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Using the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic Education Resources to Reduce Burnout of Intensive Care Nurses at an Urban Acute Care Hospital

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Using the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic Education Resources To Reduce Burnout Of Intensive Care Nurses At An Urban Acute Care Hospital

A DNP Project Submitted to the
Graduate Faculty
of Jacksonville State University
in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Nursing Practice

By

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Jacksonville, Alabama

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Abstract

Background: Nurse burnout is a serious problem, as documented by many studies. Burnout has been shown to lower quality of life, performance level, and organizational commitment while also increasing a nurses' desire to leave the job. Despite this knowledge, nurse burnout continues to be present, especially among nurses who work in intensive care units (ICUs). Hospitals need ICU nurses to care for critically ill patients; therefore, it is essential to educate ICU nurses on burnout and initiate measures to decrease burnout in this vulnerable population.

Purpose: The goals of this study are to explore nurse burnout in the medical intensive care unit (MICU) of an urban acute care hospital, implement educational teaching about burnout reduction using the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience during the COVID-19 Pandemic resource, and assess the effectiveness of the education after implementation.

Methods: This quality improvement project consists of a didactic program offered to all permanent day and night shift nurses in the MICU of an urban acute care hospital. A Maslach Burnout Inventory Survey was given to all participants before and after the educational intervention to assess success of the intervention on the study population.

Results: Key results included statistically significant improvement in emotional exhaustion (11.7%), depersonalization (11.7%), and personal accomplishment (8.3%) after implementing a burnout prevention educational program.

Conclusion: This project helped to stress the importance of hospitals implementing a burnout prevention program and offering this education to nursing staff to improve their mental health and improve patient care and outcomes.

Keywords: nursing burnout, intensive care nurses, education, Maslach Burnout Inventory

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I would also like to thank my loving husband, Ryan, for his support and encouragement. He has been very patient and helpful during this project period. He has motivated me to overcome many obstacles encountered during this program. I would also like to thank my children for loving me through this process and reminding me of why I fought so hard to achieve my goals. I would also like to thank the study participants in this DNP project for their dedication to improving nursing mental health.

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Using the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic Education Resources to Reduce Burnout Of Intensive Care Nurses At An Urban Acute Care Hospital

In 1974, Herbert Freudenberger defined the concept of burnout as a state of fatigue or frustration that happens after dedication to a project, job, relationship, or lifestyle in which the expected effort is not produced (Ramírez-Elvira et al., 2021). Burnout syndrome has been associated with physical ailments such as migraines, musculoskeletal pain, and gastrointestinal distress. It has also been shown to reduce well-being leading to issues including irritability, sleep disturbance, eating disorders such as binge eating or anorexia, anxiety, and depression. Finally, burnout has been documented to cause increased staffing turnover, absenteeism, and use of sick leave (Friganović et al., 2020). The healthcare industry is no exception to developing burnout among healthcare providers, especially nurses. Influences such as personal characteristics, working conditions, feeling useless, conflicts with patients, families, or other staff members, and lack of administrative support have resulted in burnout syndrome among nurses (Friganović et al., 2020). Intensive care units (ICUs) are a specific environment characterized by technologically advanced equipment, elevated levels of nursing responsibility, critically ill patients, frequent patient turnover, and stress perceived by patients, families, and staff (Friganović et al., 2020). Research published by Xie et al. (2020) demonstrates that ICU nurses suffer from more job-related stressors and burnout than nurses on general medicine wards.

Identifying interventions to reduce or prevent burnout is imperative to the survival of the nursing profession and overall patient safety, especially during this unprecedented stress associated with the COVID 19 global pandemic. Numerous research studies have assessed and investigated burnout in ICU healthcare providers, especially nurses. However, approaches to

reduce burnout in this population of healthcare providers have been relatively unexplored (Friganović et al., 2020). This study aims to assess if providing education about burnout can decrease symptoms of burnout among a group of ICU nurses. This study also aims to determine if using educational material from the CDC can reduce burnout among the same group of ICU nurses. The findings of this study could be beneficial when planning burnout intervention and prevention measures in the future.

Background

Jarden et al. (2020) published that intensive care work environments mandate that nurses respond quickly to difficult situations, often with unknowable patient outcomes. Nurses in these environments may experience prospective psychological injuries such as stress and burnout (Jarden et al., 2020). Burnout syndrome among nurses can lead to a range of personal health problems, patient-care deficits, and hospital facility problems. Burnout is impacted by many interdependent personal and professional influencers. Nurses begin to experience burnout when they have ineffective work relationships, high patient acuity, heavy workloads, and a lack of leadership support (Brown et al., 2018). In a survey conducted by Mental Health of America, Inc. (2021), more than 20% of the 9,445 nurses surveyed report leaving bedside care, or the profession entirely, by the beginning of 2021.

Burnout can manifest in a range of physical and psychological complications that can affect the everyday function of an individual. Cleary et al. (2018) published that nurses experience depression at rates twice that of the general public. Nurses also experience other adverse psychological and emotional outcomes such as anxiety, post-traumatic stress disorder, sleep disturbances, insomnia, and fear as a result of burnout syndrome (Galanis et al., 2021). Physical and psychological effects of burnout such as anxiety, PTSD, sleep disorders, insomnia,

and depression result in absenteeism, extended sick leave, and resignations (Kowalczuk et al., 2020).

Nursing burnout and, subsequently, nurses exiting the profession can significantly compromise patient care. For those that remain in the profession, nurses are overtaxed on nursing wards and in intensive care units that patient care is being impacted. For example, when there are not enough nurses, patients may stay in their urine or feces. Patients sitting in their excrement can lead to bedsores, infections, and personal humiliation. Medication errors or failure to receive medications needed to provide disease-altering therapy also put patients at risk. When nursing resources are unavailable or nurses are too burned out to concentrate on their jobs, medication errors and missed medications can occur. Finally, when nurses are burned out, patients may experience physical injuries related to falls, self-harm, or unwitnessed medical emergencies like cardiac arrest or stroke (Witczak et al.,2021)).

Nursing burnout not only affects patient care but also affects how effectively and efficiently a hospital can function. Burnout causes nurses to leave the profession, which impacts hospitals financially. Hospitals pay large sums to replace the nurses lost and train them to perform as expected. Hospitals may also be required to hire temporary or travel nurses in the interim until replacement staff can be trained. Utilizing a large volume of travel nurses to staff a hospital can be very costly to an organization (Cagliostro, 2020). Nurse burnout may also contribute to hospital supply waste (Cagliostro, 2020). Poor hospital resource management is problematic because hospital supply arrival has been suffering from supply chain interruptions since the onset of the COVID 19 pandemic (Gooch & Gonzales, 2021).

Needs Analysis

Current burnout education for intensive care unit nurses is minimal, with no established resilience or burnout prevention program. This project will take place in a 16-bed MICU. The primary population of this unit typically includes individuals with acute medical illnesses requiring intensive care; however, the population has transitioned to care for individuals diagnosed with COVID-19 who require intensive care. Providing care for COVID-positive individuals is very difficult and stressful, not to mention potentially very dangerous for the nursing staff. Due to these unprecedented conditions, the nursing staff is under even greater stress and strain. Many individuals have vacated their nursing positions during the last two years of the global pandemic in this intensive care unit. The remaining staff is exhausted and needs burnout prevention education to reduce current or impending burnout syndrome.

SWOT Analysis

The primary investigator performed a SWOT analysis to assess internal strengths and weaknesses and external opportunities and threats (Appendix A). The significant internal deficiencies identified were staff nurse time constrictions, staff nursing shortage, and staff buy-in for implementing a new program. Internal forces that can help combat weaknesses include support from the nurse manager and director of staff education and understanding of current work demands.

Also examined were external forces for opportunities and threats. The primary investigator identified two main threats during this analysis. The first threat is the changing staffing levels with the possibility of being understaffed frequently. The other threat is the lack of a commitment to a burnout reduction program by staff nurses. Opportunities that could support this project include the growing need to reduce nurse burnout to help improve staffing

and the stressed importance of other studies documenting the importance of finding methods to reduce experienced stress while at work.

Problem Statement

Nursing burnout is a current problem internationally (Woo et al., 2020). Reducing burnout can improve nursing job satisfaction and personal well-being. It can also improve patient safety, patient satisfaction, and hospital spending (Jun et al., 2021; Cagliostro, 2020). Education and interventions are needed to improve nursing burnout in all hospital environments (Friganović et al., 2020). This project addressed the absence of burnout education provided to intensive care nurses beyond what was previously offered.

The question that this author asked during this project was: 1) Among adult intensive care nurses in an urban hospital (P), does implementation of burnout prevention education using the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic Education Resources (I) as compared to no burnout prevention education (C) reduce nurse burnout symptoms (O) over six weeks (T).

Aims and Objectives

The principal aims of this project were to:

1. Identify non-specific demographics of intensive care unit nurses experiencing burnout
    a. Increase awareness of experienced burnout in the MICU
    b. Identify repeated patterns in survey data to focus on educational interventions
2. Increase knowledge of nurses regarding burnout syndrome and interventions to alleviate burnout
    a. To educate nurses regarding how to identify burnout syndrome
    b. To educate nurses regarding methods to de-stress and help burnout syndrome

Review of Literature

Methods for Literature Selection

A literature review was performed with several considerations. The first was to identify that the concept of burnout had been researched in the specific population of intensive care nurses. The second was to evaluate the effect of burnout syndrome on patient safety. The third was to identify if a successful intervention for nursing burnout education had been identified. The fourth was to assess the value of flexible learning modalities to conduct burnout education. The final was to determine the best method for evaluating the study population. The research databases utilized were CINAHL, ProQuest, and Google Scholar. Master headings and mesh headings were used per the professional recommendations of Paula Barnett-Ellis, the Information and Education Librarian at Houston Cole Library at Jacksonville State University. Findings from this review will be presented below.

The following key terms were used in CINAHL: Intensive care unit, burnout, and nurses, with 358 potential sources found through different term combinations. Results were narrowed to include only peer-reviewed academic journals, published in English within the last five years, resulting in a total of 126 findings. Articles were eliminated if research was: not specific to burnout in the intensive care unit, did not pertain to nurses, were not related to adult intensive care nurses, were not related to nursing burnout, were not relevant to the research of interest, or were duplicates.

The following Mesh key terms were applied in ProQuest: burnout, ICU, knowledge, and nurse, with 1739 potential sources found through different term combinations. Results were narrowed to include only peer-reviewed academic journals, evidence-based healthcare, and literature reviews. Publications were required to be in English, needed to have been written

within the last five years, and were directed to have full-text availability. These limitations reduced the findings to 20 articles. Articles were eliminated if the research was not specific to burnout in the intensive care unit, did not pertain to nurses, were not related to adult intensive care nurses, were not related to nursing burnout, were not relevant to the current research of interest, or were duplicates.

The following Mesh key terms were applied within Google Scholar: "Burnout," nursing burnout, adult intensive care unit, and nursing burnout education, with 4,460 potential sources found through different term combinations. Results were then narrowed using the limiter of peer-reviewed academic journals. The articles had to be published in English, free of cost and published within five years. These additional limiters reduced the results to 502 findings. Pieces were eliminated if they: were not specific to burnout in the intensive care unit, did not pertain to nurses, were not related to adult intensive care nurses, were not related to nursing burnout, were not relevant, or were duplicates.

Synthesis of the Literature

Many key findings from the literature review included results from systematic reviews, qualitative studies, cross-sectional studies, and one randomized quasi-experimental pilot study. Some of the key findings that were used to shape the methodology of this project are identified below; however, there was no specific evidence-based practice methodology identified through the literature reviews to support the purpose of this DNP project directly.

Vasconcelos and Martino (2017) published a quantitative, descriptive, and cross-sectional study to identify the prevalence and analyze the existence of predictors of burnout syndrome in intensive care nurses. The study was conducted at a Brazilian hospital specializing in high-complexity procedures and catering to all medical specialties. There were 91 participants in the

study from various intensive care units. The study utilized a sociodemographic data collection form and the Maslach Burnout Inventory (MBI) to collect study data. Findings from the study reflected that 14.3% of the study population suffered from burnout. Study findings concluded that burnout is triggered by the sum of sociodemographic factors such as age, gender, and marital status; especially work-related factors such as type of occupation, shift, and work burden; and organizational factors such as physical environment, reward, bureaucracy, and safety (Vasconcelos & Martion, 2017). Findings from this study helped the primary investigator identify causative factors associated with burnout syndrome in the intensive care nurse demographic and focus interventional education on reducing burnout syndrome.

Garcia et al. (2019) published a systematic review and meta-analysis to analyze the relationship between burnout and patient safety. The research databases utilized were PubMed and Web of Science. Garcia et al. (2019) used both databases to carry out two refining searches regarding human studies. The first used the following descriptors: patient safety AND burnout, professional safety AND organizational culture. Garcia et al. (2019) used a second search with the following descriptors: patient safety AND burnout, professional safety AND safety management. The study team took the definition of burnout from the Maslach Burnout Inventory form. The search resulted in 124 articles, and after the filtering process, 21 articles met the inclusion criteria for the study. The meta-analysis's results revealed more than 60% association between burnout and patient safety. Findings also showed an association between unfavorable outcomes, patient dissatisfaction, and increased family and patient complaints which can be associated with emotional fatigue and depersonalization of bedside providers. The study concludes that avoiding professional exhaustion, also known as burnout, is an essential strategy

for improving patient safety. Findings from this survey helped identify the importance of reducing burnout to enhance patient safety.

Friganović et al. (2020) published a cross-sectional qualitative study using the Maslach Burnout Inventory (MBI) to assess 620 ICU nurses working in various ICU settings across five hospital universities in Croatia. The MBI score for each participant was grouped into three categories: low, moderate, and high burnout. High burnout was reported by 72 (12%) of the 620 survey participants. Of this number, 28 (39%) of the 72 nurses scoring as having high burnout were chosen at random to participate in the final interview process. A 30-60 minute interview was conducted with each participant discussing four pre-determined research questions. The purpose of these interviews was to explore ICU nurses' experience of and attitudes toward burnout and to identify their sense of knowledge about this syndrome (Friganović et al., 2020). Findings from this study showed a vague understanding of burnout syndrome among ICU nurses, with much of the information coming from variable sources. Study findings also showed providing ICU nurses with continuing education could affect both burnout and job satisfaction (Friganović et al., 2020). Results from this research study helped shape this DNP project's methodology.

Magtibay et al. (2017) published a quasi-experimental 1-group baseline to post-intervention study to assess the value of blended learning in decreasing stress and burnout among nurses. A convenience sample of 50 nurses was selected for the study from one healthcare institution in the U.S. An EBP resiliency program entitled Stress Management and Resiliency Training was redesigned from a classroom format to a web-based design and used as the intervention in this study. Magtibay et al. (2017) changed the training format to allow nurses more flexibility to participate in the study. Participants had the option of blended learning

opportunities, which included a web-based form, independent reading, facilitated discussions, or a combination of all formats at their convenience. Participant response was assessed using six measurement tools given at weeks 8, 12, and 24 of the study. Findings of this study showed improvement in stress, anxiety, resilience, mindfulness, happiness, and burnout among the study population as early as eight weeks. The study also suggests that the flexibility of blended learning allows a viable option in teaching SMART with nurses (Magtibay et al., 2017). Findings from this successful study inspired the principal investigator to pursue a web-based educational format for this DNP project.

An overwhelming majority (10/12; 83%) of the published works on nurse burnout studies reviewed for this DNP project referenced the MBI as the primary or most commonly used survey for assessing burnout among healthcare providers. Xie et al. (2020) published that the Maslach Burnout Inventory is a well-known 22-item measurement tool for burnout. Kowalczuk et al. (2020) published that the Maslach Burnout Inventory has been extensively validated and has clear scoring guidelines. Ramírez-Elvira et al. (2021) published a systematic review with a meta-analysis that referenced inclusion criteria to be studied using the MBI. Jun et al. (2021) published a systematic review that stated that the instrument most often used to measure burnout within their searches was the MBI. These findings inspired the primary investigator to utilize the MBI as the pre-and post-assessment tool in this DNP project as a result of these findings.

Theoretical Model

The theoretical model utilized to guide this project is Nola Pender's Health Promotion Model with the Knowledge to Action Framework as a means of diagraming the process of moving knowledge into action (Graham et al.,2006). The health promotion model emphasizes health as a state of well-being and not just the absence of disease (Petiprin, 2020). This model

applies to this project because the primary investigator aims to educate the intensive care unit nurses on burnout and interventions to avoid or decrease burnout to improve their perception of personal well-being. Many theoretical statements have originated from this model, and some are directly applicable to this project.

The first statement is that persons engage in behaviors that anticipate deriving personally valued benefits (Petiprin, 2020). This statement means that people are willing to act when they see a personal reward. The primary investigator is educating ICU nurses about burnout to encourage utilization of interventions to prevent or alleviate burnout for physical and mental well-being. It is the desire of the primary investigator that the nurses receive this education and choose to utilize it to enhance their well-being. The second statement is that perceived competence or self-efficacy to execute a given behavior increases the likelihood of commitment to action and the actual performance of the behavior (Petiprin, 2020). Therefore, if nurses are confident in alleviating or preventing burnout, they will be more likely to utilize these methods, and burnout symptoms will decrease. This is the primary reason education and discussion of interventions are paramount to stimulating change in behaviors.

Methodology

The primary intervention of the project was to implement education and increase the utilization of burnout prevention methods in the MICU (MICU). The primary investigator provided the ICU nurses working in this unit with a semi-structured approach utilizing the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic Education Resources (CDC, 2020) All MICU nurse participants were asked to complete a Maslach Burnout Inventory Human Services Survey for Medical Providers (MBI-HSS MP). The primary investigator asked this group of nurses several

questions designed to assess emotional exhaustion, depersonalization, and personal accomplishment; the three components considered when evaluating burnout. Those nurses who chose to participate in the study were offered education material on burnout and methods to alleviate burnout while performing expected nursing duties with the permission of the unit manager. Participants continued to receive education through brief emails. The primary investigator provided participants with information on how to acquire more help with symptoms related to burnout if they chose to pursue more burnout interventions.

Setting

This research takes place in an urban acute care hospital that prides itself in providing quality healthcare with kindness and clinical excellence, personalized through compassion and faith. The facility is a 434-bed tertiary care hospital on a single campus offering diverse specialties from heart care to labor and delivery to robotic-assisted surgery. Specialty units include a level III trauma center, certified chest pain center, recognized bariatric surgery center, recognized national sleep center, recognized stroke center, cardiac catheterization lab, neonatal, surgical, neuroscience, cardiovascular, and medical intensive care. The hospital also hosts medical residents from the local university.

The nursing unit where this project took place was the MICU within the urban acute care hospital facility. The primary patient focus is a MICU with 16 beds. The patients in the MICU have various medical problems; for the last two years, most have also been positive for the COVID 19 virus.

Population

The population of interest was ICU staff nurses in the MICU from January 2022 to March 2022. All nurses who worked on the day or night shift and held permanent positions were

included in this project. The combined day shift and night shift roster included 31 staff nurses who were either full-time or per diem. The nurse manager was excluded from this project, making the sample size 30 nurses.

Inclusion/Exclusion Criteria for Nurses

Inclusion criteria:

- All dayshift registered nurses on the MICU
- All nightshift registered nurses on the MICU
- Employment status: full time, part-time, or per diem

Exclusion criteria:

- Float nurses
- Travel nurses
- Unit administrators

Recruitment

A flyer was developed and placed in the MICU staff break room two weeks prior to start of the study. The flyer provided information on the survey dates, educational sessions, and post-survey dates that would take place during the six-week project timeframe (Appendix B). The four educational sessions occurred each Monday and were provided to participants through their email of choice to ensure all participants could access the educational material and review it at convenient times. The principal investigator made regular trips to the MICU unit to ensure the educational materials had been received and check if any participants had any questions about the materials. The participants also had access to the primary investigator's email and cell phone

number to talk about the project. Light refreshments were provided to the staff during several unit visits.

Consent

Before the first project survey, the primary investigator obtained consent from all study participants (Appendix C). It was accentuated, by the primary investigator, that this was a student-run project to define burnout for the staff and provide education on interventions to decrease burnout symptoms. The principal investigator performing this project had no influence over administrative responsibilities in the MICU concerning scheduling, staffing, evaluations, or promotions. The primary investigator informed the staff that hospital management did not influence project participation. The primary investigator communicated that the primary investigator would maintain the privacy of all study participants. All identifiable data collected would also be kept private. The participants had the right to withdraw their participation at any point during the ongoing project without penalty.

Design

The quality improvement project used a convenience sampling of nurses in a MICU. The project began after IRB approval (Appendix D). The primary investigator obtained licenses from Mind Garden, Inc. to distribute the project survey (Appendix E). The project then began by distributing a Maslach Burnout Inventory Human Service Survey for Medical Providers to all interested study participants to obtain data about the level of burnout experienced in this hospital unit. All willing participants were subsequently offered educational information was sent through email in four separate sessions. The primary investigator used the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic Education Resources to compose the educational materials and sent them via email.

The teaching defined the concept of burnout and discussed various interventions that could utilize to prevent or alleviate the symptoms of burnout. The primary investigator reinforced the teaching with weekly, 30 minutes to one hour unit visits and correspondence with participants through email. After four weeks of disseminated education, a second Maslach Burnout Inventory Human Services Survey for Medical Personnel was sent to all participants via email to see if the instruction influenced the level of burnout experienced within the MICU.

The DNP student used questions one through seven of the pre and post-survey to obtain demographic information from the study participants discussed in the previous section. Questions eight through twenty-nine of the survey were the pre-designed MBI-HSS MP assessment questions. The pre and post-survey information were analyzed using the assistance of Mind Garden, Inc., a psychological assessment distribution and data management organization. Data was compiled and incorporated into two extensive group reports, one for the pre-survey and one for the post-survey. The reports were so extensive that they were not included in this manuscript; however, they are available for review by request to the primary investigator. Each of the statements required the participant to answer using a scale: zero (Never), one (A few times a year or less), two (Once a month or less), three (A few times a month), four (Once a week), five (A few times a week) or six (Every day). There were no open-ended questions in the survey.

Maslach Burnout Inventory: Human Services Survey for Medical Personnel

The Maslach Burnout Inventory (MBI) Human Services Survey (HSS), published in 1981, is a 22-item assessment applicable to human services jobs (clergy, police, therapists, social workers, and medical). Constructed by Christina Maslach and Susan Jackson, this survey has been recognized as the gold-standard method of evaluating burnout for over 35 years

(Williamson et al., 2018; Mind Garden, Inc., 2018). The MBI-HSS is the most widely used inventory version and has been translated into more than thirty languages and addresses three scales: emotional exhaustion, depersonalization, and personnel accomplishment. The MBI-HSS was the original version of the inventory when it was created in 1981; there are now five versions available, including the Maslach Burnout Inventory Human Services Survey for Medical Providers (MBI-HSS MP). The MBI-HSS (MP) results can explore the relationship between burnout and the medical culture and suggest actions for administrators and the hospital environment (Mind Garden, Inc., 2021). In 2010, ownership of the MBI and all published versions was acquired by Mind Garden, Inc., an international publisher of psychological assessments owned by founder Robert Moss Ph.D. (Mind Garden, Inc., 2018). Since then, Mind Garden, Inc. has made all versions of the MBI, with all their other psychological assessment tools, available for digital distribution and analysis utilizing a patented, customizable survey administration process. This process offers interpretive reports of assessment scores, helping customers leverage the power of their psychological assessment tools for maximum benefit.

Maslach et al. (2018) published that data from early samples that completed the original MBI-HSS determined the internal reliability of the MBI-HSS. Cronbach's coefficient alpha decided the estimated internal reliability. Cronbach's coefficient alpha yielded 0.90 for emotional exhaustion, 0.79 for depersonalization, and 0.71 for personal accomplishment indicating that the MBI has internal reliability (Anselmi et al., 2019; Maslach et al.,2018). Researchers estimated the standard error of measurement for each scale as 3.80 for emotional exhaustion, 3.16 for depersonalization, and 3.73 for personal accomplishment indicating that the sample population was a good representation of the true population (Anselmi et al., 2019; Maslach et al.,2018). Additional evidence concerning the reliability of the MBI-HSS comes

from dozens of subsequently published studies conducted by other researchers (Maslach et al., 2018). Through various samples, reliability coefficients have shown mainly adequate internal consistency for each of the three MBI-HSS scales (Maslach et al., 2018). Convergent validity for the MBI-HSS has been verified in several ways. These include correlating scale scores with the observations of others, with job conditions that were hypothesized to be associated with burnout, relating burnout to other personal attitudes and reactions, and various longer-term outcomes (Maslach et al., 2018). Definitive reliability and validity evidence are not yet available for the alternate wording used in the MBI-HSS (MP). However, studies using the MBI-HSS have found that the psychometric properties of that version are good when it is used with professionals working in medical settings. Such evidence suggests that the MBI-HSS (MP) psychometric properties are likely to be good. The MBI-HSS (MP) wording is modified to be easily understood and appropriate for people whose work primarily addresses medical concerns. It is recommended to use the MBI-HSS MP version of the MBI for assessing burnout in physicians, nurses, and other medical personnel (Maslach et al., 2018).

Risks and Benefits

There was minimal potential risk for any nurses participating in this project, with confidentiality being the primary concern. The primary investigator minimized risk by using a no-login link for participants to engage in the MBI-HSS (MP) survey. Using this link, the participants did not have to create an account on the Mind Garden, Inc. website or enter any identifying personal information to take the survey. Confidentiality and participant consent forms were scanned into a password protected database and stored off-campus on the primary investigator's password protected personal computer which has a digital back-up of the

documents stored on a password protected cloud server. Individual survey results were stored by Mind Garden, Inc. on a secure server to which only the primary investigator had access.

Benefits to participants included improving personal mental health and improving intimate knowledge of burnout which could eventually help to improve patient safety and outcomes. This knowledge could also help individuals identify burnout symptoms amongst their colleagues, friends or family member which could help to improve the quality of life of these individuals. The project's foundational goal is to help enhance nurses' knowledge of burnout and broaden the utilization of burnout prevention resources.

The primary investigator upheld the four primary ethical principles required to protect any involved participant. The primary investigator observed the principles of beneficence and non-maleficence by acting in the best interest of the participants while curtailing or avoiding harm. The principle of justice was supported by treating all participants equally and providing all nurses meeting inclusion criteria with the opportunity to participate. The focus on autonomy was respected by honoring participants' freedom to join or forego participation in the project.

Compensation

All participants were given either a $10 Chick-fil-A or Starbucks gift card for their initial participation in the project. Also, participants and other unit staff were offered light refreshments during unit visits by the primary investigator. Finally, all participants were entered into a drawing for a $100 Amazon gift card after the second survey completion.

Timeline

The DNP project proposal planning process began in June 2021. As a measure of degree completion, the primary investigator completed CITI training as required by Jacksonville State University in October 2021 (Appendix F). The JSU PERC committee approved the proposed

DNP project in November 2021. The primary investigator obtained approval through the JSU IRB committee in December 2021. The implementation site approved the project in January 2022. The DNP project began in February 2022 and was completed in March 2022. The primary investigator dedicated the timeframe from April 2022 until July 2022 to data analysis, manuscript completion, and dissemination of the project through a poster presentation, a PowerPoint presentation, and the final manuscript approval for publication (Appendix G).

Budget and Resources

The initial proposed budget for this DNP project was $1300. The most expensive aspects of the project were the purchase of the Maslach Burnout Inventory Human Services Survey (MBI-HSS) licenses and group reports from Mind Garden, Inc. Mind Garden, Inc. did provide a student discount for the primary investigator helping to offset project cost. The other project expenses included consultation with Mind Garden, Inc., purchase of the premium Grammarly subscription for manuscript editing, printing educational materials, and purchasing the individual and grand prize participation incentives. The urban acute care facility donated overhead costs related to the operation of the project implementation facility. Dr. Rishi Agarwal volunteered his time and attention to the primary investigator to assist with the DNP project. The actual cost of the DNP project was $1029 (Appendix H).

Evaluation Plan

Statistic Considerations

Descriptive statistics (frequencies, percentages) were used to describe the characteristics of the study population (Table 1) and the impact of the educational intervention on the study population (Table 2 and Table 3). These findings will be explained in greater detail in the manuscript's result section. The instrument used to survey the participants had been validated using Conbach's coefficient alpha as previously mentioned in the Maslach Burnout Inventory

Human Services Survey section of this manuscript.

Data Maintenance and Security

The nurses who participated in the project were provided with a no-login link via email to complete the pre-intervention and post-intervention surveys. The surveys were stored on the Mind Garden, Inc. server, and the primary investigator possessed a unique log-in password to access those surveys. The primary investigator and one Mind Garden, Inc. staff member were the only two with direct survey access. There was no personally identifiable information collected from nurse participants, so there was no need to de-identify the data before or after use. The IRB was closed after the primary investigator completed the project. The final manuscript was completed and submitted to the participating urban hospital for review before any agreements to publish the project results.

Results

Demographics of Survey Participants

The primary investigator offered study participation to 34 registered nurses listed as being employed during participant recruitment. Of this number, ten nurses (29.4%) agreed to participate in the study (Table 1). Sixty percent of the study participants listed their marital status as single. The average age of the participating nurse was 22 years to 30 years old (60%). The average nursing experience and intensive care unit experience was 3 to 5 years (50%). A large percentage (70%) of the participants held a bachelor's degree in nursing (Table 1).

Results of Survey Responses

The primary investigator obtained a convenience sample of ten nurses out of 34 (29.4%) with a 100 percent follow-up response rate with pre-and post-surveys. The first seven questions were used to obtain demographic information (Table 1). The remaining questions were direct

MBI-HSS (MP) questions used in the study to obtain the mean response results for each individual MBI-HSS (MP) question (Table 2) and the mean results for each of the three primary categories of burnout before and after the study intervention (Table 3).

Question eight asked the participants if they felt emotionally drained from their work. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling emotionally drained. The mean score for this question on the pre-survey was 4.4/6 for the study group. The mean score for this question on the post-survey was 3.5/6. This change showed a 15% decrease in the study population feeling emotionally drained after the educational intervention.

Question nine asked the participants if they felt used up at the end of the workday. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling used up by the end of the day. The mean score for this question on the pre-survey was 5/6 for the study group. The mean score for this question on the post-survey was 3.8/6. This change showed a 20 % decrease in the study population feeling used up by the end of the workday.

Question ten asked the participants if they felt fatigued when they got up in the morning and had to face another day on the job. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling fatigued when they got up in the morning and had to face another workday. The mean score for this question on the pre-survey was 4.7/6 for the study group. The mean score for this question on the post-survey was 3.9 /6 for the study group. This change showed a 13.3% decrease in feeling fatigued when waking and having to go to work.

Question eleven asked the participants if they could easily understand how their patients felt about things. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of quickly understanding how their patients were feeling about things. The mean score for this question on the pre-survey was 4.9/6 for the study group. The mean score for this question on the post-survey was 5.1/6 for the study group. This change showed a 3.4 % increase in the study population's understanding of how their patients were feeling about things.

Question twelve asked the participants if they felt they treated some patients as if they were impersonal objects. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they treated some patients like impersonal objects. The mean score for this question on the pre-survey was 3.1 /6 for the study group. The mean score for this question on the post-survey was 2.1 /6 for the study group. This change showed a 16.6 % decrease in feeling like they treat some patients like impersonal objects.

Question thirteen asked the participants if working with people all day was a strain. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that working with people all day was a strain. The mean score for this question on the pre-survey was 2.1/6 for the study group. The mean score for this question on the post-survey was 2.6/6 for the study group. This change showed an 8.3 % increase in feeling that working with people all day was a strain.

Question fourteen asked the participants if they dealt very effectively with their patients' problems. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they dealt very effectively with patient problems. The mean score for this question on the pre-survey was 5/6 for the study group. The mean score

for this question on the post-survey was 4.9/6 for the study group. This change showed a 1.7 % decrease in dealing very effectively with patient problems.

Question fifteen asked the participants if they felt burned out from their work. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling burned out from their work. The mean score for this question on the pre-survey was 4.5/6 for the study group. The mean score for this question on the post-survey was 3.9/6 for the study group. This change showed a 10 % decrease in the study group feeling burned out from their work.

Question sixteen asked the participants if they felt they positively influenced other people's lives through their work. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they positively influenced other people's lives through their work. The mean score for this question on the pre-survey was 4.1 /6 for the study group. The mean score for this question on the post-survey was 4.6 /6 for the study group. This change showed an 8.3 % increase in the study group feeling that they positively influenced other people's lives through their work.

Question seventeen asked the participants if they have become more callous toward people since beginning their job. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they have become more callous toward people since beginning their job. The mean score for this question on the pre-survey was 3.3/6 for the study group. The mean score for this question on the post-survey was 2.6/6 for the study group. This change showed an 11.7 % decrease in the study group feeling that they have become more callous toward people since starting their job.

Question eighteen asked the participants if they worried that their job was hardening them emotionally. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that their jobs were hardening them emotionally. The mean score for this question on the pre-survey was 4.5/6 for the study group. The mean score for this question on the post-survey was 3.2/6 for the study group. This change showed a 21.5 % decrease in the study group feeling that they were becoming hardened emotionally by their job.

Question nineteen asked the participants if they felt very energetic. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling lively. The mean score for this question on the pre-survey was 2.9 /6 for the study group. The mean score for this question on the post-survey was 3.9 /6 for the study group. This change showed a 16.7 % increase in the study group feeling energetic.

Question twenty asked the participants if they felt frustrated by their job. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling frustrated by their job. The mean score for this question on the pre-survey was 5.2/6 for the study group. The mean score for this question on the post-survey was 3.9/6 for the study group. This change showed a 21.6% decrease in the study population feeling frustrated by their job.

Question twenty-one asked the participants if they felt they were working too hard on their job. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they were working too hard on their job. The mean score for this question on the pre-survey was 4.5/6 for the study group. The mean score for

this question on the post-survey was 3.5/6 for the study group. This change showed a 16.7% decrease in the study population feeling that they were working too hard on their job.

Question twenty-two asked the participants if they didn't care what happened to some patients. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they didn't care what happened to some patients. The mean score for this question on the pre-survey was 0.6/6 for the study group. The mean score for this question on the post-survey was 0.3/6 for the study group. This change showed a 5 % decrease in the study population feeling they didn't care what happened to some patients.

Question twenty-three asked the participants if working with people directly put too much stress on them. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that directly working with people put too much stress on them. The mean score for this question on the pre-survey was 2.1/6 for the study group. The mean score for this question on the post-survey was 2.1/6 for the study group. There was no change in the feelings of the pre-survey and post-survey population regarding working with people daily, putting too much stress on them.

Question twenty-four asked the participants if they could easily create a relaxed atmosphere with their patients. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they could easily create a relaxed atmosphere with their patients. The mean score for this question on the pre-survey was 4.4/6 for the study group. The mean score for this question on the post-survey was 4.9/6 for the study group. This change showed an 8.3% increase in the study population feeling they could easily create a relaxed atmosphere with their patients.

Question twenty-five asked the participants if they felt exhilarated after working closely with their patients. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling exhilarated after working closely with their patients. The mean score for this question on the pre-survey was 4.1/6 for the study group. The mean score for this question on the post-survey was 4.3/6 for the study group. This change showed a 3.3 % increase in the study population feeling exhilarated after working closely with their patients.

Question twenty-six asked the participants if they had accomplished many worthwhile things while doing their job. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they had accomplished many worthwhile things in their job. The mean score for this question on the pre-survey was 4/6 for the study group. The mean score for this question on the post-survey was 4.5/6 for the study group. This change showed an 8.4% increase in the study population feeling they had accomplished many worthwhile things in their job.

Question twenty-seven asked the participants if they felt like they were at the end of their rope. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they were at the end of their rope. The mean score for this question on the pre-survey was 3.2/6 for the study group. The mean score for this question on the post-survey was 2.5/6 for the study group. This change showed an 11.7% decrease in the study population feeling as if they were at the end of their rope.

Question twenty-eight asked the participants if they dealt with emotional problems very calmly in their work. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that they dealt with the emotional problems

very calmly. The mean score for this question on the pre-survey was 4.6/6 for the study group. The mean score for this question on the post-survey was 5.2/6 for the study group. This change showed a 10 % increase in the study population feeling as if they dealt with emotional problems very calmly.

Question twenty-nine asked the participants if they felt patients blamed them for some of their problems. The scores ranged from zero (never) to six (every day), meaning that a low score corresponded to the lowest level of feeling that their patients blamed them for some of their problems. The mean score for this question on the pre-survey was 3.4/6 for the study group. The mean score for this question on the post-survey was 3.1/6 for the study group. This change showed a 5% decrease in the study population feeling that their patients blamed them for some of their problems.

The primary investigator composed a table of results for all study questions with the mean score for the pre-survey and post-survey studies listed with the reflected percentage of change for each question (Table 2). A table was also composed of comparison data from the general and study populations. Mind Garden, Inc. provided the general population's data. The mean score for emotional exhaustion, depersonalization, and personal accomplishment was listed for the general population and the study population with pre-survey and post-survey results (Table 3). The overall results showed a higher percentage of emotional exhaustion (66.7%) before the teaching intervention when compared to the general population (38.3%). The results showed a higher percentage of depersonalization (50%) before the teaching intervention when compared to the general population (28.3%). The results showed a lower percentage of personal accomplishment (70%) for the study population before the teaching intervention when compared to the general population (71.6%). The overall results for the post-intervention data

demonstrated an improvement in emotional exhaustion, depersonalization, and personal accomplishment when compared to the general population after the intervention; however, the results for emotional exhaustion and depersonalization remained higher than the results of the general population indicating the need for continued interventions to decrease burnout.

As part of the Mind Garden, Inc. group reports purchased by the primary investigator, the survey questions were grouped into the three core aspects of burnout syndrome: emotional exhaustion, depersonalization, and personal accomplishment. After this grouping, Mind Garden, Inc. obtained a mean score for each category. The pre-survey mean score for emotional exhaustion was 4/6 for the study group. The post-survey mean score for emotional exhaustion was 3.3/ 6 for the study group. This change showed an 11.7 % decrease in overall emotional exhaustion for the group. The pre-survey mean score for depersonalization was 3/6 for the study group. The post-survey mean score for depersonalization was 2.3/6 for the study group. This change shows an 11.7 % decrease in depersonalization for the group overall. The pre-survey mean score for personal accomplishment was 4.2/6 for the study group. The post-survey mean score for personal accomplishment was 4.7/6 for the study group. This change shows an 8.3 % increase in personal accomplishment for the group overall (Table 3).

Discussion

The DNP project addressed the lack of education regarding burnout syndrome and burnout prevention measures offered to intensive care unit (ICU) nurses at an urban acute care hospital. The main aims were to identify non-specific demographics of ICU nurses experiencing burnout and increase knowledge regarding burnout syndrome and interventions to alleviate burnout. The primary investigator used quantitative data to measure the ability of this study to meet those aims. The findings included both expected and unexpected data results.

Demographics obtained from the survey population were inconsistent with the national average of nurses working in the United States in 2020. The gender of this DNP project study population was 100% female, and the national average of female nurses was reported as 90.5% in 2020 (Smiley et al., 2021). The study participants were primarily (60%) within the age category of 21-30 years old, while the median age of RNs in 2020 was 52 years old (Smiley et al., 2021). The study population had a 70% prevalence of a baccalaureate degree in nursing, and the national average of baccalaureate degree nurses was 65.2% across all nursing age groups in 2020 (Smiley et al., 2021). These results indicate that the study population was not an ideal representation of the national population of nurses in the United States in 2020. Future scholars should not discount these results because they represent impactful information regarding the demographics of the study population of this DNP project.

The results of the data obtained from both the pre-survey and post-survey were enlightening to the primary investigator. The pre-survey results showed significant evidence of burnout among the study population before the intervention. This data indicated that the study population was suffering from high levels of emotional exhaustion and depersonalization while also experiencing lower levels of personal accomplishment when compared to the general population. The majority of the post-survey findings reflected successful intervention. There was a range from 3.3% to 21.6% improvement when comparing the pre-intervention survey results to the post-intervention survey results. Although the post-intervention scores for emotional exhaustion and depersonalization decreased, they were still elevated when compared to the general population scores. These findings indicate a need for continued interventions to reduce burnout symptoms in this population.

Three of the twenty-two questions did not have outcomes consistent with the overall positive data results. When asked if working with people all day was a strain, participants demonstrated increased perceptions after the intervention. When asked if working with people all day put too much stress on them, participants demonstrated no change in perceptions after the intervention. One particular factor leading to these unexpected findings could be related to a decrease in COVID 19 cases. This phenomenon resulted in an increase in family and visitors at the patient's bedsides exposing the ICU to more people during each shift. The decrease in COVID 19 cases also resulted in the return of managerial unit rounding which could also result in increased perception of strain on the bedside ICU nurse.

In addition to this unanticipated finding, participants demonstrated a mild decrease in perceived ability to deal very effectively with their patient's problems after the intervention. One particular factor leading to this unexpected finding could again be related to the COVID 19 pandemic. Individuals suffering from COVID 19 and requiring ICU care could have very labile disease processes that affected each patient differently. As a result of the unknown long-term effects and wide variety of known complications of COVID 19, ICU nurses caring for COVID 19 patients may feel unsure of how to deal very effectively with their patient's problems.

Implications for Clinical Practice

Burnout prevention education for nurses and other clinical staff can benefit clinical practice. Nurses are the backbone of the hospital healthcare structure. Burnout prevention education programs designed to help nurses maintain and rebuild the mental health required to perform their nursing duties are pivotal to patient care. Without nurses, there would be no hospitals for patients to come to when they were critically ill, having babies, needing elective or life-saving surgical procedures, and more. If nurses remain burned out about their nursing

duties, two things may happen. The first could be that the nurse performs their job terribly, and the nurse's life or patient's life could be in great danger. The second could be that the nurse reaches a point where they do not wish to continue coming to work and leave their position and possibly the nursing field. For these reasons, burnout prevention education has tremendous implications for clinical practice.

Implications for Healthcare Policy

There are few policies regarding burnout education and resilience training for hospital staff and an established need to improve this process (Marchalik & Shanafelt, 2020). By showcasing positive outcomes of burnout prevention programs offered within hospital departments, hospital governing boards may realize the benefit of providing such programs across entire hospital organizations and possibly hospital chains. In March 2021, the Lorna Breen Act, named after Dr. Lorna Breen, who committed suicide due to her experiences at the beginning of the COVID pandemic, was proposed to the United States Congress (Southwick, 2021). President Biden passed and signed this act into law on March 18, 2022 (Library of Congress, 2022). This act provides government grant funding for 35 million dollars to create programs to address the mental health needs of healthcare workers. It also provides 10 million dollars to the CDC to fund a public awareness campaign to urge healthcare workers to seek help for mental and behavioral health issues (Southwick, 2021). With endorsement from the United States government, hospital organizations may now be urged to implement burnout prevention programs to ensure their staff receives mental health assistance and burnout prevention interventions. For these reasons, burnout prevention education has enormous implications for healthcare policy.

Impact on Quality/Safety

Patient safety and quality are always at the forefront of healthcare decision-making and initiatives. This quality improvement project successfully implemented a burnout education program in a MICU in an urban acute care hospital. The success of this program may increase the uptake of similar programs in other hospital units within the same or different hospital organizations. Implementing a similar program hospital-wide may allow the hospital system to influence all clinical and non-clinical staff's ability to understand the concept of burnout and learn about interventions that could reduce or prevent burnout syndrome. Reducing and preventing burnout is beneficial to patient care. It has been documented that patient care suffers when staff, especially clinical staff such as nurses, are suffering from burnout syndrome (Galanis et al., 2021). Implementation of a burnout education program, as demonstrated by this study and others, can assist all staff in developing better coping mechanisms to handle stress and ensure stable mental health (Centers for Disease Control and Prevention, 2021). With sound mental health, clinical staff will be able to manage stress related to their jobs and ensure that patient care and safety are top priorities. For these reasons, burnout prevention education has immense implications for quality and patient safety measures.

Implications for Education

Multiple studies have demonstrated the importance of education when introducing new concepts to nurses (Xie et al., 2020). This study further supports these findings, as evident by the improvement in emotional exhaustion, depersonalization, and personal accomplishment post-survey scores dictated by the project study participants after receiving education on burnout syndrome. Educating nurses empowers them to perform at the highest level they must commit to ensuring patient safety. Teaching allows for evidence-based practice measures to be introduced

into clinical practice, thus ensuring that patients receive the most up-to-date care measures. Lehane et al. (2018) published that the Institute of Medicine set a goal that by 2020, 90% of clinical decisions would be supported by accurate, timely, and up-to-date clinical information that would reflect the best available evidence to achieve the best patient outcomes. To effectively accomplish this goal, health care organizations must effectively implement EBP curricula to target these competencies (Lehane et al., 2018).

Limitations

The main limitation of this study was related to the global SARS-CoV-2 2019 (COVID 19) pandemic, which had been ongoing for two years and during the project intervention period. The pandemic limited the potential settings for this project because there were limited organizations agreeable to having student learners. As a result of the setting limitations, the potential for larger sample size was affected. The organization where the DNP project was completed did not allow in-person classroom educational sessions during the implementation period of the project. As a result of this pandemic, this DNP project was performed on a small scale. The sample size of nurses, utilizing one hospital unit, short staffing ratios, and short project duration makes it difficult to determine if the changes seen during this project will be sustained or have any effect in a different hospital setting. The compensation gift cards given to the survey participants were not believed to influence the survey responses because all participants got a gift card despite what they responded as the responses were anonymous to the primary investigator. The amount of the gift card may have been a limiting factor for obtaining participants. This project is being performed concurrently with other global projects studying burnout among hospital nursing staff. More data will likely be available in the future to assist

with larger-scale project implementation and generalizability. Findings from this project can be used at the nursing administration level to help with a change in this study population.

Dissemination

The findings from this Doctor of Nursing Practice (DNP) project have been disseminated through paper, poster, and presentation at the university level and through discussion and presentation at the hospital level. The DNP project findings were presented to the hospital director of education and unit management of the medical ICU where the project was performed. The DNP Project was presented via poster or short presentation at the Jacksonville State University's (JSU's) Annual DNP Virtual Dissemination Day on July 15th, 2022. The DNP manuscript will also be placed in the JSU Library's Public Repository system.

Sustainability

This burnout education project did not end with the administration of the post-intervention surveys and drawing for the $100 Amazon gift card winner. The primary investigator reviewed the information obtained from the pre- and post-surveys with the director of clinical staff education and the clinical manager of all the intensive care units located within the urban acute care hospital. Through dissemination, it is hoped that the other hospital units will adopt similar programs to educate their nurses about burnout and burnout prevention measures. The primary investigator hopes that hospital administrators and educators will find further interest in this program or similar programs.

Future students can further the project by implementing burnout education and resilience training using larger study populations, on more nursing units, in other hospitals or hospital chains, or measuring outcomes over a more extended period. Other barriers found in this study can be addressed, such as conducting in-person educational sessions, which were not feasible

during this project because of the COVID 19 pandemic. Future scholars can accomplish further work by getting the study participant's perspectives on what they feel will improve their level of burnout, rather than using the standard suggestions proposed by the CDC and Mind Garden Incorporated. Obtaining these perspectives should be done to see if modifications need to be made in the educational material to aid in the success of the study participants having decreased burnout symptoms.

Plans for Future Scholarship

While this study adds to the existing data supporting education and protocol implementation of burnout prevention training, further research is needed to continue to stress the importance of these findings. Further studies can examine barriers such as staff buy-in and hospital administration buy-in. Research can examine which specific interventions show the most promise in helping to alleviate burnout syndrome for nurses and other clinical staff while at work. Some examples of these interventions include meditation, outdoor breaks, journaling, buddy systems, and more to help the team manage stress. Hospitals should make a conscious effort to conduct these research initiatives to assess what works best for staff.

This study was focused on ICU nursing staff; however, researchers should include more clinicians in burnout prevention education studies. This study provided staff nurses with resources they could contact on a national level; however, the hospital where the study was conducted did not have a good plan for local contact. The hospital does have a chaplain service and several behavioral health specialists on staff. Hospitals should plan to utilize these resources in developing a plan for burnout management at the point where burnout is occurring. There are also state programs in existence to assist with burnout syndrome management. Hospitals should assess these programs and establish a point of contact with each program to expedite care when

burnout syndrome symptoms may be endangering an employee's life. Discussion of interventions to alleviate burnout should also happen with physicians as they show signs of severe burnout symptoms. Hospitals need to apply focused effort toward the mental health of all clinical and non-clinical staff to ensure that a hospital is a safe place for patient care.

Conclusion

This study aimed to educate MICU nurses about burnout syndrome and interventions to alleviate burnout using the CDC's How to Cope with Stress and Build Resilience during the COVID-19 Pandemic educational resources. This study demonstrated success in lowering the number of burnout symptoms experienced by the study population. However, extensive work needs to be done within the study population's hospital environment and most other hospital environments to improve burnout symptoms. Maslach and Jackson (2018) published that the sustainability of our healthcare delivery system, the well-being and engagement of healthcare professionals, and the quality and safety of the care that patients receive are threatened by burnout. Despite this, there is still an identified need to develop more standardized hospital-based burnout prevention programs. While this study had identified limitations such as a global pandemic, small sample size, and implementation in one hospital MICU, the findings observed support findings from similar studies.

Future students and interested parties should perform additional research on different hospital units and with various clinical providers (physicians and nurses) to examine the barriers to developing a standardized burnout prevention program. Identifying and overcoming these barriers can further aid in successfully implementing future burnout prevention programs. Emailed education sessions were beneficial to the study population; therefore, these sessions and other sessions, including digital classroom or in-person sessions should be evaluated as tools to

strengthen the impact of burnout prevention education on burnout. This type of focused effort toward burnout prevention is essential to retaining, empowering, and nurturing the mental health of clinical providers and non-clinical staff in the healthcare system, which will only benefit future patient care and patient outcomes.

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Table

Table 1

Participant Demographics

Characteristics	Frequencies (Percentages) n = 10
Age of Study Participant	
22 – 30 years old	6 (60%)
31 – 40 years old	3 (30%)
41 – 50 years old	0
51 – 60 years old	1 (10%)
Over 60 years old	0
Marital Status	
Single	6 (60%)
Married	4 (40%)
Gender	
Male	0
Female	10 (100%)
ICU Experience (in years)	
0 – 2	3 (30%)
3 – 5	5 (50%)
6 – 10	0
11 – 20	1 (10%)
21 – 30	0
Over 30	1 (10%)
Nursing Experience (in years)	
0 – 2	2 (20%)
3 – 5	5 (50%)
6 – 10	0
11 – 20	2 (20%)
21 – 30	0
Over 30	1 (10%)
Current Shift	
7a – 7p	10 (100%)
7p – 7a	0
Highest level Nursing Degree	
Associates	3 (30%)
Bachelors	7 (70%)
Masters	0
Doctorate	0

Table 2

Comparison of Pre- and Post-Survey Mean Scores with Percentage Change

Question #	Question Description	Pre-Survey Mean Score n=6	Post-Survey Mean Score n=6	Percent Change
8	Emotionally drained	4.6	3.5	15 %
9	Used up	5	3.8	20 %
10	Felt fatigued	4.7	3.9	13.3 %
11	Patient's feelings	4.9	5.1	3.4 %
12	Impersonal objects	3.1	2.1	16 %
13	Working with people is a strain	2.1	2.6	- 8.3 %
14	Dealt with problems	5	4.9	- 1.7 %
15	Felt burned out	4.5	3.9	10 %
16	Positive influence on others	4.1	4.6	8.3 %
17	Becoming more callous	3.6	2.3	11.7 %
18	Emotionally hardened	4.5	3.2	21.5 %
19	Feel energetic	2.9	3.9	16.7 %
20	Feel frustrated	5.2	3.9	21.6 %
21	Working too hard	4.5	3.5	16.7 %
22	Don't care	0.6	0.3	5 %
23	People are stressful	2.1	2.1	0 %
24	Can create relaxed atmosphere	4.4	4.9	8.3 %
25	Feel exhilarated after patient care	4.1	4.3	3.3 %
26	Accomplished worthwhile things	4	4.5	8.4 %
27	End of rope	3.2	2.5	11.7 %
28	Handle emotional problems calmly	4.3	5.2	10 %
29	Patients blame for their problems	3.4	3.1	5 %

Table Legend	
	Improvement in outcome achieved
	No change
	Worsening in outcome achieved

Table 3

Comparison of Pre and Post Survey Data by Burnout Category

	General Population Score	Pre-Intervention ICU Population Score	Post-Intervention ICU Population Score	Change Percentage
Emotional Exhaustion (goal was to decrease)	2.3/6	4/6	3.3/6	-11.7 %
Depersonalization (goal was to decrease)	1.7/6	3/6	2.3/6	-11.7%
Personal Accomplishment (goal was to increase)	4.3/6	4..2/6	4.7/6	8.3 %

Appendix A

SWOT Analysis: Medical Nursing Unit at an Urban Acute Care Hospital

Internal		External	
Strengths	Weaknesses	Opportunities	Threats
-Support from the ICU manager and Director of Education in implementing a new project. -Relationships with unit nurses can endorse the support of the primary investigator. -Understanding of staff nurse work demands through primary investigator background. -Trained nurses who have a good understanding of their daily work demands.	-Staff nurse time constraints. -Nurse perceptions that intervention is not enough to reduce burnout. - Nurses resigning from their positions in the unit	-Growing need to focus on reducing nurse burnout. -Stressed importance of findings methods to reduce experienced stress while working.	-Changing levels of staffing – possibility of being understaffed. -Lack of commitment to burnout reduction program by staff nurses.

Teoli, Sanvictores, and An (2021)

Appendix B

Participant Recruitment Flyer

Participants Needed for a DNP Nursing Project

PURPOSE:
To educate nurses about burnout interventions to decrease nurse burnout using the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic Education Resources.

WHO:
All MICU Nurses who are permanent employees at the hospital.

WHAT:
Sign a consent form. Take a Maslach Burnout Inventory Survey online. Receive educational literature and teaching on burnout and burnout interventions through four email sessions. Then participants will take another Maslach Burnout Inventory to assess the intervention.

WHERE:
The MICU

WHEN:
February 14, 2022, through March 25, 2022

DATE:
Survey 1: Feb 14-19; Survey 2: March 21-25

Each participant will receive a $10 gift card to Starbucks or Chick-fil-A with the first survey and enter a drawing to receive a $100 Amazon gift card after the second survey. The drawing will be held on March 29.

If interested, please call or text.

Elizabeth Gilbert FNP, CRNP
at
205-600-7422

Appendix C

Participant Consent Form

This consent form is part of an informed consent process for a DNP student project. This form will provide information that will help the participant decide if they wish to volunteer for this project. It will also help establish what is being studied and what will be implemented during the project.

During this project, the participant should feel free to ask any questions that they deem pertinent to their participation and expect to be given answers that can be fully understood.
After all participant questions have been answered, the participant may complete the online survey and participate in the educational session if there is still a wish to participate in the project. No legal rights are being surrendered by volunteering for this DNP project.

Why is this project being performed?
This project aims to address nursing burnout within the intensive care setting. An increase in the number of nurses terminating their employment and a decrease in the number of nurses seeking employment leaves room for nurses to become vulnerable to burnout in the intensive care unit. This project planned to assess the level of burnout in the intensive care unit of an urban hospital. The intervention provided education on burnout with individual methods to alleviate burnout. Next, the author would reassess if the teaching effectively decreased the level of burnout found in the intensive care setting at the hospital. The length of this study will be an estimated six weeks, with an estimated ten nurses participating.

What is expected of the project participants?
The DNP student will administer an online survey of all willing participants. After the survey, the participants will be given a handout on nursing burnout and individual methods the participant can use to alleviate burnout while at home or work. The flyer will be based on the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic Education Resources. After six weeks, the participants were asked to complete the same online survey conducted before implementing the intervention.

What are the risks of participating in this project?
No expected harm should occur by participating in this study. This project has minimal influence from upper management; however, it is sanctioned by upper management. Participation in this study is voluntary and may be terminated if the participant wishes to opt out of the project. Upper management will be excused from participation and not provided any information regarding individual survey results or individual nurse participation in this project. Upper management will be allowed to view the group before and after survey reports to show the need for more burnout prevention measures in the future. The composition given to upper management will contain no identifying information that could be linked back to any participants. Participation in this project is at no cost to the participant.

How will the information regarding the surveys be kept confidential?

The author will make efforts to keep participants' personal information confidential, but total confidentiality cannot be guaranteed. The survey will be online, and each participant will be assigned a randomized identification code without the addition of any other personal identifiers. Surveys will remain digital and individual information will not be shared with members of upper management nor accessed using computers located on hospital property. A group report will be compiled with the pre-survey data. The author will create another document with post-survey data. These reports will be made available for hospital review after the study has concluded. These reports will only disclose percentages. There will be no opportunity to reveal individual survey data.

What will happen should a participant choose to withdraw from the study?

Participation in this study is strictly voluntary. Individuals who choose not to participate or decide to stop participating may do so without concern for a penalty.

Consent may also be withdrawn by any participant wishing to leave the study. This request must be made in writing to Elizabeth Gilbert at egilbert@stu.jsu.edu.

Who can you contact with participation questions?

If there are any questions regarding participation in this study, the principal investigator / DNP student can be contacted.

Elizabeth Gilbert MSN, CRNP, FNP-C
(205)243-3422
egilbert@stu.jsu.edu

1. Subject consent

The Doctor of Nursing Practice (DNP) project has been explained. I have read this entire form, or it has been read to me, and I believe I understand what has been discussed. My questions about this form and my participation in this DNP project have been answered. I volunteer to participate in this DNP project without any expectation of compensation.

Subject name (Print): _____

Subject signature: _____

Date: _____

2. Signature of Investigator / Individual Obtaining Consent

To the best of my ability, I have explained the DNP project's complete contents, including the information contained in this consent form. All questions of the participant have been accurately answered.

DNP Student Obtaining consent (Print): _____

DNP Student Obtaining consent Signature: _____

Date: _____

Appendix D

IRB Approval Letter

Institutional Review Board for the Protection of Human Subjects in Research
249 Angle Hall
700 Pelham Road North
Jacksonville, AL 36265-1602

February 8, 2022

Elizabeth Gilbert
Jacksonville State University
Jacksonville, AL 36265

Dear Elizabeth:

The updated title for your project have been approved. Your protocol number did not change. However, the IRB acknowledges the new title for your project: "Using the CDC's Healthcare Personnel and First Responders: How to Cope with Stress and Build Resilience During the COVID-19 Pandemic Education Resources to Reduce Burnout of Intensive Care Nurses at an Urban Acute Care Hospital" 01132022 has been granted exemption by the JSU Institutional Review Board for the Protection of Human Subjects in Research (IRB). If your research deviates from that listed in the protocol, please notify me immediately. One year from the date of this approval letter, please send me a progress report of your research project.
Best wishes for a successful research project.

Sincerely,

Lynn Garner
Associate Human Protections Administrator, Institutional Review Board

Appendix E

Mind Garden Permission

Permission for Elizabeth Gilbert to reproduce 1 copy within three years of February 7, 2022

For Publications:
We understand situations exist where you may want sample test questions for various fair use situations such as academic, scientific or commentary purposes. No items from this instrument may be included in any publication without the prior express written permission from Mind Garden, Inc. Please understand that disclosing more than we have authorized will compromise the integrity and value of the test.

For Dissertation and Thesis Appendices:
You may not include an entire instrument in your thesis or dissertation, however you may use the three sample items specified by Mind Garden. Academic committees understand the requirements of copyright and are satisfied with sample items for appendices and tables. For customers needing permission to reproduce the three sample items in a thesis or dissertation, the following page includes the permission letter and reference information needed to satisfy the requirements of an academic committee.

Online Use of Mind Garden Instruments:
Online administration and scoring of the Maslach Burnout Inventory is available from Mind Garden, (https://www.mindgarden.com/117-maslach-burnout-inventory). Mind Garden provides services to add items and demographics to the Maslach Burnout Inventory. Reports are available for the Maslach Burnout Inventory.

If your research uses an online survey platform other than the Mind Garden Transform survey system, you will need to meet Mind Garden's requirements by following the procedure described at mindgarden.com/mind-garden-forms/58-remote-online-use-application.html.

All Other Special Reproductions:
For any other special purposes requiring permissions for reproduction of this instrument, please contact info@mindgarden.com.

Appendix F

CITI Training Certificate

CITI PROGRAM

Completion Date 07-Oct-2021
Expiration Date 06-Oct-2024
Record ID 45507586

This is to certify that:

Elizabeth Gilbert

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Social and Behavioral Responsible Conduct of Research
(Curriculum Group)
Social and Behavioral Responsible Conduct of Research
(Course Learner Group)
1 - RCR
(Stage)

Under requirements set by:

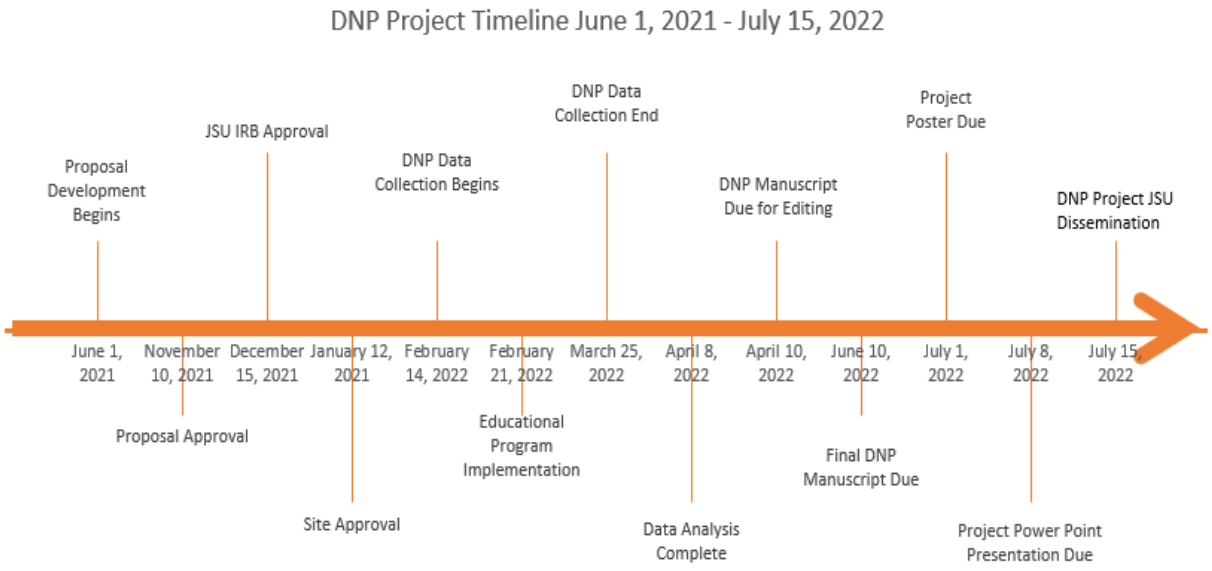
Jacksonville State University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wd7de1bb6-6221-4000-aa5e-79ff8a5f257b-45507586

Appendix G

Project Timeline



Appendix H

Budget

PROGRAM EXPENSE	**PROJECTED COST**	**ACTUAL COST**
Salaries, wages *(Admin support, practitioners, statistics, or writing consultation)* Mind garden consultation; Grammarly Premium Subscription	$ 250	$194
Start-up costs *(copies, charts, displays)* Educational materials, Laminated Flyers	$ 75	$75
Capital costs *(hardware, equipment)* Mind garden Products	$ 650	$560
Operational costs *(heat/electricity)*	$ 75	$0
Other: Grand Prize Drawing for Participation and Individual Participation Incentives	$250	$ 200
Total Project Expenses	**$ 1300**	**$ 1029**