfulness Practices

Mindfulness-based interventions (MBIs) research increased exponentially over the last decade. Among these approaches are Mindfulness-Based Cognitive Therapy (MBCT), Mindfulness-Based

Stress Reduction (MBSR), and Dialectical Behavior Therapy (DBT) (Guo et al., 2019). In one study, researchers confirmed the feasibility of Mindfulness-Based Positive Behavior Support (MBPBS) for health providers who provided care to individuals with developmental and intellectual challenges (Singh, Lancioni, Karazsia, Chan, & Winton, 2016).

The evidence from MBSR studies supports improvements in mental health outcomes. Studies on stress reduction indicate that MBSR has a positive impact on psychological resilience. MBSR has been recommended as a safe technique for clinicians to reduce stress (Shapero, Greenberg, Pedrelli, de Jong, & Desbordes, 2018). Mindfulness has a long history in Eastern practices. In recent times, the practice of mindfulness has increased all over the world. It has been incorporated into daily stress reduction techniques. Mindfulness-based interventions have been found to reduce psychological symptoms and improve caregivers' overall wellbeing (Duarte & Pinto-Gouveia, 2016).

Mindfulness practices focus on enhancing an individual's attention and the awareness of present experiences (Janssen, Heerkens, Kuijer, van der Heijden, & Engels, 2018). In one systematic review, researchers analyzed the effects of two mindfulness tools, including Mindfulness-Based Cognitive Therapy (MBCT) and Mindfulness-Based Stress Reduction (MBSR) (Janssen et al., 2018). The researchers concluded that the latter tool could improve individuals' psychological wellbeing based on the study's results. MBSR involves various techniques that help to improve psychological functioning. It supports the self-regulation of attention to enable the present moment (Khoury, Sharma, Rush, & Fournier, 2015).

MBSR focuses on the adoption of acceptance and openness of personal or professional experiences. MBSR can help nurses develop new relationships with their thoughts, enabling them to apply different strategies when experiencing distressing thoughts (Raab, Sogge, Parker, & Flament, 2015). Meditation-based practices and exercises help participants to learn how to disengage automatic thoughts. Studies have established that MBSR promotes cognitive flexibility; and helps to counter repetitive negative thinking, which causes stress (Raab, 2014).

Feasibility and Usefulness of Mindfulness for Healthcare Professionals

A systematic review by Burton, Burgess, Dean, Koutsopoulou, and Hugh-Jones (2017) also found that mindfulness techniques can reduce stress. The study was conducted due to the high rates of work-related stress in the British healthcare system. Mindfulness meditation practices provide users with new ways of relating to inner experiences, thereby reducing stress (Burton et al., 2017). MBSR enables healthcare workers to accept emotions and thoughts without investing in them, reduces stress, improves patient satisfaction, and reduces medical errors. Based on studies, MBSR is accepted by the National Health Service as an intervention that can help healthcare professionals to deal with work-related stress (Burton et al., 2017).

In a related study that investigated the primary antecedents of job satisfaction and job stress, a researcher concluded that stress management intervention using MBSR was an effective intervention in reducing job dissatisfaction. (McVicar, 2016). A study evaluated the effects of a modified MBSR program on the degree of stress, resilience, and affects of Chinese general hospital nurses (Lin, He, Yan, Gu, & Xie, 2018). The study concluded that the modified MBSR was an effective strategy for reducing stress and negative affect among nurses. More importantly, since the study modified the MBSR to suit a Chinese context, it illustrates that MBIs can be adapted for use at VAMC in Fayetteville to reduce stress and burnout.

Mobile Applications

Mobile applications play a significant role in delivering healthcare services and are increasingly being used to provide treatment directives. Mobile applications, delivered through smartphones, are becoming behavioral intervention technologies (BITs) (Simmons, E'leyna Garcia, & Leong, 2016). They are also used to monitor compliance with treatment (Simmons et al., 2016). Increasingly, mobile applications are being integrated into existing treatments. Smartphone technology is playing an educational role in a variety of treatment plans. Mobile technologies are convenient, free, or low-cost and are easily downloadable in smartphones, which have become the dominant means of communication. The applications may be provided at a small cost (Apple) or, in some cases, no cost

(Android). These applications are useful because they provide immediate intervention (Simmons et al., 2016). Healthcare professionals have demanding jobs and lack time to engage in formal training sessions. Web-based and mobile applications are being used to mitigate stress and burnout (Pospos et al., 2018). Technology-based resources increase access to adequate healthcare interventions (Pospos et al., 2018). Mobility ensures that the application can be used anywhere and at any time to promote wellness. Moreover, these tools also allow users to save data and access it at a later time. Mobile applications can be used specifically to deliver mindfulness and relaxation techniques. The use of a Mindfulness-Based Intervention app seeks to allow nurses the flexibility of access, which is necessary since acute care nurses work for longer hours. No published literature has focused on implementing a mobile phone mindfulness application intervention among caregivers in an acute mental health VA setting. The free online VA Mindfulness Coach app provides a training program that helps users adopt mindfulness practice (Gauthier, Meyer, Grefe, & Gold, 2015). The application offers 12 audio-guided mindfulness exercises: Awareness of body, breath, and senses; Mindful eating, listening, looking, and walking; Building compassion; Loving-Kindness Meditation; Mindfulness of Emotional Discomfort and Seated Practice, all of which enable users to master mindfulness techniques (Gauthier et al., 2015). Although the VA Mindfulness Coach app was developed for veterans, it can also be used by nurses employed by the Veterans Affairs administration.

CHAPTER 3: THEORETICAL FRAMEWORK AND METHODOLOGY

Theoretical Framework

Health care theories, models, and frameworks provide a foundation for the provision of quality care. Integrating the evidence into clinical practice is foundational for advanced practice nurses, supporting high-quality nursing care (AACN, 2006). Consequently, nurse leaders are responsible for implementing effective scientific and theoretical thinking interventions to address burnout. Evaluating a theory before utilizing it is essential in evidence-based practice projects.

The Maslach Burnout Theory (MBT) guided the implementation of this project. The MBT is applicable as it defines burnout. MBT's main strength is that it defines burnout comprehensively and offers an inventory to measure burnout. The theory defines burnout as a syndrome associated with three variables: depersonalization, emotional exhaustion, and a reduced sense of personal accomplishment (Maslach & Leiter, 2016). The theory can focus on these variables, determine the prevalence of burnout among nurses in the acute mental health setting, and guide interventions to implement strategies to address specific dimensions of burnout.

Project Design

The proposed design for the project is quality improvement. The project was designed to be implemented entirely using online resources. In this project, the project director (Georgette Awo Gbeddy) used a modified MBSR approach, using the VA Mindfulness Coach Application within four weeks to reduce stress and burnout among psychiatric nurses. The focus of the project was to promote resilience among psychiatric nurses, using mindfulness skills, including self-compassion, non-judgmental, observational, and non-reactive skills. The aim is for nurses to experience significant improvements in several dimensions, including burnout, personal accomplishment, and stress.

Methods: Setting and Resources

The setting for recruiting participants for this project was on an acute inpatient psychiatric

locked unit, with a 20 behavioral health bed capacity, located in a VA Medical Center in the

Southeastern United States. The inpatient behavioral health department serves veterans with

psychiatric needs; veterans may be admitted under voluntary or involuntary status. There are currently

fourteen RNs and six LPNs. The interdisciplinary behavioral team also consists of three attending

psychiatrists, two social workers, two psychologists, two recreational therapists, two veteran peer

support personnel, and twenty mental health assistants. Training of nurses was done using handouts,

voiceover PowerPoint presentations, and online zoom meetings.

Participants

Participants included registered nurses (RNs) and licensed practical nurses (LPNs) working

full-time or part-time in the acute mental health unit. Participation was voluntary, and invitations were

sent through emails. Participants were evaluated for stress and burnout using the Maslach Burnout

Inventory. The MBI-Human Services Survey for Medical Personnel - MBI-HSS (MP) was utilized

(Maslach & Leiter, 2016). Nursing staff who exhibit low levels of work-related stress and burnout by

answering once a month or less to every day on the emotional exhaustion scale (Maslach, & Leiter,

2016) were invited to participate in the project. Interested and eligible nurses enrolled in the project;

informed consent was obtained through an online consent form via Qualtrics. An online document

informed participant of the project's goals and benefits. Nurses were notified of the level of

commitment required for successful participation in the project. Nurses were also informed that

participation was voluntary, and they can leave the program at any time.

Selection Criteria

The components of the Maslach Burnout Inventory were used as selection criteria in the

participant selection process. Nurses who scored low to high on the emotional exhaustion scale by

indicating on the questionnaire and answering once a month or less, once a week, a few times a week,

or every day, were eligible for the program on the emotional exhaustion scale. Equally, nursing staff who scored low on the professional efficacy scale were also qualified because they showed signs of burnout.

Ethical Considerations/Protection of Human Subjects

There are ethical obligations because the project involved the recruitment of human participants. Informed consent was obtained before the participants could enroll in the project. The goals and objectives were clearly stated. All data were collected using online surveys via Qualtrics software, a professional survey platform for non-interactive online projects and studies (Qualtrics, 2020), and interviews using a HIPAA compliant University of North Carolina version of Zoom. Information collected from participants was treated as confidential and protected. Participants were required to complete the forms anonymously. Nurses were provided with the opportunity to present their views via post-survey interviews using Zoom. The interviews were conducted confidentially to ensure that nurses feel secure to provide honest answers.

<u>Project Implementation</u>

The project was implemented within four weeks, using the VA Mindfulness Coach App. Before the project was implemented, the MBI-HSS (MP) survey was used to measure nurses' burnout. All nurses who reported burnout were eligible to participate in the program; only nurses employed by VAMC at this facility and who specifically work in the mental health unit were qualified. Also, participants who demonstrated the ability to operate a mobile phone and commit to adhering to the specified schedule were eligible. Participants downloaded the free online VA Mindfulness Coach application on their mobile devices. The App was accessed twice daily while at work and at home. The participants were required to engage in at least two guided mindfulness practices of their choosing 15-30 minutes per session two times daily. The project director (Georgette Awo Gbeddy) checked in on participants two times a week via phone calls, text messages, and zoom meetings.

The 14 nurses enrolled in the project were trained on using the VA mindfulness application in the first two days. Afterward, they were required to use the App for mindfulness self-care for the next four weeks individually. After the four weeks, the 14 nurses were expected to complete the online project questionnaires, including the Maslach Burnout Inventory-Human Services Survey for Medical Personnel, which consisted of; the measure of Personal Accomplishment, Depersonalization, and Emotional Exhaustion. One nurse dropped out due to reports of time constraints, leaving 13 nurses to complete the post-survey. The surveys' scores were compared with the initial survey scores to track burnout, emotional exhaustion, and stress levels. VAMC's online resource Evidence-based Synthesis Program (ESP), was utilized during the implementation phase. The ESP program identifies facilitators, program barriers, and best practices for dissemination and sustainability (US Department of Veteran Affairs, 2020b).

Mindfulness Application

The VA Mindfulness Coach App was used to deliver the mindfulness intervention to psychiatric nurses. The APP was developed as part of the Department of Veteran Affairs (VA's) Quality Enhancement Research Initiative (QUERI). The design of mindfulness-based intervention enabled psychiatric nurses based at the VA Medical Center's (VAMC's) mental health unit to become aware of their thoughts, sensations, and feelings. The project also encouraged the nurses to approach their stress states with non-judgmental curiosity (Duarte & Pinto-Gouveia, 2016).

Maslach Burnout Inventory Tool

Maslach Burnout Inventory is a standard tool for measuring occupational burnout (Bria, Spânu, Băban, & Dumitraşcu, 2014). The tool measures three components; emotional exhaustion, personal accomplishment, and depersonalization. It also helps to measure professional detachment— the 8-item Personal Accomplishment Scale measured competence.

The decreased feelings of personal accomplishment were exhibited through the nurses' feelings of incompetence (Roelen et al., 2015). Emotional exhaustion was measured through the 9-item

Emotional Exhaustion Scale. The emotional exhaustion scale shows how exhausted one is over their work (Roelen et al., 2015). Emotional exhaustion encompasses being emotionally overextended and exhausted due to work demands (Roelen et al., 2015). The 5-item Depersonalization (DP) scale was used to measure compassion towards one's patients regarding care and treatment (Roelen et al., 2015). Feelings of competence while working with people were measured using an 8-item personal accomplishment scale. The project's goal was to introduce acute mental health nurses to MBSR techniques to reduce stress and burnout. The mindfulness project improved their awareness and attention, also provided the nurses with skills of resilience to cope with the challenges of managing challenging and physically threatening patients.

CHAPTER 4: RESULTS

Job burnout due to chronic stress among VAMC Psychiatric nurses was associated with emotional and mental depletion, exhaustion, and job dissatisfaction (Duarte & Pinto-Gouveia, 2016; Dubale et al., 2019). Nurses providing care in acute mental care settings were particularly vulnerable to job burnout due to the frequency and intensity of challenging patient interactions. The purpose of this quality improvement project was to examine the impact of an online Mindfulness Coach application (App) to reduce stress and job burnout among nurses in a VA acute mental care unit. A sample of 14 VA nurses was included in this quality improvement project by completing a Maslach Burnout Inventory (MBI) pre-and post-intervention after four weeks of engagement. Chapter 4 provides data analysis by the clinical question, sample characteristics, and participants' reflections on the VA mindfulness coach app.

Sample Characteristics

Fourteen nurses participated in this quality improvement project, of which eleven were RNs, and three were LPNs. The mean participant age was 29.1 years (*SD*=4.3), and the mean number of hours worked each week was 44.5 (*SD*=3.4). Fourteen participants completed the MBI pre-intervention, and Thirteen participants completed both pre and post-intervention, given one participant dropped out three weeks into the program due to reports of time constraints. Two participants left three or less MBI survey items blank. The mean response for all completed MBI items for those participants was recorded as the response to missing items to maintain sample size. As shown in Table 1, the mean nursing experience was 2.71 years (*SD*=.83), and the mean psychiatric experience was 1.86 years (*SD*=.36).

TABLE 1: Participant Nursing Experience

	N	Minimum	Maximum	*Mean*	*Std. Deviation*
Nurse Exp.	14	2	4	2.71	.82
Psychiatric Exp.	14	1	2	1.86	.36

Data Analysis

Qualitative and descriptive data were collected through web based Qualtrics surveys and interviews. Participants' demographics were collected, including age, gender, work status, full-time or part-time, work characteristics, and project outcome measures. Graphs were generated through the surveys to examine patterns and themes related to the project goals. Feedback was elicited from participants; given feedback provides insight into the project's success, improving areas of weakness.

CQ. What is the impact of an online Mindfulness Coach application to reduce stress and job burnout among nurses in a VA acute mental care facility?

As shown in Table 2, the mean daily MBI score decreased from 93.64 (*SD*=13.94) pre-intervention to 82.57 (*SD*=9.63) post-intervention, for a mean MBI score reduction of 11.07. A paired-sample *t*-test was conducted to determine whether the mean MBI score reduction was statistically significant at $p<.05$. As shown in Table 3, the mean difference between pre-and post-intervention MBI scores indicated that the Mindfulness App significantly reduced job burnout, $t(13) = 2.284, p = .040$.

TABLE 2: Mean MBI Scores Pre-and Post-intervention

	Mean	*N*	*Std. Deviation*	*Std. Error Mean*
MBI pre-intervention score	93.64	14	13.94	3.72
MBI post-intervention score	82.57	14	9.63	2.57

TABLE 3: Paired Sample t-test Daily MBI Score Pre- and Post-intervention

	Mean Difference	Std. Deviation	Std. Error Mean	t-statistic	df	Sig. (2-tailed)
	11.07	18.13	4.84	2.284	13	.040
MBI pre-intervention score						
MBI post-intervention score						

N=30.

Participants' Reflections on the App

Participants that completed the Mindfulness App education interventions and completed both pre-and post-intervention MBI surveys were asked to respond to a series of forced-choice survey items to characterize their experience. Table 4 summarizes responses to the following item: I plan to use mindfulness in my everyday life. Twelve (85.7%) participants planned to use the Mindfulness App in their daily lives to reduce stress.

TABLE 4: Plan to use Mindfulness App in Everyday Life

Response	n	%
Neutral	2	14.3%
Agree	9	64.3%
Strongly agree	3	21.4%

Table 5 summarizes responses to the following item: Was the Mindfulness App effective to reduce stress and burnout? Twelve (85.7%) participants found the Mindfulness App a useful tool to reduce stress and job burnout.

TABLE 5: Mindfulness App Effectiveness to Reduce Stress and Job Burnout

Response	n	%
Yes	12	85.7%
No	2	14.3%

Table 6 summarizes responses to the following item: Would you recommend using the Mindfulness App to reduce stress and burnout? Nine (64.3%) participants would recommend the

Mindfulness App to reduce other nurses' stress and job burnout.

TABLE 6: Recommend Mindfulness App to Reduce Stress and Job Burnout

Response	n	%
Disagree	2	14.3%
Agree	9	64.3%
Strongly agree	3	21.4%

CHAPTER 5: DISCUSSION

The quality improvement project sought to determine whether the implementation of a mindfulness coach application could reduce stress and burnout among nurses in a VA acute mental health unit. The results indicated that the mean daily MBI score dropped from a high of 93.61 to a low of 82.57, showing an 11.07 decrease in stress and burnout among nurses. This result confirms previous studies' findings, which demonstrate the effectiveness of MBSR techniques among nurses and homogeneous and heterogeneous adults in general (Janssen et al., 2018; Khoury et al., 2015; McConville et al., 2017; Shapero et al., 2018; Solar, 2013). With mindfulness-based stress reduction, the focus is on techniques that help nurses lower their stress and anxiety levels, increase their relaxation, and eliminate pain (Solar, 2013). Moreover, some researchers contend that mindfulness-based training can help individuals change their stressful experiences fundamentally by re-perceiving (Carmody, Baer, Lykins, & Olendzki, 2009). In other words, when individuals perceive stressful experiences, it allows them to reduce stress by self-regulating and taking control of a situation as opposed to the situation controlling them (Carmody et al., 2009). Similarly, according to Carmody et al. (2009), mindfulness-based interventions also help individuals avoid stress and burnout through new techniques of cognitive and behavioral flexibility. In essence, the individual is equipped with skills that take them through moment-to-moment experiences. The reduction in stress and burnout levels observed among acute care nurses post mindfulness intervention is attributable to the mindfulness skills learned during the program.

The mindfulness app was useful because participants were able to track their progress. Primarily, participants were expected to create goals for themselves, and these goals had to be specific, measurable, achievable, relevant, and time-bound daily. Burnout among healthcare workers is argued

to be a phenomenon characterized by increased depersonalization (Baier et al., 2018; Chemali et al., 2019; Garcia et al., 2016; Profit et al., 2015). Similarly, a given workplace attribute is related to increased stress and burnout in a statistically significant way (Chemali et al., 2019). For instance, employees have been increasingly affected by work overloads; hence, they experience hardships balancing their private and professional lives (Chemali et al., 2019). Ultimately, this circumstance predisposes workers to emotional exhaustion. The mindfulness app set nurses on a path towards better mental health states by taking a mindfulness mastery assessment, which helped nurses track their progress and get personalized feedback regarding several aspects of their achievements. Among these elements was the degree to which nurses observed the world around them. Similarly, nurses learned about their ability to focus maximum attention on their activities and their awareness of personal thoughts. Burnout, which is described as a process that begins with sustained stress levels, makes individuals irritable, fatigued and detached (Profit et al., 2015). More importantly, by focusing on participants' observational, attention, and awareness skills, the App training ensured that acute care nurses' mental state remained healthy, balanced, and actively involved in the workplace.

Building expertise for dealing with stress and burnout is a critical area of mindfulness-based interventions. During the training process, nurses had to learn about mindfulness, including its benefits and daily use. Participants were also expected to cultivate mindfulness, and they had to learn how to use mindfulness to deal with difficult emotions. When experiencing an intense emotion during mindfulness training, the App insisted that participants label the thought or emotion. Primarily, individuals were expected to take stock of their thoughts or feelings, for instance, by acknowledging how feelings of sadness frustrated them. The Job-Demand Resources Model (JD-RM) explains occupational factors' predictive role in employee burnout (Bria et al., 2014; Demerouti & Bakker, 2011). More importantly, when individuals notice how their work environment affects their emotional states and label their experience, the technique of mindfulness through labeling helps them recognize their experiences and choose outside of that. In other words, individuals retain more power and control over their experiences and emotions.

Most participants also noted that they would recommend the mindfulness App as a tool for reducing stress and burnout to other nurses. Caregivers' inclination to recommend the App might be attributed to their recognition of the threat posed by nurses who are stressed and burned out to patients (Burton et al., 2017; Hall et al., 2016; Kim et al., 2018; McVicar, 2016; Welp et al., 2016). Thus, the participants had benefited from the intervention in several ways, including reducing their stress levels, increasing self-acceptance and compassion, improving their life and work balance. Subsequently, they were willing to extend these benefits to their colleagues.

Project Strength

The major strengths of this project were that it tests the outcomes of mindfulness-based intervention using an app instead of the efficacy of the tool. Moreover, the potential for strengthening the outcomes exists given the project could apply multiple intervention measures through the VA mindfulness Coach App over four weeks. Several studies have illustrated the efficacy of MBIs in helping to reduce stress and burnout among health practitioners. In Duarte and Pinto-Gouveia's (2016) study, in which the researchers explored the effectiveness of MBIs among nurses, respondents reported a significant reduction in stress, compassion fatigue, burnout, experiential avoidance, and self-compassion. Similarly, evidence from non-healthcare settings also supports the efficacy of mindfulness meditation in reducing work-related stress. Notably, based on an Australian public sector setting, researchers report that an appropriately tailored eight-week meditation program can reduce stress in mentally and psychologically draining work settings (Vella & McIver, 2019).

Evidence from research supports the efficacy of mindfulness in the reduction of stress and burnout among nurses. MBIs focus on training nurses in formal meditation exercises, which enables them to develop mindfulness skills. MBSR, for this matter, is found to be suitable, given it is structured, and it has proven to be useful in the medical and healthcare fields (Solar, 2013). Although different approaches to meditation are linked to positive health outcomes, MBSR is arguably better suited.

Limitations

The project limitations weakened the efficacy of the findings. Primarily, participants were not taken through a one-on-one training session, given the project was entirely online. Some nurses found the web-based approach of the intervention difficult to maneuver. A few participants were unfamiliar with the concepts and benefits of mindfulness. The reality is that mindfulness is a complex intervention; hence, the lack of understanding of its benefits caused some nurses' reduced motivation. Studies show that a lack of familiarity with a given practice impedes adoption in the clinical setting (Sadeghi-Bazargani, Tabrizi, & Azami-Aghdash, 2014). Also, unawareness impedes adaptability when participants are unfamiliar with a proposed treatment approach (Pagoto et al., 2007; Sadeghi-Bazargani et al., 2014).

Lastly, since nurses' workloads are extreme, some participants' ability to follow the recommended participation thresholds was hindered due to time constraints. Lack of time remains a significant limitation to the implementation of evidence-based practices (Harding, Porter, Horne-Thompson, Donley, & Taylor, 2014). The pressure to provide quality care at the bedside prevented nurses from effectively participating in the project. Nurses feel stressed because of the volume of work they regularly perform; hence any other task that needs more time competes with a myriad of responsibilities and heavy workloads.

Participants Selection

Participants who took part in the intervention were selected from a 20-bed acute inpatient psychiatric locked unit. The inpatient behavioral health department provides care to veterans diagnosed with psychiatric conditions and admitted on a voluntary and involuntary basis. The participants comprised both licensed practice nurses (LPNs) and registered nurses (RNs). These participants were recruited voluntarily, and the project director emailed all potential participants for the project. Selected nurses were trained via voiceover PowerPoint presentations and handouts. The training was conducted online via

Zoom, a free virtual conference tool. The project deployed Qualtrics and a virtual informed consent document to obtain informed consent, which participants were expected to fill. The project relied on the Maslach Burnout Inventory components to select study participants (Bria et al., 2014; Maslach & Leiter, 2016). Fourteen nurses participated in the study, eleven of whom were RNs, while the other three were LPNs. All 14 participants completed the pre-survey; however, one participant dropped out due to time constraints, leaving 13 participants to engage in the post-intervention surveys.

Intervention Design

The intervention included the use of a mindfulness coach application to reduce stress and burnout among nurses. The App comprised four interfaces for mindfulness training, building expertise, tracking progress, and practicing mindfulness. Users were expected to go through various levels of training and exercises of mindfulness training. The practice exercises comprised activities to improve awareness of the body, awareness of breath, awareness of senses, mindful eating, mindful listening, mindful walking, seated practice, and body scans. Regarding tracking progress, users were expected to set goals and track their mastery of mindfulness. The App also maintained user's practice logs.

Recommendation for Practice

Since the level of awareness about mindfulness-based interventions is low among some nurses, the study recommends that before implementing the VA mindfulness coach app, the VAMC leadership team can develop a training program for all caregivers to increase awareness. Similarly, although mindfulness shows promise regarding reducing stress and burnout among caregivers, effort must also be made to minimize potential unpleasant emotions associated with these experiences. The VAMC leadership team can also investigate whether other stress and burnt intervention programs can be combined with mindfulness-based techniques to optimize results. With a variance of 15-30 minutes of mindfulness practice per session two times daily, it was noted that participants engaged in mindfulness practices depending on their schedule. In the future, providing the respondents with a set

period to exercise mindfulness would facilitate the evaluation of the practices and yield better results.

Conclusion

The VA mindfulness coach application was used successfully to reduce stress and burnout among VAMC acute mental health nurses. The study employed a quasi-experimental design to test the effectiveness of the approach. Fourteen acute care nurses were recruited for the project; however, thirteen completed both the pre-and post-intervention surveys. It is recommended that the VAMC leadership team increase awareness of mindfulness among caregivers before implementing the mindfulness-coach App among nurses working in other critical care areas. The results of this project are essential for the Veterans Affairs (VA) Medical Center leadership team. The mindfulness project shows a complimentary, feasible avenue to nurturing a healthy and productive workforce within VAMC. As the institution steers toward a culture change that centers on whole health and employee wellbeing, a program founded on MBSR would demonstrate to be a useful tool for realizing the culture transformation.

Mindfulness improves emotional resilience to stress and burnout, which allows nurses to care more about patients. By incorporating mindfulness skills into their day, nurses will be able to treat veterans with integrity, commitment, respect, serve as advocates, provide excellent care, and uphold the VA core values of those who have served.

This project showed that mindfulness could effectively add to minimizing stress and burnout in the nurses at the VA medical center. The results also indicate the enactment of mindfulness at the hospital can lead to enhanced self-care. The project established a credible, relatively inexpensive approach to increase the nursing workforce's physical and mental wellbeing using the free online VA Mindfulness Coach Application.

APPENDIX A: PROJECT INVITATION EMAIL

Gbeddy IRB Number [20-1400]

Date: 06/25/2020

Georgette Awo Gbeddy

The University of North Carolina at Chapel Hill

Department of Nursing

Dear fellow Nurses,

I am working on a quality improvement project; using mindfulness practices to reduce stress and burnout among psychiatric nurses. I am particularly interested in introducing mindfulness as a stress-reduction technique, improve emotional resilience to stress, and improve the quality of care provided to the veteran.

It is my hope that this project will help improve knowledge about how stress reduction influences health status among nurses, enhancing overall health and wellbeing.

The project will involve participating individually by downloading the free VA mindfulness Coach application on handheld devices/phones. Participants will engage in at least two of the 12 guided mindfulness practices, approximately 15 -30 minutes per session two times a day for four weeks. Participants will take a Maslach Burnout Inventory before and after the mindfulness program; also, you will participate in a brief anonymous survey to provide feedback about the barriers and strengths of the program at the end of the four weeks.

I am looking forward to your participation and do appreciate your time and consideration. I have also included a PowerPoint presentation to provide an overview of my project.

Please follow the link to the Maslach Burnout Inventory survey and consent for participation.

Anonymous Survey Link

A reusable link that can be pasted into emails or onto a website and is unable to track identifying information of respondents.

https://unc.az1.qualtrics.com/jfe/form/SV_3UHmM06q4e2ZvwN

Thank You.

Sincerely,

Georgette Awo Gbeddy, RN

Contact:

Email: awoawo@live.unc.edu

Phone#: 347-885-1418

Georgette Awo Gbeddy is inviting you to a scheduled Zoom meeting.

Topic: Mindfulness-Based Practice Project Follow up

Time: Jun 26, 2020, 03:00 PM Eastern Time (US and Canada)

    Every week on Fri, until Jul 24, 2020, 5 occurrence(s)

    Jun 26, 2020 03:00 PM

    Jul 3, 2020, 03:00 PM

    Jul 10, 2020,, 03:00 PM

    Jul 17, 2020, 03:00 PM

    Jul 24, 2020, 03:00 PM

Please download and import the following iCalendar (.ics) files to your calendar system.

Weekly:

https://unc.zoom.us/meeting/tJYsfu2trjsvE9WJy4necdvAnkkYeFhj6vgn/ics?icsToken=98tyKuCqrzIuH9SVtRCGRowQBYr4LO_ziGJYj_pqtgaxDSVQZhXXOOlJC7dZGNKG

Join Zoom Meeting

https://unc.zoom.us/j/92194500591

Meeting ID: 921 9450 0591

One tap mobile

+13017158592,,92194500591# US (Germantown)

+13126266799,,92194500591# US (Chicago)

Dial by your location

    +1 301 715 8592 US (Germantown)

    +1 312 626 6799 US (Chicago)

    +1 929 436 2866 US (New York)

    +1 253 215 8782 US (Tacoma)

    +1 346 248 7799 US (Houston)

    +1 669 900 6833 US (San Jose)

    877 853 5257 US Toll-free

855 880 1246 US Toll-free

Meeting ID: 921 9450 0591

Find your local number: https://unc.zoom.us/u/ae8RMP7tn

Join by SIP

92194500591@zoomcrc.com

Join by H.323

162.255.37.11 (US West)

162.255.36.11 (US East)

115.114.131.7 (India Mumbai)

115.114.115.7 (India Hyderabad)

213.19.144.110 (EMEA)

103.122.166.55 (Australia)

209.9.211.110 (Hong Kong SAR)

64.211.144.160 (Brazil)

69.174.57.160 (Canada)

207.226.132.110 (Japan)

Meeting ID: 921 9450 0591

APPENDIX B: INFORMED CONSENT

Informed Consent

Welcome to the Mindfulness Project!

We are interested in understanding using Mindfulness-Based Practices to reduce stress and burnout among Psychiatric Nurses for this project. You will be presented with information relevant to mindfulness practices through a free VA online mindfulness Coach Application. Stress and burnout would be evaluated using the Maslach Burnout Inventory before and after a four-week mindfulness program. You will be asked to answer some questions about it. Your responses will be kept completely confidential.

The initial survey should take you around 5-7 minutes to complete. Your participation in this program is voluntary. You have the right to withdraw at any point during the program. The Principal Investigator of this program, Georgette Awo Gbeddy, can be reached at awoawo@live.unc.edu or Georgette.Gbeddy@va.gov

By clicking the button below, you acknowledge:

Your participation in the study is voluntary.

You work Full-Time/Part-Time at VAMC.

You are an RN/LPN.

You are aware that you may choose to terminate your participation at any time for any reason.

○ I consent, begin the study

○ I do not consent; I do not wish to participate

MBI Human Services Survey for Medical Personnel
Christina Maslach & Susan E. Jackson
The purpose of this survey is to discover how various people in the human services or the helping
professions view their job and the people with whom they work closely.

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

How often 0-6   Statements:

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

APPENDIX D: VA MINDFULNESS COACH APP

MINDFULNESS
COACH

VA | US. Department of Veterans Affairs

National Center for PTSD
Posttraumatic Stress Disorder

Mindfulness Starts Here

4 weeks Mindfulness program

To introduce mindfulness as a stress reduction technique

Improve emotional resilience to stress

Reduce nurse stress levels

Improve the quality of care provided to veterans

We want your participation!

The purpose of this project is to evaluate the feasibility of a free online VA mindfulness Coach application to reduce stress and burnout in nurses. The four-week program is designed to help reduce stress and burnout using mindfulness practices.

Participants must be a registered nurse or licensed practical nurse working in a full-time or part-time capacity at the VAMC

THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

Have Question?

Contact Project Lead:

Georgette Gbeddy RN

awoawo@live.unc.edu
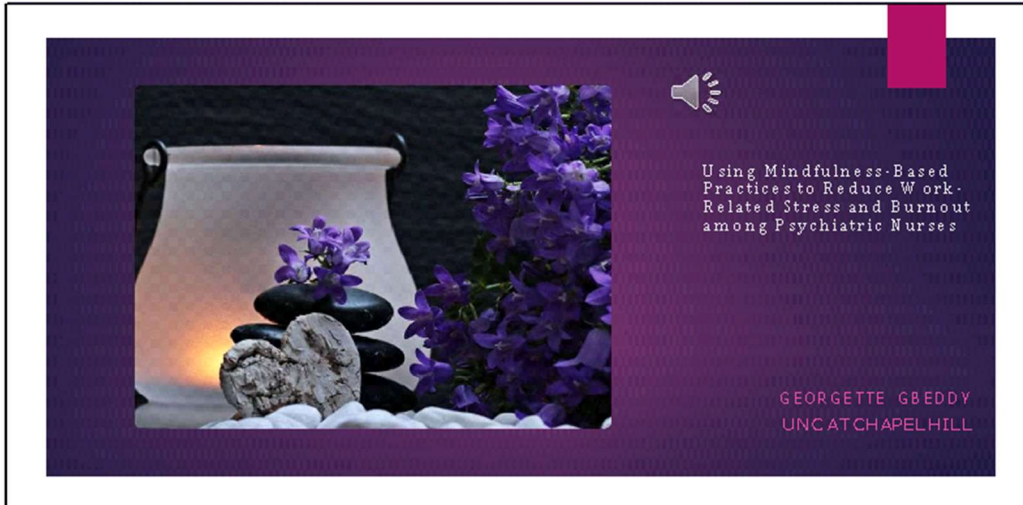
Phone: 347-885-1418

APPENDIX F: POWERPOINT PRESENTATION

Using Mindfulness-Based Practices to Reduce Work-Related Stress and Burnout among Psychiatric Nurses

GEORGETTE GBEDDY
UNC AT CHAPEL HILL

1

Background

- Psychiatric nurses provide care to high risk patients
- Intense nurse-patient interactions leads to emotional exhaustion (Khamisa, Oldenburg, Peltzer, & Ilic, 2015)
- Long-term exposure to stress undermines quality care.

2

1

Purpose and Outcomes

▸ Purpose

The purpose of this quality improvement project is to use a mindfulness-based intervention via a free online VA Mindfulness Coach application (App) to reduce work-related stress and burnout in nurses

▸ Outcomes

Primary outcomes of the project is to introduce mindfulness as a stress reduction technique, improve emotional resilience to stress, reduce nurse stress levels, improve the quality of care provided to veterans and positively impact productivity and healthcare outcomes.

Mindfulness Practice

▸ Mindfulness can reduce stress (Burton, Burgess, Dean, Koutsopoulou, & Hugh-Jones, 2017) (Guo et al., 2019)

▸ Users find novel ways of relating with inner experiences (Raab, Sogge, Parker, & Flament, 2015), (Shapero, Greenberg, Pedrelli, de Jong, & Desbordes, 2018)

▸ Mindfulness-based stress reduction (MBSR), enables nurses to accept emotions and thoughts in a non-judgmental manner (Steinberg, Klatt, & Duchemin, 2016

▸ MBSR reduces job dissatisfaction (McVicar, 2016)

Project Design

➤ The Mindfulness project is designed to be executed entirely using online resources

➤ The project will be implemented using mobile application; the VA mindfulness Coach Application will be used at least 2 guided practices 15-30 per session minutes two times a day over four weeks.

➤ The Maslach burnout inventory for health professionals survey will be completed before and after the four weeks

➤ Skills to be adopted include observational, non-reacting, mindfulness, and self-compassion

5

VA Mindfulness Coach Application

➤ VA Free Online Mindfulness Coach Application, developed for Veterans helps users adopt mindfulness practice to daily activities

➤ The application provides 12 audio-guided mindfulness exercises:
Awareness of body, breath, and senses; Mindful eating, listening, looking and walking; Building compassion; Loving-Kindness Meditation; Mindfulness of Emotional Discomfort and Seated Practice.

➤ The application can be used by nurses employed by the Administration of Veterans Affairs

VA Mindfulness Coach App Objectives

▶ Mindfulness training – The app helps individuals get started with their mindfulness practice. As they go through the training process, they develop various techniques regarding the practice of mindfulness.

▶ Building expertise - The efficacy of mindfulness is based on the effectiveness of the technique in helping caregivers to cope with a highly stressful work environment; therefore, the app assists individuals to learn about the

▶ basic principles of the approach and how they can use the strategy to face challenges related to their work environment.

▶ Tracking progress – The app also trains participants on how to develop mindfulness practice goals incorporated into daily activities.

7

Levels of Training

▶ The App has several levels of training. Individuals gain background knowledge on mindfulness.

▶ They also learn about the benefits of mindfulness

▶ Gains knowledge regarding seated practice and introduces participants to the spirit of mindfulness

Levels of Training Cont.

▶ Regarding tracking an individual's progress, the first level allows one to rate their level of mastery of mindfulness

▶ The app has integrated exercises that introduce one to the practice of seated practice.

Levels of Training Cont.

▶ Like level 1, level 2 also generates several activities that help an individual to build their expertise. However, these activities have a higher level of complexity compared to the introductory phase.

▶ On building expertise, for instance, level 2 trains one in the techniques for anchoring attention or being aware of the present.

▶ Concerning practice, in addition to seated practice, an individual is introduced to awareness of breath.

Levels of Training Cont.

- Building expertise comprises of knowledge concerning how mindfulness works, adoption of mindfulness qualities, and letting go off suffering
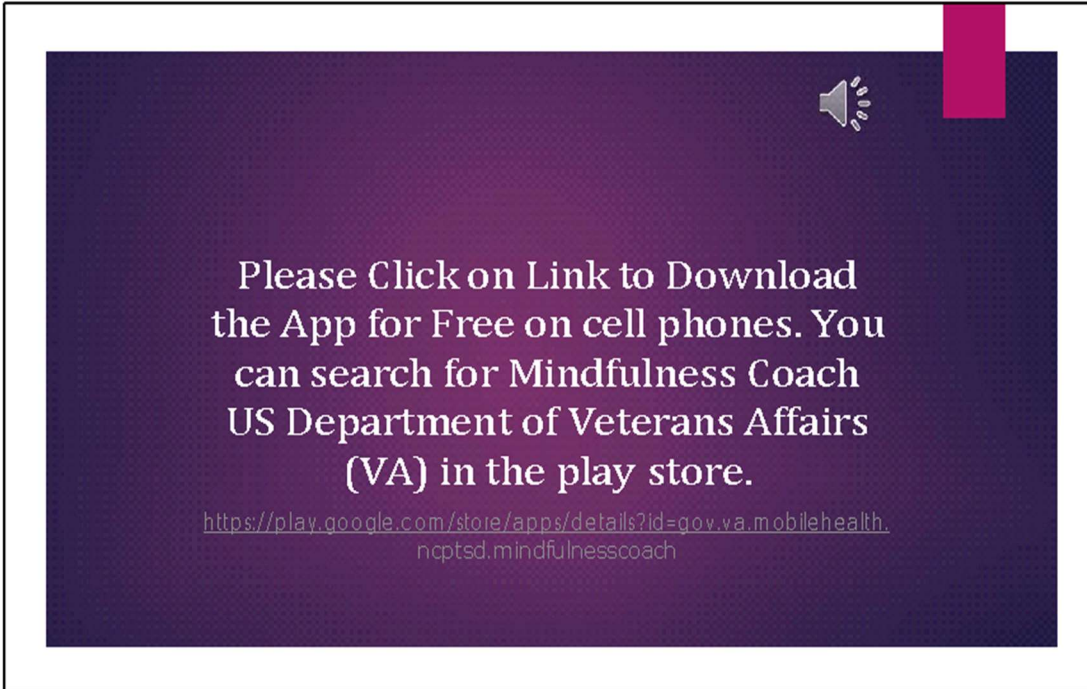- With practice, awareness of one's senses is introduced.
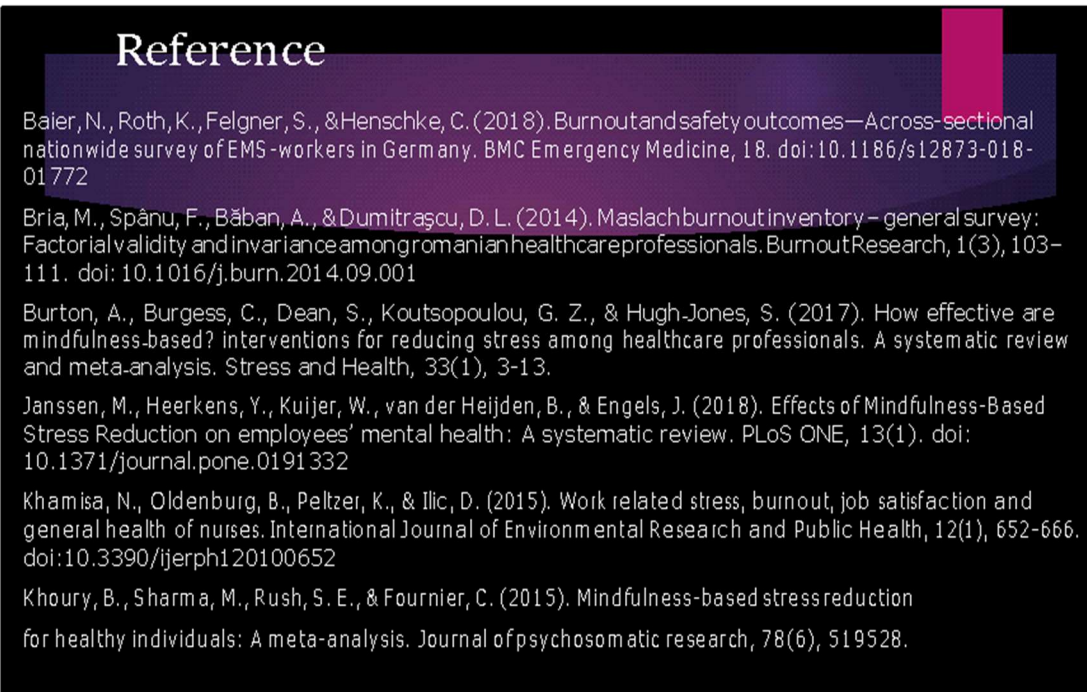

11

Conclusion

The project is to introduce mindfulness as a stress reduction technique, and for nurses to experience significant improvement in several dimensions, including burnout, personal accomplishment, and stress. Also the use of the VA mindfulness Coach App would train participants in mindfulness approaches, introducing strategies for practicing mindfulness, help participants develop mindfulness expertise and incorporate the practices into their daily routines

Please Click on Link to Download
the App for Free on cell phones. You
can search for Mindfulness Coach
US Department of Veterans Affairs
(VA) in the play store.

https://play.google.com/store/apps/details?id=gov.va.mobilehealth.
ncptsd.mindfulnesscoach

13

Reference

Baier, N., Roth, K., Felgner, S., & Henschke, C. (2018). Burnout and safety outcomes—A cross-sectional nationwide survey of EMS-workers in Germany. BMC Emergency Medicine, 18. doi:10.1186/s12873-018-01772

Bria, M., Spânu, F., Băban, A., & Dumitraşcu, D. L. (2014). Maslach burnout inventory – general survey: Factorial validity and invariance among romanian healthcare professionals. Burnout Research, 1(3), 103–111. doi: 10.1016/j.burn.2014.09.001

Burton, A., Burgess, C., Dean, S., Koutsopoulou, G. Z., & Hugh-Jones, S. (2017). How effective are mindfulness-based? interventions for reducing stress among healthcare professionals. A systematic review and meta-analysis. Stress and Health, 33(1), 3-13.

Janssen, M., Heerkens, Y., Kuijer, W., van der Heijden, B., & Engels, J. (2018). Effects of Mindfulness-Based Stress Reduction on employees' mental health: A systematic review. PLoS ONE, 13(1). doi: 10.1371/journal.pone.0191332

Khamisa, N., Oldenburg, B., Peltzer, K., & Ilic, D. (2015). Work related stress, burnout, job satisfaction and general health of nurses. International Journal of Environmental Research and Public Health, 12(1), 652-666. doi:10.3390/ijerph120100652

Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction

for healthy individuals: A meta-analysis. Journal of psychosomatic research, 78(6), 519528.

Reference

Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. World Psychiatry: Official Journal of the World Psychiatric Association (WPA), 15(2), 103–111. doi:10.1002/wps.20311

McVicar, A. (2016). Scoping the common antecedents of job stress and job satisfaction for nurses (2000-2013) using the job demands-resources model of stress. Journal of Nursing Management, 24(2), E112-136. doi:10.1111/jonm.12326

Raab, K., Sogge, K., Parker, N., & Flament, M. F. (2015). Mindfulness-based stress reduction and self-compassion among mental healthcare professionals: a pilot study. Mental Health, Religion & Culture, 18(6), 503-512.

Shapero, B. G., Greenberg, J., Pedrelli, P., de Jong, M., & Desbordes, G. (2018). Mindfulness-based interventions in psychiatry. Focus, 16(1), 32-39.

Steinberg, B. A., Klatt, M., & Duchemin, A.-M. (2016). Feasibility of a Mindfulness-Based Intervention for Surgical Intensive Care Unit

Personnel. American Journal of Critical Care: An Official Publication, American Association of Critical-Care Nurses, 26(1), 10

U.S. Department of Veteran Affairs. (2020b). QUERI - Quality Enhancement Research Initiative. Retrieved April 7, 2020, from https://www.queri.research.va.gov/about/default.cfm 18. doi:10.4037/ajcc2017444

15

APPENDIX G: PROJECT TIMELINE

Time	Activities	Mode
Week 1	-Obtained consent from participants -Pre-surveys completed -Project overview, PowerPoint with voice over - Instructions on download and use of VA Mindfulness Coach APP -Participants engage in at least 2 guided mindfulness practices 15-30 mins per session 2 times daily	- Emails/ Electronic survey link - Electronic survey link -Email - Zoom Link/Email/PowerPoint -Mobile APP
Week 2	-Participants engage in at least 2 guided mindfulness practices 15-30 mins per session 2 times daily -Investigator's check-in and discussion on dealing with obstacles and challenges to mindfulness practice.	-Mobile App -Zoom Link/3 buddy group text
Week 3	-Participants engage in at least 2 guided mindfulness practices 15-30 mins per session 2 times daily -Investigator checks in with participants - Discussion on participants change in perspectives as a result of engaging in mindfulness	-Mobile App - Zoom Link/3 buddy group text - Zoom Link/3 buddy group text
Week 4	-Participants engage in at least 2 guided mindfulness practices 15-30 mins per session 2 times daily -Post-surveys completed -Investigator's final check-in with participants -Discussion on participants' growth in responses, skillful responses, and awareness. Preliminary data findings shared with participants - Thank you email sent to participants	-Mobile App - Electronic survey link -Zoom Link -Zoom Link -Emails/ 3 buddy group text

REFERENCES

AACN. (2006). *The essentials of doctoral education for advanced nursing practice*. Retrieved from https://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf

Alharbi, J., Wilson, R., Woods, C., & Usher, K. (2016). The factors influencing burnout and job satisfaction among critical care nurses: A study of Saudi critical care nurses. *Journal of Nursing Management, 24*(6), 708–717. DOI:10.1111/jonm.12386

Baier, N., Roth, K., Felgner, S., & Henschke, C. (2018). Burnout and safety outcomes—A cross-sectional nationwide survey of EMS-workers in Germany. *BMC Emergency Medicine, 18*. doi:10.1186/s12873-018-0177-2

Bria, M., Spânu, F., Băban, A., & Dumitraşcu, D. L. (2014). Maslach burnout inventory – general survey: Factorial validity and invariance among romanian healthcare professionals. *Burnout Research, 1*(3), 103–111. doi: 10.1016/j.burn.2014.09.001

Burton, A., Burgess, C., Dean, S., Koutsopoulou, G. Z., & Hugh-Jones, S. (2017). How effective are mindfulness-based interventions for reducing stress among healthcare professionals? A systematic review and meta-analysis. *Stress and Health, 33*(1), 3-13.

Carmody, J., Baer, R. A., Lykins, E., & Olendzki, N. (2009). An empirical study of the mechanisms of mindfulness in a mindfulness-based stress reduction program. *Journal of Clinical Psychology*, *65*(6), 613-626.

Chemali, Z., Ezzeddine, F. L., Gelaye, B., Dossett, M. L., Salameh, J., Bizri, M., … Fricchione, G. (2019). Burnout among healthcare providers in the complex environment of the Middle East: A systematic review. *BMC Public Health, 19*. doi:10.1186/s12889-019-7713-1

Demerouti, E., & Bakker, A. B. (2011). The job demands-resources model: Challenges for future research. *SA Journal of Industrial Psychology*, *37*(2), 01-09.

Dewa, C. S., Loong, D., Bonato, S., & Trojanowski, L. (2017). The relationship between physician burnout and quality of healthcare in terms of safety and acceptability: A systematic review. *BMJ Open, 7*(6). doi:10.1136/bmjopen-2016-015141

Duarte, J., & Pinto-Gouveia, J. (2016). Effectiveness of a mindfulness-based intervention on oncology nurses' burnout and compassion fatigue symptoms: A non-randomized study. *International Journal of Nursing Studies, 64,* 98–107. doi: 10.1016/j.ijnurstu.2016.10.002

Dubale, B. W., Friedman, L. E., Chemali, Z., Denninger, J. W., Mehta, D. H., Alem, A., … Gelaye, B. (2019). Systematic review of burnout among healthcare providers in sub-Saharan Africa. *BMC Public Health, 19*. doi:10.1186/s12889-019-7566-7

Finley, E. P., Garcia, H. A., Ketchum, N. S., McGeary, D. D., McGeary, C. A., Stirman, S. W., & Peterson, A. L. (2015). Utilization of evidence-based psychotherapies in Veterans Affairs post-traumatic stress disorder outpatient clinics. *Psychological Services, 12*(1), 73–82. doi:10.1037/ser0000014

Fischer, J., Kumar, S., & Hatcher, S. (2007). What makes psychiatry such a stressful profession? A qualitative study. *Australasian Psychiatry*, *15*(5), 417-421.

Garcia, H. A., McGeary, C. A., Finley, E. P., McGeary, D. D., Ketchum, N. S., & Peterson, A. L. (2016). The influence of trauma and patient characteristics on provider burnout in VA post-traumatic stress disorder specialty programmes. *Psychology and Psychotherapy, 89*(1), 66–81. doi:10.1111/papt.12057

Gauthier, T., Meyer, R. M., Grefe, D., & Gold, J. I. (2015). An on-the-job mindfulness-based intervention for pediatric ICU nurses: a pilot. *Journal of Pediatric Nursing, 30*(2), 402-409.

Guo, J., Wang, H., Luo, J., Guo, Y., Xie, Y., Lei, B., … Whittemore, R. (2019). Factors influencing the effect of mindfulness-based interventions on diabetes distress: A meta-analysis. *BMJ Open Diabetes Research & Care, 7*(1). doi:10.1136/bmjdrc-2019-000757

Hall, L. H., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. B. (2016). Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. *PLoS ONE, 11*(7). doi: 10.1371/journal.pone.0159015

Harding, K. E., Porter, J., Horne-Thompson, A., Donley, E., & Taylor, N. F. (2014). Not enough time or a low priority? Barriers to evidence-based practice for allied health clinicians. *The Journal of Continuing Education in the Health Professions, 34*(4), 224–231. doi:10.1002/chp.21255

Janssen, M., Heerkens, Y., Kuijer, W., van der Heijden, B., & Engels, J. (2018). Effects of Mindfulness-Based Stress Reduction on employees' mental health: A systematic review. *PLoS ONE, 13*(1). doi: 10.1371/journal.pone.0191332

Khamisa, N., Oldenburg, B., Peltzer, K., & Ilic, D. (2015). Work-related stress, burnout, job satisfaction, and general health of nurses. *International Journal of Environmental Research and Public Health, 12*(1), 652–666. doi:10.3390/ijerph120100652

Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *Journal of Psychosomatic Research, 78*(6), 519-528.

Kim, L. Y., Rose, D. E., Soban, L. M., Stockdale, S. E., Meredith, L. S., Edwards, S. T., … Rubenstein, L. V. (2018). Primary care tasks associated with provider burnout: Findings from a veteran's health administration survey. *Journal of General Internal Medicine, 33*(1), 50–56. doi:10.1007/s11606-017-4188-6

Lin, L., He, G., Yan, J., Gu, C., & Xie, J. (2018). The effects of a modified mindfulness-based stress reduction program for nurses: A randomized controlled trial. *Workplace Health & Safety*. https://doi.org/10.1177/2165079918801633

Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry: Official Journal of the World Psychiatric Association, 15*(2), 103–111. doi:10.1002/wps.20311

McConville, J., McAleer, R., & Hahne, A. (2017). Mindfulness Training for Health Profession Students-The Effect of Mindfulness Training on Psychological Well-Being, Learning and Clinical Performance of Health Professional Students: A Systematic Review of Randomized and Non-Randomized Controlled Trials. *Explore, 13*(1), 26-45. doi: 10.1016/j.explore.2016.10.002

McVicar, A. (2016). Scoping the common antecedents of job stress and job satisfaction for nurses (2000-2013) using the job demands-resources model of stress. *Journal of Nursing Management, 24*(2), E112-136. doi:10.1111/jonm.12326

Pagoto, S. L., Spring, B., Coups, E. J., Mulvaney, S., Coutu, M. F., & Ozakinci, G. (2007). Barriers and facilitators of evidence-based practice perceived by behavioral science health professionals. *Journal of Clinical Psychology*, *63*(7), 695-705.

Pospos, S., Young, I. T., Downs, N., Iglewicz, A., Depp, C., Chen, J. Y., ... & Zisook, S. (2018). Web-based tools and mobile applications to mitigate burnout, depression, and suicidality among healthcare students and professionals: a systematic review. *Academic psychiatry, 42*(1), 109-120.

Profit, J., Sharek, P. J., Amspoker, A. B., Kowalkowski, M. A., Nisbet, C. C., Thomas, E. J., … Sexton, J. B. (2015). Burnout in the NICU setting and its relation to safety culture. *BMJ Quality & Safety, 23*(10), 806–813. doi:10.1136/bmjqs-2014-002831

Qualtrics. (2020). Provo, Utah, USA, Retrieved from Google Scholar

Raab, K. (2014). Mindfulness, self-compassion, and empathy among health care professionals: a review of the literature. *Journal of Health Care Chaplaincy, 20*(3), 95-108.

Raab, K., Sogge, K., Parker, N., & Flament, M. F. (2015). Mindfulness-based stress reduction and self-compassion among mental healthcare professionals: a pilot study. *Mental Health, Religion & Culture, 18*(6), 503-512.

Roelen, C. a. M., van Hoffen, M. F. A., Groothoff, J. W., de Bruin, J., Schaufeli, W. B., & van Rhenen, W. (2015). Can the Maslach Burnout Inventory and Utrecht Work Engagement Scale be used to screen for risk of long-term sickness absence. *International Archives of Occupational and Environmental Health, 88*(4), 467–475. doi:10.1007/s00420-014-09812

Sadeghi-Bazargani, H., Tabrizi, J. S., & Azami-Aghdash, S. (2014). Barriers to evidence-based medicine: A systematic review. *Journal of Evaluation in Clinical Practice, 20*(6), 793–802. doi:10.1111/jep.12222

Shapero, B. G., Greenberg, J., Pedrelli, P., de Jong, M., & Desbordes, G. (2018). Mindfulness-based interventions in psychiatry. *Focus, 16*(1), 32-39.

Simmons, K., E'leyna Garcia, M. K. H., & Leong, S. (2016). *Personalizing, Delivering, and Monitoring Behavioral Health Interventions: An Annotated Bibliography of the Best Available Apps.*

Singh, N. N., Lancioni, G. E., Karazsia, B. T., Chan, J., & Winton, A. S. W. (2016). Effectiveness of caregiver training in Mindfulness-Based Positive Behavior Support (mbpbs) vs. Training-As-Usual (tau): A randomized controlled trial. *Frontiers in Psychology, 7*. doi:10.3389/fpsyg.2016.01549

Solar, E. (2013). *An Alternative Approach to Behavior Interventions: Mindfulness-Based Stress Reduction: Beyond Behavior*. doi:10.1177/107429561302200208

Steinberg, B. A., Klatt, M., & Duchemin, A.-M. (2016). Feasibility of a Mindfulness-Based Intervention for Surgical Intensive Care Unit Personnel. *American Journal of Critical Care: An Official Publication, American Association of Critical-Care Nurses, 26*(1), 10.

US Department of Veteran Affairs. (2020a). *Fayetteville VA Coastal Health Care System* [General Information]. Retrieved April 7, 2020, from https://www.fayettevillenc.va.gov/about/index.asp

U.S. Department of Veteran Affairs. (2020b). *QUERI - Quality Enhancement Research Initiative*. Retrieved April 7, 2020, from https://www.queri.research.va.gov/about/default.cfm 18. doi:10.4037/ajcc2017444

Wagner, A., Hammer, A., Manser, T., Martus, P., Sturm, H., & Rieger, M. A. (2018). Do occupational, and patient safety culture in hospitals share predictors in the field of psychosocial working conditions. Findings from a cross-sectional study in German university hospitals. *International Journal of Environmental Research and Public Health, 15*(10). doi:10.3390/ijerph15102131

Welp, A., Meier, L. L., & Manser, T. (2016). The interplay between teamwork, clinicians' emotional exhaustion, and clinician-rated patient safety: A longitudinal study. *Critical Care, 20*. doi:10.1186/s13054-016-1282-9