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Preventing and Reducing Nurse Burnout in an Outpatient Military Facility

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Abstract

Practice Problem: Nurse burnout adversely affects nurses, patients, and healthcare organizations. Implementing changes to address key contributors to burnout can effectively reduce and prevent burnout.

PICOT: The PICOT question that guided this project was: In outpatient clinic nurses (P), how does implementing a bundled strategy (I) compared to not providing interventions (C) affect nurse burnout (O) within eight weeks (T)?

Evidence: Evidence from an extensive literature review showed that there is no single cause for burnout and therefore no single intervention to reduce or prevent it. The primary themes in the literature to address burnout include practicing mindfulness, building resilience, and changing the environment.

Intervention: The intervention for the change project included bringing nurses together to build their community within the practicum site, teaching nurses about mindfulness and leading nurses through mindfulness exercises, educating nurses on building resilience, and empowering nurses to change their environments.

Outcome: The interventions resulted in a statistically significant decrease in Emotional Exhaustion, one of the three domains of burnout. There were also improvements in the two other domains of burnout, Depersonalization and Personal Accomplishment. While there was not a statistically significant improvement in those domains, a decrease in Patient Safety events demonstrated the clinical significance of the change project.

Conclusion: The project outcome demonstrates that interventions to address burnout have a positive effect on the three domains of burnout, Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Burnout among the nurses improved while patient safety improved as well.

Preventing and Reducing Nurse Burnout in An Outpatient Military Facility

While nurse burnout is a significant problem that adversely impacts nurse well-being, patient care, health outcomes, and healthcare organizations, implementing evidence-based interventions can help to reduce and prevent burnout (Keyser et al., 2021). A recent study by the International Council of Nurses found that burnout rates among nurses were 40% before the COVID-19 pandemic and the rates have reached 70% as of 2021 (Bartholomew, 2021). Burnout is defined by the Mayo Clinic as a special type of work-related stress which includes physical or emotional exhaustion and involves a reduced sense of accomplishment and personal identity (Mayo Clinic, 2021). Burnout adversely affects nurses on an individual and personal level, hinders job performance, and can impact their overall quality of life (Labrague, 2021). Beyond the individual, burnout negatively impacts patients and healthcare facilities (Keyser et al., 2021). This project aimed to implement a sustainable, multi-dimensional program over an 8-week period to prevent and reduce nurse burnout at an outpatient Military Treatment Facility (MTF) in Florida. The MTF is comprised of outpatient, primary care clinics that serve active-duty military members, their dependents (spouses, children), and retired military members and their family members.

Significance of the Practice Problem

Burnout has been recognized as a syndrome resulting from chronic workplace stress that has been unsuccessfully managed (World Health Organization, 2019). Its definition has been further detailed in the 11th Revision of the International Classification of Diseases (ICD-11) as an occupational phenomenon (not a medical condition), characterized by feelings of exhaustion, increased mental distance from one's job, or negative feelings related to one's job, and reduced professional efficacy (World Health Organization, 2019). The three dimensions of burnout syndrome are emotional exhaustion, depersonalization, and diminished personal accomplishment (Velando-Soriano et al., 2020). Emotional exhaustion is the mental fatigue that results from coworker and patient interactions (Velando-Soriano et al., 2020). Depersonalization

is irritability and reduced motivation stemming from cynical attitudes and reactions that develop in response to occupational stressors (Velando-Soriano et al., 2020). Decreased personal accomplishment results when a negative self-view is adopted, spurred by a lack of satisfaction and a sense that work is under/unappreciated (Velando-Soriano et al., 2020).

Nurse burnout has been a growing concern across the globe for years and burnout numbers have only increased under the stress of the COVID-19 pandemic since early 2020 (Labrague, 2021). It negatively impacts both the psychological and physical health of those who experience it. Psychological effects include anxiety, depression, and substance abuse (Soosova, 2021). The adverse physical effects include fatigue, insomnia, and musculoskeletal disorders (Lee, 2016). Burnout also adversely affects patients, contributing to poorer quality care, increased medical errors, and patient dissatisfaction (Zhang et al., 2020). Medical errors in particular are estimated to be the third most common cause of death in the United States and a leading cause of mortality worldwide (Hutchinson et al., 2020). Burnout negatively impacts healthcare organizations in that it contributes to low organizational commitment, reduced work performance, increased absenteeism, and increased turnover (Soosova, 2021). The poorer quality of care and increased medical errors increase costs for both patients and healthcare organizations (Keyser et al., 2021).

Between 2007 and 2018, nurses who cited burnout as their reason for leaving their jobs increased from 17% to 31.5% according to the U.S. Department of Health and Human Services' Health Resources and Service Administration National Sample Survey of Registered Nurses (Shah et al., 2021). The added stress experienced by nurses can be attributed to factors like inadequate nurse staffing, increased patient acuity and census, and long hours/overtime (Labrague, 2021).

The Chief Nurse of the MTF has identified nurse burnout as a concern in the facility. He noted that the nurses are under increased stress from heavier workloads due to the COVID-19 pandemic and they are staying late returning calls to patients and completing telehealth calls,

and not taking breaks within or away from the workstation (A. Bangura, personal communication, October 7, 2021). Patient call volume increased for a wide variety of concerns during the last two years with notable spikes during times of increased COVID infection rates locally (A. Bangura, personal communication, October 7, 2021). Compounding the increase in patient call volume is the increase in absenteeism due to staff members contracting COVID or being ordered to quarantine due to COVID exposure resulting in fewer staff members handling the workload. Generally, the Chief Nurse believes increased work-related stressors with little reprieve have contributed to nursing burnout in the facility. Because nurse burnout is an individual response to unsuccessfully managed occupational stress, a variety of interventions can be applied to both ease the stress and help individual nurses better handle their response to the stressors (Keyser et al., 2021). Burnout may also be reduced by interventions that address factors in the work environment that contribute to stress, such as reducing workload through breaks, creating a culture of well-being, and shared leadership through which nurses participate in decision-making in the work center (Kelly et al., 2021).

PICOT Question

The PICOT question that serves as the foundation for this project is: In outpatient clinic nurses (P), how does implementing a bundled strategy (I) compared to not providing interventions (C) affect nurse burnout (O) within eight weeks (T)?

Population

The population for this evidence-based practice change project consists of licensed practical nurses (including medics), registered nurses, and advanced practice nurses assigned to an outpatient Military Treatment Facility in Florida. The nurses are active-duty Air Force, federal civilian, and contract nurses. The facility is an outpatient clinic Air Force Medical Group consisting of the Operational Medical Readiness Squadron, which cares for active service members, and the Health Care Operations Squadron, which cares for military dependents and retirees. The nurse population includes registered nurses, licensed practical nurses, and

advanced practice nurses that fall within all three categories of clinical nurses within the Medical Group – active-duty Air Force, federal civilian, and contract nurses.

Intervention

The bundled approach of this project included a variety of interventions combined to address the various contributors to nurse burnout. The interventions aimed to improve individual resilience, provide the “bridge from burnout to wellness”, and address organizational factors that add to the work-related stress experienced by the nurses (Zhang et al., 2020, p.12). The literature has shown that both individual and organizational factors contribute to burnout, and there is no single intervention to reduce burnout in healthcare professionals (Pijpker et al., 2020). The studies have shown that an approach that addresses both individual and environmental issues is effective at reducing burnout (Pijpker et al., 2020).

The interventions targeting the individual level included building the nurse community within the organization while encouraging social support, resilience training, and mindfulness training. This was accomplished through in-person meetings for the entirety of the nursing staff on two occasions during an eight-week period. Because social support has been shown to reduce burnout in nurses, the meetings included time for the nurses to discuss challenges and solutions within their own sections, share best practices, and offer support to one another (Velando-Soriano et al., 2020). Peers provided social support consisting of emotional, instrumental, informational, and evaluative support (Velando-Soriano et al., 2020). Emotional support refers to attention, trust, empathy, civility, and affection (Velando-Soriano et al., 2020). Instrumental support is tangible goods, services, or specific assistance (Velando-Soriano et al., 2020). Examples of instrumental support in this setting are headsets for nurses providing telehealth services, and assistance with learning how to use a new electronic medical record that launched late this year. Informational support means that facility leadership provides information in times of stress (Velando-Soriano et al., 2020). Evaluative support is information that is shared to enable a self-assessment (Velando-Soriano et al., 2020). A guided discussion

of Velando-Soriano et al.'s article (2020) and facets of social support took place with the nurses at a Nurse Executive Function meeting in the Spring of 2022. A review of how to provide social support along with a guided discussion on nurse concerns, challenges, and successes was led by the Preservation of the Force and Family (POTFF) team at the first meeting. The mission of the POTFF is to sustain Special Operations Forces readiness and performance through holistic human performance programs to strengthen the Force (United States Special Operations Command, n.d.). Because the nurses in the facility are scattered throughout many clinics and often do not work with other nurses, the meetings served as a platform upon which the nurses can seek and obtain the social support needed from each other as well as set the stage to request support from their supervisors and facility leaders.

In addition to social support, the nurses received resilience training from the facility's POTFF Team, who educated the nurses on the pillars of resilience and also outlined activities that build resilience in individuals. The Preservation of the Force & Family (POTFF) team taught the nurses about mindfulness, led them through mindful meditation sessions, and shared mindfulness and resilience resources available to the nursing staff. Mindfulness-based interventions have been shown to improve burnout (Bianchini & Copeland, 2020). Written resilience materials were provided to all nurses at both of the nurse meetings. A brief and different mindfulness meditation was practiced at each meeting.

The environmental interventions included reduced workload in the form of defined break periods (Kelly et al., 2021). All nurses are permitted to take breaks, though many have chosen to skip breaks and remain on duty without stepping away to take some time for themselves during the day. Nurses who rarely or never take 30-minute breaks during their work shift demonstrated significantly higher levels of emotional exhaustion than nurses who took 30-minute breaks sometimes or often (Kelly et al., 2021). Emotional exhaustion is considered the strongest dimension of burnout (Carthon et al., 2020). Flight commanders (leaders from various health professions who lead the duty sections) have continued encouraging nurses to take

breaks away from their workstations to allow for a physical, mental, and emotional break from their work.

Another environmental intervention included incorporating shared decision-making such that nurses have a voice in how nurses provide care in their respective clinics, which has been shown to improve nurse satisfaction (Kelly et al., 2021). The individual clinics within the facility are comprised of interprofessional teams that provide care to beneficiaries. While each clinic is led by a Flight Commander, who receives information and guidance from senior leaders, including nurses in decision-making allows them to provide valuable and relevant expertise on how decisions will impact the execution of their duties. While decisions are ultimately made by the Flight Commander, including nurses in the decision-making process results in better outcomes for nurses and patients (Carthon et al., 2020). Each clinic holds a daily huddle that includes all members of the healthcare team, during which nurses' input was solicited prior to the implementation of business or practice changes. In the nurse meetings, nurses were able to determine which challenges they have faced that they have not been able to solve, for the elevation of their concerns to direct supervisors, unit leadership, and then to the facility's Chief Nurse, as needed. Emphasis was placed on organizational interventions that address specific stressors in the work environment to reduce burnout (Ruotsalainen et al., 2015).

Comparison

The comparison to this project was the status quo, in which no interventions were provided to address nurse burnout. At the outset of this project, there were no policies or practices in place that were targeted at reducing or preventing nurse burnout. The comparison to the intervention was to continue with routine operations without addressing nurse burnout in the facility.

Outcome

The projected outcome was decreased nurse burnout evidenced by improved scores on the 22-question Maslach Burnout Inventory for healthcare professionals, measured pre and

post-intervention. Confidentiality of nurse responses was maintained as the nurses were assigned a random number which identified their responses. Individual nurse names were not written on the MBI forms. The project manager ensured confidentiality throughout the evaluation. Results of pre and post-intervention assessments remained confidential and data was aggregated for statistical analysis. The Maslach Burnout Inventory is the most commonly used and validated tool to detect clinician burnout, assesses emotional exhaustion, depersonalization, and a sense of low personal achievement (Lim et al., 2020).

Time

The project interventions took place over an 8-week period of time. The project began with a baseline assessment of nurse burnout using the Maslach Burnout Inventory (MBI). Following the baseline assessment, the nurses met for interventional meetings. The project concluded with a post-intervention assessment using the MBI. Workplace interventions were initiated after the pre-intervention MBI assessment.

Evidence-Based Practice Framework & Change Theory

The Johns Hopkins Evidence-Based Practice (JHEBP) Model for Nursing and Healthcare Professionals was the framework that guided the development and implementation of this project. JHEBP is a model for interprofessional teamwork to apply a problem-solving approach to determine best practices and implement practice improvements (Johns Hopkins Medicine, n.d.). It begins with an inquiry which leads to the development of a practice question, review of the evidence, and translation through reflection (Johns Hopkins Medicine, n.d.) This model assists the healthcare professional in identifying best practices that are implemented to result in practice improvements (Johns Hopkins Medicine, n.d.). The model uses the PET Process whereby the practice question (P) leads to a review of the evidence (E) which prompts translation (T) (Dang et al., 2022). The goal of the JHEBP Model is to support front-line healthcare professionals in recognizing the difference between best practices and common practices, so that best practices can be implemented appropriately and quickly (Johns Hopkins

Medicine, n.d.). For this project, the question of how to prevent and reduce nurse burnout led to the evidence that supported multi-faceted interventions which were implemented in the MTF to mitigate the risks associated with nurse burnout and the subsequent adverse effects on the patients and the healthcare organization.

The change theory that served as the foundation for this project is Rogers' Diffusion of Innovation Theory, which consists of five change phases. The first phase is knowledge which involves educating and communicating with the nurses regarding the change (Barrow et al., 2021). The second phase is persuasion by using change champions to generate interest and persuade peers (Barrow et al., 2021). Following persuasion is the decision phase in which the nurses of the MTF will determine whether or not they will accept the change. The phases of implementation and confirmation are followed by the final phase during which staff members recognize the benefits of the change and sustain the change (Barrow et al., 2021). This change theory was applicable because the nurses needed to buy into the change to benefit from the multi-faceted interventions aimed to prevent and reduce nurse burnout. They also needed to recognize the benefit of the interventions to sustain the practice change.

Evidence Search Strategy

The evidence search began using CINAHL using the terms "outpatient clinic nurse burnout prevention" which yielded three articles in academic journals published between 2015 and 2021. A second CINAHL search using "nurse and burnout and prevention and mitigate", limited to academic journals and written in English resulted in 37 articles published between 2016 and 2021. There were no articles published in 2022 that met the search criteria as of the search date. A third and final CINAHL search using the terms "nurse burnout prevention" restricted to 2016-2022, articles published in academic journals written in English yielded 487 articles.

A PubMed article search was completed by searching the keywords "nurse burnout prevention mitigate" covering the last five years, published in English. PubMed used the MeSH

terms “nurses” and “burnout, psychological” with the MeSH subheading “prevention and control”. A PubMed search that included the term “outpatient” yielded a single article. This result prompted a search that did not include the term “outpatient”. A final search of the Cochrane Database of Systematic Reviews was performed using the search terms “nurse burnout prevention” for articles published since 2015 which yielded 43 matches.

Articles were screened to determine if they met the inclusion criteria. Articles whose main theme addressed burnout in nurses were included. Articles that met exclusion criteria were those that focused on students and nurses specifically working in specialty areas such as the Emergency Department, critical care, dialysis, pediatrics, and neonatal intensive care or nurses outside the United States. Articles that addressed burnout only in the environment of the COVID-19 pandemic were also excluded. Burnout is not a new concern and articles that address burnout, in general, were pertinent in that this evidence-based practice change project was intended to be sustainable beyond the current pandemic conditions. Once exclusion criteria were applied, the search resulted in 23 articles. Those articles were included in the evidence tables found in Appendix A.

Evidence Search Results

The initial evidence searches in CINAHL, PubMed, and the Cochrane Database of Systematic Reviews resulted in 426 non-duplicate citations based on the literature search outlined above. Those 426 articles were then screened for applicability to the PICOT question. Exclusion criteria were then applied by reviewing the title and abstract. This resulted in a reduction to 64 articles for further review. Forty-one articles were further eliminated after a full-text screen which yielded 23 articles for inclusion. Five of these were systematic reviews. The PRISMA diagram in Appendix B summarizes these search results.

Using the Johns Hopkins Evidence-Based Practice (JHEBP) Model for Nursing and Healthcare Professionals, the articles were evaluated for evidence level and quality (Dang et al., 2022). The evidence tables for both individual studies and systematic reviews are located in

Appendix B. The JHEBP tables at the end of Appendix A were used to evaluate the articles. Of the 23 articles, four were Level II-B, two were level II-C, six were level III-B, and six were Level V studies. Two systematic reviews were Level I-C based on the quality of evidence, while one was Level II-A, one was Level II-B, and one was level IIII-A. While much study has been done regarding burnout in healthcare professionals, few studies with high-quality methods, such as randomized controlled trials with sufficient sample size have been conducted to contribute to the body of evidence supporting specific interventions to prevent and reduce burnout in nurses. The articles did note that a combination approach of implementing multiple interventions to mitigate nurse burnout demonstrated a positive impact on nurses (Pijpker et al., 2020). Most articles acknowledged the significant limitations in the studies that have been conducted and recommend that more research be done to solidify a body of evidence to mitigate nurse burnout (Suleiman-Martos et al., 2020).

Themes with Practice Recommendations

Reviewing the literature regarding nurse burnout revealed themes pertaining to interventions to reduce the risk of developing burnout and reducing burnout levels in nurses experiencing it. These intervention themes included practicing mindfulness, building resilience, and adjusting environments. Studies show that mitigating burnout risk and reducing burnout in those experiencing it is best approached by implementing a variety of interventions to address both factors that increase the risk of burnout in individual nurses and environmental factors that contribute to repeated, excessive, and prolonged stress (Pijpker et al., 2020).

Mindfulness

Mindfulness is maintaining awareness, moment by moment, of one’s thoughts, feelings, sensations, and environment and accepting these things without judgment (Greater Good Science Center, 2022). It stems from the Buddhist tradition and is a process of bringing attentiveness and awareness to the present moment’s experience with an open, curious, and accepting attitude (dos Santos et al., 2016). Practicing mindfulness has been cited in several

studies as beneficial in preventing and reducing burnout. Bianchini & Copeland noted in their quasi-experimental study that mindfulness-based interventions and self-care strategies positively affect both stress and burnout levels (2020). Best et al also found through their study that mindfulness levels increased with regular mindfulness activities which may combat compassion fatigue, which is comprised of both burnout and secondary traumatic stress (2020). Similarly, dos Santos et al determined that a mindfulness stress reduction program reduced depression, perceived stress, burnout, and anxiety in nursing professionals (2016). The mindfulness theme continued in the non-experimental study by Klein et al (2020), which demonstrated mindfulness, meditation, and relaxation techniques helped to reduce burnout in healthcare professionals. In addition to burnout reduction, mindfulness has been shown to provide other positive benefits such as an increase in self-compassion and compassion for others, feelings of connectedness to others, and positive feelings overall (dos Santos et al., 2016). Additional benefits of mindfulness include improved communication with patients and enhanced attentiveness (Magtibay & Chesak, 2017).

These articles noted that practicing mindfulness took a variety of forms. Jon Kabat-Zinn, a leader in mindfulness, created a Mindfulness-Based Stress Reduction (MSBR) program in 1979 that has been shown to improve the mental and physical health of participants (Greater Good Science Center, 2022). This MSBR and Burch's Breathworks Mindfulness were used in the dos Santos study which resulted in decreased burnout in nursing professionals (dos Santos et al., 2016). The program focused on attention and concentration training, body scan which focuses on the bodily sensations, mindfulness of breathing to focus on breath and its sensations, informal mindfulness with a focus on routine daily activities, and loving-kindness mindfulness which focuses on thoughts toward self and others (dos Santos et al., 2016). For nurses desiring to practice mindfulness on their own time and schedule, many apps are available online at no cost.

Building Resilience

Another theme in the literature involved resiliency building for individual nurses. Many nurses can be subject to the same level of stress for the same amount of time, but not all nurses will experience burnout because it is an individualized response to stress that involves internal factors for the nurse combined with prolonged stressors within the work environment (Pijpker et al., 2020). The individual's perception of those stressors and reactions to that stress, along with personal resiliency, determine whether or not the nurse will experience burnout (Pijpker et al., 2020). Building resiliency in the individual helps to protect her from burnout syndrome (Magtibay & Chesak, 2017). Resilience training results in increased employee retention, reduced turnover, and increased patient satisfaction, and supports the ability of individuals to make healthy choices (Magtibay & Chesak, 2017). Face-to-face and web-based resiliency training both demonstrated a significant increase in resilience and decreased stress, work-related burnout, and personal burnout, along with increased happiness (Magtibay & Chesak, 2017). Resilience-building activities include those that build upon an individual's four pillars of resilience – physical, social, mental, and spiritual (Defense Logistics Agency, n.d.). People who are emotionally resilient are often able to self-calm, exercise self-care, are able to self-replenish, be non-judgmental and self-supporting, and are optimistic and have hope (Gentry, 2018). Similarly, self-focused strategies such as "time out" and "quiet moments" along with activities to build the pillars of resiliency like exercise, meditation, mindfulness, and relaxation techniques can help reduce burnout, according to Klein et al (2020). The 2018 systematic review by Velando-Soriano et al. demonstrated that social support, particularly from supervisors and coworkers, helped reduce burnout in nurses (2018). Social support from others builds the social pillar of resilience for nurses.

There is a link noted by Magtibay & Chesak between psychological resilience and mindful attention in that resilience is more pronounced in individuals who are mindful (2017). While resilience plays a critical role in coping with adversity, it is imperative that interventions do

not inadvertently send the message to nurses that they are solely responsible for overcoming adversity in the work environment (Kelly et al., 2019). Kelly et al. (2019) note that the Institute for Healthcare Improvement (IHI) and the Mayo Clinic have both developed frameworks that develop leaders with the skills to promote resilience through building a healthy work environment, the third theme supporting interventions to prevent and reduce nurse burnout.

Adjusting Environments

The final theme regarding interventions to prevent and reduce burnout syndrome in nurses involved making adjustments to the work environment. The constant stressors in the work environment contribute to burnout and measures can be taken to help reduce the stressors (Carthon et al., 2020). These stressors may include changing schedules, frequently changing business rules or operations, environments that do not encourage open interprofessional communication and collaboration, short staffing, and a lack of meaningful recognition (Kim et al., 2020). Kim et al.'s (2020) article on healthy work environments in primary care outlines changes to improve work environments to reduce stressors and burnout. These improvements include fostering true collaboration among team members, maintaining frequent and respectful interactions between team members, including nurses in policy decision-making, evaluating clinical care, and leading organizational operations in which nurses' concerns and opinions are valued and considered (Kim et al., 2020) In addition, it is essential to have leaders who demonstrate authenticity in embracing a healthy work environment as well as a robust program that recognizes nurses for their unique contributions and the value each brings to the organization (Kim et al., 2020). Likewise, Kelly, Weston, and Gee promote workload reduction through breaks, creating a culture of well-being by normalizing and modeling self-care, and creating a culture of gratitude and meaningful recognition to reduce nurse burnout (2021). Shared decision-making and leadership involvement and support have been shown to have a positive impact on nurse burnout (Adams et al., 2019). Jean Watson's Theory of Human Caring was the theoretical foundation for Sollazzo and Esposito's premise that the work

environment can be redesigned to reduce stress and burnout while nurses can be educated on safety and health while being encouraged to make personal positive choices and changes (2020). Other goals to support the theme of improved work environments are to create positive work and learning environments for nurses, reduce administrative burdens, enable technology solutions, provide nurse support, and invest in nurse well-being, according to Pappas and Rushton (2020). When decisions are made that directly impact nurses and how they perform their jobs, administrators may want to consider consulting those on the front lines performing the work before changes are made (Kelly et al., 2021). The overarching goal is to determine what stressors lie within the specific environment and eliminate or alter those that can be changed to reduce unnecessary stress on nurses.

While mindfulness, building resilience, and adjusting environments were common themes in the literature regarding nurse burnout, most studies and systematic reviews noted that more high-quality research still needs to be done to further build on the body of evidence (Suleiman-Martos et al., 2020). Many of the studies were quasi-experimental in nature with relatively few randomized controlled trials, the gold standard for research. The majority of the research was determined to be Level II-III and Quality Grade B per the Johns Hopkins EBP Model for Nursing and Healthcare Professionals (Dang et al., 2022). The cause of nurse burnout is multi-factorial in nature and as such the practice change recommendation is also multifactorial and includes practicing mindfulness, building resilience through training, and altering work environments to reduce unnecessary stressors (Pijpker et al., 2020).

Setting, Stakeholders, and Systems Change

The setting of this DNP scholarly project was a small military treatment facility (MTF) comprised of several outpatient clinics, including Family Health, Women's Health, and Pediatrics. The nurses in this facility were comprised of registered nurses, licensed practical nurses, advanced practice nurses, medics (civilian-equivalent LPNs), a nurse executive whose title is Chief Nurse, and a squadron commander (upper-level manager) who is a registered

nurse. The facility's Commander (CEO-equivalent) was also a registered nurse. Many of the nurses perform clinical work, telephone triage, and face-to-face interactions with patients while others perform predominantly administrative duties in various roles such as healthcare integrator, infection preventionist, and case manager. The beneficiaries who receive care at this MTF are active-duty military service members along with their spouses and children, and retired military service members and their families. The mission of the facility is to optimize the human weapon system and its vision is to enable resilient, medically ready warriors to conduct special operations across the globe (1SOMDG, n.d.). This MTF was primed to adopt positive change under the guidance of the Secretary of the Air Force, General Charles Q. Brown Jr., and his Action Orders, published in August 2020. General Brown's orders were to Accelerate Change or Lose with a focus on four specific areas, the first of which is the Airmen of the United States Air Force (CSAF, 2020). The Chief of Staff of the Air Force emphasized the Air Force's mission to "recruit, assess, educate, train, experience, develop, and retain Airmen" (CSAF, 2020). Thus, implementing evidence-based practice change interventions to care for and retain these Airmen (active duty, civilian, and contract nurses) is directly aligned with CSAF's directive. The culture to care for the Air Force's most valuable resource, its Airmen, was demonstrated through the MTF leaders' willingness to cut through red tape to care for its members. This focus on the Airmen was displayed by the Chief Nurse through his request for a change project to prevent and reduce nurse burnout.

There were a number of project stakeholders in the MTF, including the clinical and administrative nursing staff as they were at the center of this change project. Also, the Chief Nurse was a stakeholder in that he was the executive-level nurse that identified the organizational need for interventions to reduce and prevent nurse burnout in the facility. Other stakeholders included the POTFF members who provided education, training, and resources to the nursing staff. Communication with and collaboration among all the stakeholders were imperative for the successful execution and sustainment of this project. The Chief Nurse who

identified burnout as a serious concern for the facility provided support for the project's implementation and sustainment. He confirmed his commitment to ensuring time was set aside for the nurses to participate in activities and events that supported their mindfulness and resilience as well as included nurse input for decisions that impacted their work environments, scheduling, and business operations. The Chief Nurse was the executive champion who ensured change sustainability. The MTF Commander was also a stakeholder because she was ultimately responsible for all operations and outcomes within the facility. Interprofessional collaboration between nurses, physicians, group practice managers, ancillary staff members, and all stakeholders was essential for successful project implementation.

A SWOT analysis of the project (see Appendix C) showed that strengths include project support by the facility's Chief Nurse Executive, evidence-based interventions, and low cost for implementation and sustainment for a significant potential return on investment. Internal weaknesses included a small additional time commitment away from duties for the nursing staff, the required commitment of all stakeholders, and the risk of reluctance to change. External opportunities included the opportunity for POTFF to be more engaged with MTF staff members. Also, the increased morale resulting from the project attracts more skilled and experienced medical professionals for hire. In addition, a successful project can serve as a template for non-healthcare units within the military organization. Threats to the project included the potential scheduling conflict with external resources, such as POTFF, as well as a possible increased operations tempo from surges in the COVID-19 pandemic or military operations that would have threatened nurse participation in project interventions.

This project created a meso-level systems change because it was an organizational-level change that occurred in one outpatient healthcare facility. A micro-level change involves a single individual while the involvement of the entire institution constitutes a macro-level change (Blackstone, 2012). This meso-level systems change included how nurse scheduling is managed, soliciting nurse input in business operations changes, and encouraging staff

members to take the needed time to recharge themselves so that they can continue to serve others.

Implementation Plan with Timeline and Budget

The objective of this change project was to prevent and reduce nurse burnout. The project objectives, implementation plan, timeline, resources, and budget are included here and served as the roadmap for executing this change project.

Project Objectives

Project objectives for implementation and evaluation were outlined in SMART format (specific, measurable, achievable, realistic, and timely) as follows:

1. Assess baseline nurse burnout with at least 80% of the registered nurses completing an initial assessment of burnout using the Maslach Burnout Inventory (MBI) upon project initiation.
2. Reduce nurse burnout through participation in two nurse meetings during which targeted interventions will be provided and participants encouraged to practice interventions between sessions.
3. Assess the impact of the project on nurse burnout with at least 80% of the registered nurses completing a final assessment using the Maslach Burnout Inventory (MBI) at the end of eight weeks of intervention.
4. Assess project outcomes by evaluating patient safety report rates, as compared with pre-intervention scores and rates.

The objectives were measured using the scores of the pre-intervention MBI as compared with the post-intervention MBI scores. Scores for the individual components of burnout – emotional exhaustion, depersonalization, and personal achievement, were examined for improvements in each category as the Maslach Burnout Inventory Manual (4th Ed.) recommended not totaling the scores from the three dimensions of burnout: emotional exhaustion, depersonalization, and personal accomplishment (Maslach et al., 2022). The MBI was administered during nurse all-

calls, during which all available nurses assembled to discuss nursing business within the facility. While completion of the MBI was done voluntarily per the MBI Manual (2022), the project manager encouraged maximum participation in the initial assessment, post-assessment, and nurse meetings. Participant privacy was maintained with random numerical assignments for each nurse such that individual names were not attached to hard-copy surveys. This ensured that individual responses were not linked to personally identifiable information. The project manager maintained the key, outside the facility, with which to identify individual responses. For this project, identities were masked and only scores, without identities, were shared with the practicum site.

Risks of nurse participation in this EBP project included possible emotional distress from assessing their own feelings during MBI completions and during the mindfulness sessions. Nurses who found the emotional distress to be more than they were willing to bear were permitted to stop at any time. They also participated at their discretion. Disagreements with other nurses during the nurse meetings or with supervisors regarding nursing in clinic operations could have potentially resulted in increased interpersonal conflict and strained professional relationships. Ensuring all nurses knew their voices were heard, while maintaining professional and respectful communications at all times, reduced the risk of conflict. Risks for the facility were that the nurses could have been reluctant to change until they saw the benefit of sustaining the intervention.

Also, when evaluating the project's impact on patient safety and comparing pre and post-intervention numbers, HIPAA privacy rules were upheld as the facility Patient Safety Manager provided reports that were not linked to personally identifiable information.

Implementation Plan

The change project was implemented using Rogers' Diffusion of Innovation Theory which consisted of five change phases. Educating the MTF's nurses and communicating with them about the change project was the first phase. Those that verbalized a high level of interest

were recruited to be change champions to generate interest among peers and encourage their enthusiastic participation. The change champions consisted of the Chief Nurse and registered nurses within the MTF that expressed support for the project. The goal of recruiting influencers was for the nursing staff to accept the change and enthusiastically participate in the interventions offered. The final phases of Rogers' theory were implementation with participation by the nurses and recognition of the benefit of the change by the nurses, which supported change sustainment. The theory guided the change project from the start to the completion of implementation. Collaboration of the stakeholders was imperative for successful project implementation. Smooth project execution was possible due to regular meetings with the stakeholders to discuss the timeline, roles, and responsibilities.

Project Timeline

The entirety of this project was planned, implemented, and evaluated over the course of one calendar year, divided into three 15-week terms as shown in Appendix D. The planning phase of the project occurred during NUR 7801 and all aspects of project proposal creation occurred during this first phase. Acceptance of the proposal by the University of Saint Augustine's Evidence-Based Practice Project Review Council (EPRC) and the practicum site occurred in the first weeks of the second phase, in NUR 7802. Following acceptance of the proposal, the project was implemented by the project manager who engaged regularly with stakeholders and ensured the project remained on schedule and that nurse participation was maximized. The project implementation lasted eight weeks from initial data collection through interventions and final data collection during weeks 6 through 15. This included two hour-long sessions, during which nurses met in the Executive Conference Room mid-day to build a sense of community and to support one another as these nurses often work in areas on interprofessional teams, but remote from other nurses. The nurses were able to bring their lunch though lunch was provided, and the nurses learned about the burnout reduction interventions provided by highly trained experts, the POTFF team. These experts provided mindfulness and

resilience training. The schedule for these sessions was sent out to all the nurses in the MTF in advance of the scheduled dates and times via email notification. During the final phase in NUR 7803, the project and its sustainment were evaluated. The Gantt chart in Appendix D outlines the timeline for all the key steps in the project.

Project Resources and Budget

The resources needed to execute this project were mostly contained within the parent organization of the Military Treatment Facility. The Preservation of the Force & Family team members were embedded within the facility to support all employees within the site. They were and remain available resources for the nurses of the Military Treatment Facility at no cost to the clinics, the nurses, or this project.

To encourage maximum nurse participation, the nurse calls were held during lunchtime, and lunch was provided by the project manager. The cost for lunch for 40 nurses on 2 occasions totaled $400.

The Maslach Burnout Inventory for Healthcare Providers required permission for use through Mind Garden, Inc. Purchase of the MBI Manual included permission to reproduce one copy within three years of June 5, 2022. The MBI Manual was purchased at a cost of $50 (See Figure 1). Once the project was accepted by the University's EPRC and the practicum site, permission to administer the MBI was purchased. Based on the number of nurses in the MTF (approximately 40), running the MBI twice (pre and post-intervention) cost $200 at $2.50 each (See Figure 1). These costs represented the sole outright financial costs of the project, totaling $650 (See Figure 1). Permission to use the MBI for Healthcare Providers was granted by Mind Garden, Inc. through purchase.

Results

The change project evaluated burnout levels, as measured using the Maslach Burnout Inventory, for nurses pre and post-intervention. Participants for this project were identified during the Nurse Executive Function meeting, held quarterly by the Chief Nurse and attended

by the entirety of the nursing staff. The project included all registered nurses, licensed practical nurses (including medics), advanced practice nurses, and nurse executives, totaling approximately 40 participants, of which 26 completed both pre and post-intervention evaluations (n=26).

Prior to project execution, the project manager ensured the project proposal was accepted by the University of Saint Augustine's Evidence-Based Practice Project Review Council (EPRC) and the practicum site. The purpose of the project was the implementation and evaluation of an evidence-based practice change with sustainability. The project manager received written acceptance from both the University's EPRC and the facility for project execution.

The project manager assured participants that their information was to be kept strictly confidential and that identifying information was not included in score aggregates. Only the project manager had access to individual MBI scores along with the individual participants receiving their own scores after project completion. The project manager maintained the integrity of the data using a password-protected computer and ensured no personally identifiable information was included in reports. The project manager ensured that nurse privacy was maintained, that only participants received their own individual scores, and that the identities of nurses were not shared with the practicum site. The project manager ensured interventions were implemented on schedule as outlined above.

Obtaining the Data

Baseline data was obtained by the project manager via the administration of the MBI during a Nurse Call meeting. The MBI has been used for several decades to assess burnout and has been shown to be a reliable and valid tool to measure burnout (Cordoza et al., 2018). The data obtained was entered in the MBI collection tool (see Appendix E) for the sole purpose of collecting all data in one location for later transcription onto an Excel spreadsheet and upload for statistical analysis into Intellectus Statistics. The MBI was again administered post-

intervention and the data collected was placed on the MBI collection tool. MBI scores were measured in each domain of burnout, namely Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Each domain was measured separately per the MBI manual. The project manager administered the MBI assessments both pre and post-intervention, collected the surveys, and maintained possession of the surveys, which contained no personally identifiable information (e.g. name). Scores were tallied per the MBI manual and analyzed using the Intellectus Statistics program. The data and results were stored on a password-protected computer which was not accessible by any facility staff members. Survey results for nurses who did not complete both pre and post-intervention MBIs were calculated and shared with those individuals only. The lack of two completed surveys from an individual resulted in missing data and therefore these results were excluded from the statistical analysis.

A second measure of the intervention on the practice problem involved the number of patient safety reports (PSR) entered by facility staff members for the period immediately before and the period immediately after the conclusion of the interventions. The total number of PSR submissions for the pre-intervention timeframe was compared with the number of submissions in the post-intervention timeframe. Each timeframe was one calendar month in duration. The patient safety reporting data was obtained from the facility's Patient Safety Manager and consisted of the total number of PSRs written during the specified time periods. The data obtained from the Patient Safety Manager did not contain any patient information or any personally identifiable information, including the identity of the staff members submitting the reports. The PSR numbers excluded reports that were solely related to the (new) electronic medical record that was launched during the post-intervention period as this was a new factor introduced in the facility that was not present during the pre-intervention period. Including PSRs related to the new medical record would have skewed the results.

The three components that comprise burnout, emotional exhaustion, depersonalization, and personal accomplishment, were examined pre and post-intervention for each nurse and

collectively. The MBI grades each component as low, moderate, or high degree based on an ordinal score. An evaluation was conducted to determine if scores improved from baseline to post-intervention.

Data evaluation included the participants' Emotional Exhaustion, Depersonalization, and Personal Accomplishment scores. Outcome evaluation was based on the change in MBI scores from baseline to post-intervention for individuals and the nursing staff as a whole, for each dimension of burnout. See the data collection tool in Appendix E. This tool simply served as a repository of raw scores for each nurse both pre and post-intervention. For any nurses that did not complete both a pre and post-intervention MBI, their scores were calculated separately with the annotation that a pre and post-comparison could not be made for the individual. Additional evaluation measures included the rate of patient safety reports before and after the project. None of this data contained personally identifiable information and all HIPAA privacy laws were upheld.

Statistical and Clinical Significance

Statistical analysis was conducted using Intellectus Statistics software. The project was evaluated from both statistical and clinical significance standpoints. Statistical significance for this project was established using a p-value of 0.05. The variables were entered into the Intellectus Statistics program. Shapiro-Wilk tests were conducted to determine whether the differences in pre and post-measures were produced by normal distributions, each of which indicated the normality assumption was met. Because assumptions were met for parametric testing, two-tailed paired samples t-tests were used to determine statistical significance. The result of the two-tailed paired samples *t*-test was significant based on an alpha value of .05, $t(25) = 2.07$, $p = .049$ for Emotional Exhaustion but not for Depersonalization and Personal Accomplishment (See Appendix F). While not all domains of burnout demonstrated statistically significant improvement, mean scores for each domain improved after the intervention (See Appendix G).

Clinical significance was demonstrated through the decrease in the number of Patient Safety Reports (PSR) entered for the one-month period preceding the intervention compared to the one-month post-intervention. PSRs entered by staff may range from potentially unsafe conditions that were recognized prior to impacting the patient (near-misses or close calls) to conditions that may actually result in patient harm. During the pre-intervention period, 20 PSRs were entered by staff members. In the post-intervention period, 16 PSRs were entered by staff members. The facility averaged five PSRs per week in the pre-intervention period as compared with four PSRs, on average, per week in the post-intervention period. It is important to note that the PSR submission is encouraged as a means to analyze processes and systems to prevent future unsafe situations and potential patient harm. As previously noted, improvements in burnout scores decrease the risks associated with burnout for individual nurses, their patients, and the facility. The decrease in the number of PSRs entered for the pre and post-intervention time periods shows a correlation between improved burnout scores and fewer patient safety events. As the effects of nurse burnout reflect in multiple ways, examining multiple measures demonstrated the impact of project interventions.

Sustainment

Sustainment of the change is scheduled to occur as the Chief Nurse has committed to scheduling a Nurse Call in early December 2022 with the participation of the Preservation of the Force and Family team members. The meetings are scheduled to continue on a quarterly basis and include sessions with the nursing staff to review the actions, habits, and improvements that can prevent and reduce burnout in nurses. Nurses thus also have a designated time to meet and provide social support to one another on a regular basis. These sessions will be incorporated into the quarterly Nurse Executive Function meetings.

Impact

This evidence-based practice project's goal was to reduce and prevent burnout in nurses with a secondary goal of increasing patient safety. The project addressed the practice problem of nurse burnout by acknowledging the problem, measuring burnout via the Maslach Burnout Inventory, and addressing burnout through interventional meetings during which nurses were able to interact and socialize with fellow nurses, practice mindfulness exercises, refresh on resilience techniques, and were empowered to bring positive changes to their environments. The project manager received positive feedback from participants regarding the interventional meetings, the resources provided during those meetings, and an understanding of the various resources available to all facility nurses, including the resources found within the facility, such as the Preservation of the Force and Family team (POTFF). The follow-up MBI results showed statistically significant improvement in burnout, specifically in the realm of Emotional Exhaustion. While there was not a statistical significance in the improvement in Depersonalization and Personal Accomplishment, overall scores in these realms improved and the overall, informal feedback from the participants was that the interventional meetings positively impacted their attitudes toward the workplace, their patients, and other healthcare providers. The nurses expressed an interest in continuing to meet regularly to socially support one another, practice mindfulness exercises, discuss the pillars of resilience, and share ideas on how they are changing their environments to support themselves and other nurses.

The results on Patient Safety Reporting rates further highlighted the positive impact of this project on patient safety. There was a decrease of one PSR per week from the pre-intervention period to the post-intervention period.

The project changed nursing practice in that nurses in the facility had the opportunity to gather together as a profession to discuss matters of interest and concern to them for the first time since the COVID-19 pandemic began in early 2020. During the interventional meetings, the nurses expressed their desire to continue meeting together to maintain the social and professional bonds built during the interventional sessions. They also recognized that the

changes they made in their environments have helped with their productivity. They learned that taking short breaks helped them return to their work refreshed. Regular meetings of the nursing staff will be fully supported by the facility's Chief Nurse who has expressed his determination in sustaining the project and has already dedicated his December 2022 Nurse Executive Function meeting as a time for the nurses to socialize and celebrate their successes this year, encouraging the social support of one another. The Chief Nurse also supports the nursing staff meeting as often as monthly to sustain the progress the nurses have made. The Chief Nurse will assess burnout informally in a manner of his choosing. He will not be using the formal MBI as it is a licensed product.

To further improve the practice problem, evaluation of the individual domains of nurse burnout for individual nurses or nurses in various duty sections can assist in identifying target areas on which the facility can work to prevent and reduce burnout. For example, if nurses demonstrate low Personal Accomplishment, then identifying and acknowledging their individual and collective accomplishments may improve their assessments in this area. The interventions can and should be tailored to the needs of the nurses. Limitations for this project and sustainment include that not all nurses can participate in all the interventional meetings. For some, the timing of the meetings conflict with patient schedules. In these instances, schedules may be adjusted or blocked to allow for full participation. Providing an additional incentive for nurses to participate, such as a catered lunch, may help bring out those who would otherwise not desire to attend. This type of intervention will likely have better results if participants attend voluntarily, rather than by mandate. The local community is very military and healthcare worker-friendly and would likely support a catered lunch for the nurses on a regular basis.

Dissemination Plan

Upon completion of the project, data evaluation, and analysis, the project manager formally disseminated the project's results to the facility and within the professional community. The project manager shared the project's outcomes first to the MTF Commander and Chief

Nurse then to all stakeholders during the facility's Executive Staff meeting, attended by many of the project's stakeholders including the Chief Nurse, MTF Commander, the Patient Safety Manager, and all members of the Executive Staff. The project's outcomes were also shared with all project participants at the Nurse Executive Function meeting which includes the entirety of the nursing staff and is chaired by the facility's Chief Nurse. As most meetings within the facility are guided by PowerPoint presentations, the project findings were presented following this standard format. The project manager answered questions posed during these meetings.

In addition, the project results will be shared with fellow DNP candidates through an oral poster presentation. The poster presentation format will follow the standard template for Doctor of Nursing Practice projects at the University of St. Augustine for Health Sciences. For dissemination to fellow DNP candidates, the project manager will provide a narrated presentation to share the project outcomes.

Also, as this EBP project serves as a DNP capstone project to partially fulfill the requirements of the University of St. Augustine for a Health Sciences Doctor of Nursing Practice degree, the project will be published to the University Library's Scholarship and Open Access Repository (SOAR) platform to ensure the project is searchable and available to others interested in this area of study and practice change.

Conclusion

This evidence-based practice project intended to address nurse burnout in an outpatient Military Treatment Facility. The project aimed to prevent and reduce nurse burnout as measured by the Maslach Burnout Inventory through the implementation of a burnout prevention and reduction initiative. Individual-focused interventions included building the nurse community while encouraging peer support, practicing mindfulness, and building resilience. Environment-focused interventions involved incorporating breaks during the work day and inviting nurses to offer their expertise and input for shared decision-making. This proposal involved a detailed discussion of the practice problem via the PICOT question: in outpatient clinic nurses (P), how does

implementing a bundled strategy (I) compared to not providing interventions (C) affect nurse burnout (O) within eight weeks (T)? The project was guided by the Johns Hopkins Evidence-Based Practice Model for Nursing and Healthcare Professionals using Roger's Diffusion of Innovation change theory. The change project began with the identification of a need within the facility followed by a thorough literature search to uncover evidence-based interventions to formulate the project plan. Practice change themes were identified and these provide the foundation for the interventions. Stakeholders were identified and the project plan was created, including a budget and implementation timeline. Project evaluation and dissemination plans were developed for execution.

References

1SOMDG. (n.d.). 1st Special Operations Medical Group. https://www.hurlburt.af.mil/About-Us/Fact-Sheets/Fact-Sheets/Article/204562/1st-special-operations-medical-group/

Adams, A., Hollingsworth, A., & Osman, A. (2019). The implementation of a cultural change toolkit to reduce nursing burnout and mitigate nurse turnover in the emergency department. *Journal of Emergency Nursing, 45*(4), 452-456. https://doi.org/10.1016/j.jen.2019.03.004

Barrow, J. M., Annamaraju, P., & Toney-Butler, T. (2021). *Change Management*. StatPearls. PMID: 29083813

Bartholomew, K. (2021). The dauntless nurse: Had enough yet? The latest on nurse burnout. *American Nurse Journal*. https://www.myamericannurse.com/my-nurse-influencers-the-dauntless-nurse-nurse-burnout/#:~:text=A%20recent%20study%20by%20the,change%20because%20they%20are%20impersonal.

Best, N. I., Durham, C. F., Woods-Giscombe, C., & Waldrop, J. (2020). Combating compassion fatigue with mindfulness practice in military nurse practitioners. *The Journal for Nurse Practitioners, 16*(e57-e60). **https://doi.org/10.1016/j.nurpra.2020.02.023**

Bianchini, C. & Copeland, D. (2020). The use of mindfulness-based interventions to mitigate stress and burnout in nurses. *Journal for Nurses in Professional Development, 37*(2),

101-106. DOI: 10.1097/NND.0000000000000708

Blackstone, A. (2012). *Principles of Sociological Inquiry – Qualitative and Quantitative Methods*. Saylor Foundation. https://open.umn.edu/opentextbooks/textbooks/139

Carthon, M. B., Hatfield, L., Brom, H., Houton, M., Kelly-Hellyer, E., Schlak, A. ,& Aiken, L. H. (2021). System-level improvements in work environments lead to lower nurse burnout and higher patient satisfaction. *Journal of Nursing Care Quality, 36*(1), 7-13. DOI: 10.1097/NCQ.0000000000000475

Cordoza, M., Ulrich, R. S., Manulik, B. J., Gardiner, S. K., Fitzpatrick, P. S., Hazen, T. M., Mirka, A., & Perkins, R. S. (2018). Impact of nurses taking daily work breaks in a hospital garden on burnout. *American Journal of Critical Care, 27*(6), 508-512. DOI: 10.4037/ajcc2018131

CSAF. (2020). *CSAF Action Orders – to Accelerate Change Across the Air Force*. https://www.af.mil/Portals/1/documents/2020SAF/CSAF_Action_Orders__Letter_to_the_Force_Dec_20.pdf

Dang, D., Dearholt, S., Bissett, K., Ascenzi, J., & Whalen, M. (2022). *Johns Hopkins evidence-based practice for nurses and healthcare professionals: Model and guidelines* (4th ed.). Sigma Theta Tau International.

Defense Logistics Agency. (n.d.). *DLA Resiliency*.

https://www.dla.mil/Info/Resiliency/#:~:text=Resilience%20is%20the%20ability%20to,components%20help%20strengthen%20your%20life.

dos Santos, T. M., Kozasa, E. H., Carmagnani, I. S., Tanaka, L. H., Lacerda, S. S., & Nogueira-Martins, L. A. (2016). Positive effects of a stress reduction program based on mindfulness meditation in Brazilian nursing professionals: Qualitative and quantitative evaluation. *EXPLORE, 12*(2), 90-99. https://doi.org/10.1016/j.explore.2015.12.005

Gentry, E. (2018). Fighting compassion fatigue and burnout by building emotional resilience. *Journal of Oncology Navigation & Survivorship, 9*(12), 532-535. https://0b30dmku7-mp01-y-https-eds-s-ebscohost-com.prx-usa.lirn.net/eds/pdfviewer/pdfviewer?vid=1&sid=9c86bf3f-d0ee-495e-8964-2dd4d21dc118%40redisa216e8dcfb20%40redis&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=133111378&db=ccm

Greater Good Science Center. (2022). *What is mindfulness?* https://greatergood.berkeley.edu/topic/mindfulness/definition

Hutchinson, A. M., Brotto, V., Chapman, A., Sales, A. E., Mohebbi, M., & Bucknall, T. K. (2020). Use of an audit with feedback implementation strategy to promote medication error reporting by nurses. *Journal of Clinical Nursing, 29*(21-22), 4181-4192. https://doi.org/10.1111/jocn.15447

Johns Hopkins Medicine. (n.d.). Center for evidence-based practice. https://www.hopkinsmedicine.org/evidence-based-practice/ijhn_2017_ebp.html

Kelly, L. A., Gee, P. M., Weston, M. J., & Ryan, H. A. (2019). Rethinking resilience. *Nurse Leader, 17*(5), 461-464. **https://doi.org/10.1016/j.mnl.2019.01.005**

Kelly, L. A., Weston, M. J., & Gee, P. M. (2021). A nurse leader's guide to reducing burnout: Strategies to improve well-being. *Nurse Leader, 19*(5), 467-473. https://doi.org/10.1016/j.mnl.2021.03.012

Keyser, E., Weir, L., Valdez, M. Aden, J., & Matos, R. (2021). Extending peer support across the Military Health System to decrease clinician burnout. *Military Medicine, 186*(S1), 153-159. https://academic.oup.com/milmed/article/186/Supplement_1/153/5895450

Kim, L. Y., Rose, D. E., Ganz, D. A., Giannitrapani, K. F., Yano, E. M., Rubenstein, L. V., & Stockdale, S. E. (2019). Elements of the healthy work environment associated with lower primary care nurse burnout. *Nursing Outlook, 68*(1), 14-25. doi: 10.1016/j.outlook.2019.06.018

Klein, C. J., Dalstrom, M. D., Weinzimmer, L. G., Cooling, M., Pierce, L., & Lizer, S. (2020). Strategies of advanced practice providers to reduce stress at work. *Workplace Health & Safety, 68*(9), 432-442. DOI: 10.1177/2165079920924060

Labrague, L. J. (2021). Pandemic fatigue and clinical nurses' mental health, sleep quality and job contentment during the covid-19 pandemic: The mediating role of resilience. *Journal*

of Nursing Management, 29, 1992-2001. https://doi.org/10.1111/jonm.13383

Lee, H., Kuo, C., Chien, T., & Wang, Y. (2016). A meta-analysis of the effects of coping strategies on reducing nurse burnout. *Applied Nursing Research, 31*, 100-110. http://dx.doi.org/10.1016/j.apnr.2016.01.001

Lim, W. Y., Ong, J., Ong, S., Hao, Y., Abdullah, H. R., Koh, D. L., & Mok, U. S. (2020). The abbreviated Maslach Burnout Inventory can overestimate burnout: A study of anesthesiology residents. *Journal of Clinical Medicine, 9*(1), 61. doi: 10.3390/jcm9010061

Magtibay, D. L., Chesak, S. S., Coughlin, K., & Sood, A. (2017). Decreasing stress and burnout in nurses. Efficacy of blended learning with stress management and resilience training program. *The Journal of Nursing Administration, 4*(7/8), 391-395. Doi: 10.1097/NNA.0000000000000501

Maslach, C., Jackson, S. E. & Leiter, M. P. (2022). Maslach Burnout Inventory Manual (4th Ed.).

Mayo Clinic. (2021). *Job burnout: How to spot it and take action.* https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/burnout/art-20046642#:~:text=Job%20burnout%20is%20a%20special,as%20depression%2C%20are%20behind%20burnout.

Mind Garden. (2022). *MBI: Human Services Survey for Medical Personnel.*

https://www.mindgarden.com/315-mbi-human-services-survey-medical-personnel

Pappas, S. & Rushton, C. (2020). Leading the way to professional well-being. *American Nurse Today, 15*(2), 12. *NLM UID:* 101291565

https://0b30dltjk-mp01-y-https-web-s-ebscohost-com.prx-usa.lirn.net/ehost/detail/detail?vid=2&sid=53ab3e8a-fd11-42af-8173-277c199f9216%40redis&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=141892104&db=ccm

Pijpker, R., Vaandrager, L., Veen, E. J., & Koelen, M. A. (2020). Combined interventions to reduce burnout complaints and promote return to work: A systematic review of effectiveness and mediators of change. *International Journal of Environmental Research and Public Health, 17*(1), 55. doi: 10.3390/ijerph17010055

Ruotsalainen, J. H., Verbeek, J. H., Marine, A., & Serra, C. (2015). Preventing occupational stress in healthcare workers. Cochrane Database of Systematic Reviews 2015, 4. **https://doi.org/10.1002/14651858.CD002892.pub5**

Shah, M. K., Gandrakota, N., Cimiotti, J. P., Ghose, N., Moore, M., & Ali, M. K. (2021). Prevalence of and factors associated with nurse burnout in the US. *JAMA Network, 4*(2), e2036469. doi:10.1001/jamanetworkopen.2020.36469

Sollazzo, L. C. & Esposito, C. L. (2020). Nurses unions can help reduce stress, burnout, depression, and compassion fatigue, part 1: The background. *Journal of the New York State Nurses Association 47*(1), 18-44. *NLM UID:* 7507218

https://0b30dlthm-mp01-y-https-web-p-ebscohost-com.prx-usa.lirn.net/ehost/detail/detail?vid=3&sid=34e36f25-5fb3-4f09-aa00-50bca91b4537%40redis&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=144210359&db=ccm

Soosova, M. S. (2021). Association between nurses' burnout, hospital patient safety climate and quality of nursing care. *Central European Journal of Nursing and Midwifery, 12*(1), 245-256. doi: 10.15452/CEJNM.2021.12.0039

Suleiman-Martos, N., Gomez-Urquiza, J. L., Aguayo-Estremera, R., Canadas-De La Fuente, G. A., De La Fuente-Solana, E. I., & Albendin-Garcia, L. (2020). The effect of mindfulness training on burnout syndrome in nursing: A systematic review and meta-analysis. *Journal of Advanced Nursing, 75*, 1124-1140. DOI: 10.1111/jan.14318

United States Special Operations Command. (n.d.). *About POTFF*. https://www.socom.mil/POTFF/Pages/About-POTFF.aspx#:~:text=The%20mission%20of%20the%20Preservation,strengthen%20the%20Force%20and%20Family.

Velando-Soriano, A., Ortega-Campos, E., Gomez-Urquiza, J. L., Ramirez-Baena, L., De La Fuente, E., I., & Canadas-De La Fuente, G. A. (2020). Impact of social support in preventing burnout syndrome in nurses: A systematic review. *Japan Journal of Nursing*

Science, 17(1). DOI: 10.1111/jjns.12269

World Health Organization. (2019). *Burn-out an "occupational phenomenon": International Classification of Diseases.* https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases

Zhang, X., Song, Y., Jiang, T., Ding, N., & Shi, T. (2020). Interventions to reduce burnout of physicians and nurses. An overview of systematic reviews and meta-analyses. *Medicine, 99*(26), e20992. DOI: 10.1097/MD.0000000000020992

Figure 1

Budget

EXPENSES		**REVENUE**	
Direct		Billing	0
Salary and benefits	0	Grants	0
Lunch for 40 Nurses	400	Institutional budget support	0
Services	0		
Statistician	0		
MBI Manual	50		
MBI x 40 RNs x $2.50 (x2 iterations – pre/post)	200		
Indirect	0		
Overhead	0		
Total Expenses	$650	Total Revenue	$0
Net Balance			-$650

Appendix A

Summary of Primary Research Evidence

Citation	Design Level Quality Grade	Sample Sample size	Intervention Comparison (Definitions should include any specific research tools used along with reliability & validity)	Theoretical Foundation	Outcome Definition	Usefulness Results Key Findings
Bogiatzaki, V., Frengidou, E., Savakis, E., Trigoni, M., Galanis, P., & Anagnostopoulos, F. (2019). Empathy and burnout of healthcare professionals in public hospitals of Greece. International *Journal of Caring Sciences, 12*(2), 611-626. https://search.ebscohost.com/login.aspx?direct=true&db=ccm&AN=138636049&site=ehost-live	Cross-sectional study using convenience sampling. Quantitative Level III Quality Grade B	N = 173 healthcare professionals of various disciplines including nurses, physicians, psychologists, physiotherapists	Assessment of provider reported empathy and burnout. Tools: 1. The Jefferson Scale of Physicians Empathy-Health Professions (JSPE-HP). Valid & reliable 2. The Maslach Burnout Inventory (MBI). Valid & reliable.	None noted	Association of empathy with burnout.	Empathy is negatively associated with burnout and enhancing empathy through systematic training may have significant effects against burnout syndrome.
Bianchini, C. & Copeland, D. (2020). The use of mindfulness-based interventions to mitigate stress and burnout in nurses. *Journal for Nurses in Professional Development, 37*(2), 101-106. DOI: 10.1097/NND.0000000000000708	Quasi-experimental pre and post test design. Quantitative Level II Quality Grade B	N = 150 Nursing staff who attended regularly scheduled staff meetings	Implementation of mindfulness-based interventions. Tools: MBi (Maslach & Jackson 1981). Valid & reliable. PSS (Cohen et al., 1983). Reliable & valid.	Watson's Theory of Human Caring	Nurse self-report of perceived stress and burnout levels.	Mindfulness-based interventions and self-care strategies positively affect stress and burnout levels. Also, burnout is more associated with personal accomplishment than emotional exhaustion and depersonalization.

Keyser, E. A., Weir, L. F., Valdez, M. M., Aden, J. K., & Matos, R. I. (2021). Extending peer support across the Military Health System to decrease clinician burnout. *Military Medicine, 186*(S1), 153-159. DOI: **10.1093/milmed/usaa225**	Exploratory mixed methods study. Qualitative Level III Quality Grade B	N = 254 Healthcare providers of various disciplines working in the Military Health System	Implementation of peer supporter training for medical professionals and an opportunity for others to link with a peer supporter within their specialty.	None noted	Healthcare providers having available peer support when needed.	Peer Support Programs may help to combat healthcare provider burnout.
Best, N. I., Durham, C. F., Woods-Giscombe, C., & Waldrop, J. (2020). Combating compassion fatigue with mindfulness practice in military nurse practitioners. *The Journal for Nurse Practitioners, 16*(e57-e60). **https://doi.org/10.1016/j.nurpra.2020.02.023**	Quasi-experimental pretest/posttest design; pilot study. Level II Mixed methods appraisal. Quality Grade B	N = 6 active duty WHNPs	Weekly mindfulness activities using a free app. Tools: 1. Professional Quality of Life (ProQOL). Reliable & valid. 2. Mindful Attention Awareness Scale (MAAS). Reliable & valid.	None noted	Mindfulness measures increase with use of mindfulness app.	Mindfulness levels increased with regular mindfulness activities which may combat compassion fatigue (comprised of burnout and secondary traumatic stress).
dos Santos, T. M., Kozasa, E. H., Carmagnani, I. S., Tanaka, L. H., Lacerda, S. S., & Nogueira-Martins, L. A. (2016). Positive effects of a stress reduction program based on mindfulness meditation in Brazilian nursing professionals: Qualitative and quantitative evaluation. *EXPLORE, 12*(2), 90-99. https://doi.org/10.1016/j.explore.2015.12.005	Mixed methods quasi-experimental pilot study. Level II Mixed methods appraisal. Quality Grade C	N = 13 nursing professionals working in a hospital	Mindfulness and loving kindness meditation x 6 weeks. Tools: 1. Perceived Stress Scale (PSS). 2. Beck Depression Inventory (BDI). 3. State Trait Anxiety Inventory (STAI) 4. Satisfaction with Life Scale (SWLS) 5. Self-Compassion Scale (SCS) 6. WHOQOL-BREF quality of life assessment 7. Work Stress Scale (WSS)	None noted	Stress Reduction Program based on Mindfulness to reduce depression, perceived stress, burnout, and anxiety.	Depression, perceived stress, burnout, and anxiety were reduced after mindfulness stress reduction program and a qualitative improvement in individual reaction to their own experiences.

			Reliability and validity of these tools were not addressed			
Adams, A., Hollingsworth, A., & Osman, A. (2019). The implementation of a cultural change toolkit to reduce nursing burnout and mitigate nurse turnover in the emergency department. *Journal of Emergency Nursing, 45*(4), 452-456. https://doi.org/10.1016/j.jen.2019.03.004	Quasi-experimental design. Level II Quality Grade B	N = 30 nurses	Implementation of Cultural Change Toolkit (meaningful recognition, shared decision making, increased leadership involvement/support). Tools: 1. Anticipated Turnover Scale 2. Oldenburg Burnout Inventory	None noted	Nurse turnover and nurse burnout	Non-statistically significant decrease in turnover but all measures of burnout were reduced following implementation of Culture Change Toolkit
Cordoza, M., Ulrich, R. S., Manulik, B. J., Gardiner, S. K., Fitzpatrick, P. S., Hazen, T. M., Mirka, A., & Perkins, R. S. (2018). Impact of nurses taking daily work breaks in a hospital garden on burnout. *American Journal of Critical Care, 27*(6), 508-512. DOI: 10.4037/ajcc2018131	Quasi-experimental study. Level II Quantitative Quality Grade C	N = 29 nurses	Randomly assign nurses to 6 weeks of daily work break in the garden followed by 6 weeks of indoor-only breaks. Tools: 1. Maslach Burnout Inventory-Human Services Survey. Reliable & valid 2. Pediatric Quality of Life Present Functioning Visual Analog Scale (VAS). Not formally validated for this study.	None noted	Reduced burnout for nurses taking garden breaks vs indoor breaks. No significant improvement in VAS.	Daily breaks in an outdoor garden may be beneficial in mitigating nurse burnout.
Klein, C. J., Dalstrom, M. D., Weinzimmer, L. G., Cooling, M., Pierce, L., & Lizer, S. (2020). Strategies of advanced practice providers to reduce stress at work. *Workplace Health & Safety, 68*(9), 432-442. **DOI: 10.1177/2165079920924060**	Non-experimental study. Mixed methods results Level III Quality Grade B	N = 854 advanced practice providers (PAs and APRNs) working in primary care	Survey using standardized scales to evaluate burnout and reported strategies for work stress reduction. Tool:	None noted	MBI scores. Strategies for work-stress reduction: self-focused, relational-	Self-focused strategies, such as “time out” and “quiet moments” along with exercise, meditation, mindfulness, and

			Maslach Burnout Inventory-Human Service Survey. Reliable and valid.		focused, job-focused, nothing.	relaxation techniques may help reduce burnout.
Little, L. (2021). Boundaries to prevent burnout. *Nebraska Nurse, 54*(3), 12-13. *NLM UID:* 19010060R	Non-research evidence. Level V	N/A	N/A	None noted	N/A	Nurses can set work-life boundaries (professional and personal) to safeguard against burnout; lack of boundaries contribute to feelings of emotional exhaustion and depersonalization.
Pappas, S. & Rushton, C. (2020). Leading the way to professional well-being. *American Nurse Today, 15*(2), 12. *NLM UID:* 101291565 https://0b30dltjk-mp01-y-https-web-s-ebscohost-com.prx-usa.lirn.net/ehost/detail/detail?vid=2&sid=53ab3e8a-fd11-42af-8173-277c199f9216%40redis&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=141892104&db=ccm	Non-research evidence. Level V	N/A	N/A	None noted	N/A	Goals: create positive work environments, positive learning environments, reduce administrative burden, enable technology solutions, provide support, invest in clinician well-being research.
Magtibay, D. L., Chesak, S. S., Coughlin, K., & Sood, A. (2017). Decreasing stress and burnout in nurses. Efficacy of blended learning with stress management and resilience training program. *The Journal of Nursing Administration, 4*(7/8), 391-395. Doi: 10.1097/NNA.0000000000000501	Quasi-experimental design. Level II Quality Grade B	N = 50	Participants were given various options for learning stress management and resilience training (SMART) (web-based, independent reading, facilitated discussion, or combo) Tools: Subjective Happiness Scale, Perceived Stress	None noted	Measures of happiness, stress, anxiety, mindful attention, resilience, and burnout at 8, 12, 24 weeks after baseline	SMART improved stress, anxiety, resilience, mindfulness, happiness, and burnout among nurses.

			Scale, Generalized Anxiety Scale, Connor-Davidson Resilience Scale, Copenhagen Burnout Inventory			
Kim, L. Y., Rose, D. E., Ganz, D. A., Giannitrapani, K. F., Yano, E. M., Rubenstein, L. V., & Stockdale, S. E. (2019). Elements of the healthy work environment associated with lower primary care nurse burnout. *Nursing Outlook, 68*(1), 14-25. doi: 10.1016/j.outlook.2019.06.018	Multi-variable analyses via survey. Level III non-experimental. Quality Grade B	N = 361 nurses n = 170 (RNs) n = 191 (LVN)	Non-experimental research evaluated impact of true collaboration and meaningful recognition on burnout.		Burnout measured via emotional exhaustion subscale of MBI and AACN's HWE Assessment Tool.	Perceptions of true collaboration between interprofessional members of PCMH teams were strongly associated with lower levels of burnout for primary care RNs. Meaningful recognition is associated with lower levels of burnout in LVNs. RNs reported significantly higher levels of burnout.
Roux, N. (2020). Best practices for burnout self-care. *Nursing Management, 51*(10), 30-35. **DOI-10.1097/01.NUMA.0000698116.82355.0d**	Non-research evidence. Level V	N/A	N/A	None noted	N/A	Identify burnout early, use assessment tools (Maslach's Burnout Inventory or Oldenburg Burnout Inventory, Mindful Attention Awareness Scale, Pro QoL Scale), implement prevention/reduction activities – mindfulness, focused breathing, practicing

						gratitude, art/coloring, journaling, wellness apps.
Sollazzo, L. C. & Esposito, C. L. (2020). Nurses unions can help reduce stress, burnout, depression, and compassion fatigue, part 1: The background. *Journal of the New York State Nurses Association 47*(1), 18-44. *NLM UID:* 7507218 https://0b30dlthm-mp01-y-https-web-p-ebscohost-com.prx-usa.lirn.net/ehost/detail/detail?vid=3&sid=34e36f25-5fb3-4f09-aa00-50bca91b4537%40redis&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=144210359&db=ccm	Quantitative descriptive survey. Level III Quality Grade B	N = 1817	Health & Safety Survey Questionnaire – Top Causes of Stress on the Job; do contractually mandated nurse-to-patient ratios reduce stress, burnout, etc? Do 5-minute yoga exercises decrease stress, burnout, etc?	Jean Watson's Theory of Human Caring	Burnout, depression, compassion fatigue.	Workplace conditions are highly correlated to stress, burnout, compassion fatigue, and depression. To improve the environment: redesign the environment, educate for safety & health, encourage personal change.
Kelly, L. A., Weston, M. J., Gee, P. M. (2021). A nurse leader's guide to reducing burnout: Strategies to improve well-being. *Nurse Leader, 19*(5), 467-473. **https://doi.org/10.1016/j.mnl.2021.03.012**	Non-research evidence. Level V	N/A	N/A	None noted	N/A	Reducing workload through breaks, creating a culture of well-being by normalizing and modeling self-care, responding to traumatic stress, supporting authentic connections through peer support, creating a culture of gratitude and meaningful recognition, and engaging with pro governance will improve nurse well-being and reduce burnout.
Gentry, E. (2018). Fighting compassion fatigue and burnout by building emotional	Non-research evidence.	N/A	N/A	None noted	N/A	Develop self-replenishing/self-

resilience. *Journal of Oncology Navigation & Survivorship, 9*(12), 532-535. https://0b30dltll-mp01-y-https-web-p-ebscohost-com.prx-usa.lirn.net/ehost/detail/detail?vid=2&sid=ec7f8b51-d637-4522-9b29-a216e8dcfb20%40redis&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=133111378&db=ccm	Level V					care strategies; avoid routines that reinforce the downward spiral; focus on changing negative attitudes; social support networks are important; recovery time, recovery tips.
Whittington, K. D., Shaw, T., McKinnies, R. C., & Collins, S. K. (2021). Promoting personal accomplishment to decrease nurse burnout. *Nurse Leader, 19*(4), 416-420. **https://doi.org/10.1016/j.mnl.2020.10.008**	Quantitative survey assessment. Level III Quality Grade B	N = 93	Assessment of impact of personal accomplishment on burnout.	None noted	Maslach Burnout Inventory assessed burnout; Areas of Worklife Survey indicates congruence between individual and work role	As feelings of personal accomplishment decrease, feelings of burnout (as noted by emotional exhaustion) increase. Relating to AWS, control, community, fairness, and values are statistically significant to feelings of personal accomplishment. Assist nurses with self-identification of accomplishment and leaders recognize individual accomplishment to reduce burnout.
Kelly, L. A., Gee, P. M., Weston, M. J., & Ryan, H. A. (2019). Rethinking resilience. *Nurse Leader, 17*(5), 461-464. **https://doi.org/10.1016/j.mnl.2019.01.005**	Non-research evidence. Level V	N/A	N/A	None noted	N/A	Resilience is seen as an antidote to burnout, but leaders can unintentionally send the

						message that nurses must build resilience to adversity in their work environments; address human needs, leaders need participatory mgt competency, build social community, remove sources of frustration and inefficiency, reduce preventable harm and support second victims. All nurses may promote joy at work.

Legend: See Johns Hopkins Evidence Tables below for Level and Quality Grade definitions

Appendix A

Summary of Systematic Reviews (SR)

Citation	Quality Grade	Question	Search Strategy	Inclusion/ Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness Recommendation Implications
Ruotsalainen, J. H., Verbeek, J. H., Marine, A., & Serra, C. (2015). Preventing occupational stress in healthcare workers. Cochrane Database of Systematic Reviews 2015, 4. https://doi.org/10.1002/14651858.CD002892.pub5	Level I Quality Grade C	Does work and person directed intervention compared to no intervention prevent stress in healthcare workers.	Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, PsycINFO, CINAHL, NIOSHTIC-2, Web of Science up to Nov 2013.	Inclusion = RCTs of interventions aimed at preventing psychological stress in healthcare workers.	Two review authors independently extracted data and assessed trial quality. Used Standardized Mean Differences where authors used different scales to measure stress or burnout. Combined studies that were similar in meta-analyses. Used the GRADE system to rate the quality of evidence.	Mixed results that CBT with or without relaxation reduced stress symptoms (not effective at 1 month, but effective at 6+ months). Physical relaxation was more effective in reducing stress than no intervention. Changing work schedules was the single org intervention shown to reduce stress.	Limited usefulness. More RCTs are needed with N >/= 120 to compare intervention to placebo-like intervention. Org interventions need better focus on reduction of specific stressors.
Kunzler, A. M., Helmreich, I., Chmitorz, A., Konig, J., Binder, H., Wessa, M., & Klaus, L. (2020). Psychological interventions to foster resilience in healthcare professionals. Cochrane Database of	Level I Quality Grade C	Do psychological interventions designed to foster resilience improve resilience, mental health	Searched CENTRAL, MEDLINE, Embase, 11 other databases and 3 trial registries from 1990-June 2019.	RCTs in adults age 18 and older who are employed as healthcare professionals, comparing any form of psychological intervention to	Two review authors independently selected studies, extracted data, assessed risks of bias, and rated the certainty of the evidence	Very low certainty evidence indicated that healthcare professionals receiving resilience training may	Limited usefulness based on the uncertainty of the findings. Resilience training may improve resilience for

Citation	Quality Grade	Question	Search Strategy	Inclusion/ Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness Recommendation Implications
Systematic Reviews 2020, 7. https://doi.org/10.1002/14651858.CD012527.pub2		and other factors associated with resilience in healthcare professionals?		foster resilience, hardiness, or post-traumatic growth vs no intervention.	using the GRADE approach.	report higher levels of resilience, lower levels of depression, and lower levels of stress or stress perception, compared to controls. Little to no evidence of any effect of resiliency training on anxiety, well-being, or quality of life.	healthcare professionals. More research is needed of high quality and improved study designs.
Velando-Soriano, A., Ortega-Campos, E., Gomez-Urquiza, J. L. Ramirez-Baena, L., De La Fuente, E. I., & Canadas-De La Fuente, G. A. (2018). Impact of social support in preventing burnout syndrome in nurses: A systematic review. Japan Journal of Nursing Science, 17(1). https://doi.org/10.1111/jjns.12269	Level III Quality Grade A	What is the relationship between social support and burnout syndrome in nurses and what are the risk factors for burnout?	Systematic literature search in CINAHL, PsycINFO, Proquest Health & Medical Complete, Pubmed, Scopus using MESH "burnout, professional AND social support AND nursing".	Inclusion criteria: primary studies that provided original empirical data, MBI was used as a burnout measurement instrument, social support was measured in the study population, the population was composed of nursing professionals, written in English, Spanish, Portuguese or Italian.	A coding manual was created to facilitate data recording. Two members of the team independently conducted search, selection, critical reading of articles; if in disagreement, a third researcher was consulted. Burnout variables: yrs of experience in nursing, main results on the presence of burnout in nurses.	Burnout levels are low in work environments with good social support, good feedback, good leadership. Social support consists of emotional support, instrumental support, informational support, and evaluative support. Social support is a coping strategy to prevent	Social support from supervisors and coworkers can help reduce burnout. SS minimizes feelings of isolation that can arise when nurses experience problems in day to day work and learning of coping strategies to deal with stress-inducing situations. Training to prevent burnout

Citation	Quality Grade	Question	Search Strategy	Inclusion/ Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness Recommendation Implications
				Exclusion criteria: pop included student nurses, mixed study populations that did not provide independent info on nurses, written in other languages.	Descriptive analysis of study variables (info included was not sufficient for meta-analysis).	emotional exhaustion and depersonalizatio n.	with development of optimal environments with good interprofessional comm and effective organization. SS itself does not solve burnout, but alleviates its effects. Must also avoid work overload, provide incentives for good work to motivate staff. More study is needed regarding work incentives and motivation.
Suleiman-Martos, N., Gomez-Urquiza, J. L., Aguayo-Estremera, R., Canadas-De La Fuente, G. A., De La Fuente-Solana, E. I., & Albendin-Garcia, L. (2020). The effect of mindfulness training on burnout syndrome in nursing: A systematic review and meta-analysis. *Journal of Advanced Nursing, 75*, 1124-1140. DOI: 10.1111/jan.14318	Level II Quality Grade B	How does mindfulness training impact the components of burnout – emotional exhaustion, personal accomplishm ent, and depersonaliz ation?	Search of CINAHL, LILACS, Medline, ProQuest, PsycINFO, Scielo and Scopus.	Inclusion: clinical trial or quasi-experimental study, analysis of the impact of mindfulness-based interventions on burnout, sample of nurses, article published in English, Spanish, French, or Portuguese, no restriction on publication year.	Data were recorded using a data coding manual, by two researchers working independently. The degree of their agreement on coding was tested by Cohen's kappa and intraclass correlation coefficient.	In all cases, mindfulness programs produced a reduction in burnout among nurses, comparable to that reported in similar studies of physicians and other healthcare personnel. EE scores were reduced by the	Mindfulness training has been shown to improve burnout in nurses but few RCTs have been conducted to examine this. Two meta-analyses confirm that mindfulness intervention programs reduce burnout among nurses. Future

Citation	Quality Grade	Question	Search Strategy	Inclusion/ Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness Recommendation Implications
				Exclusion: mixed sample or no independent data for nurses.		intervention and PA increased. No significant changes were observed for D. Negative correlation between mindfulness training and work satisfaction in ICU and PICU environments (high-stress environments).	research via RCT is still needed.

Legend: See Johns Hopkins Evidence Tables below for Level and Quality Grade definitions

Evidence Level I	Randomized Controlled Trial (RCT) Systematic review of RCTs, with or without meta-analysis
Evidence Level II	Quasi-experimental study Systematic review of a combination of RCTs and quasi-experimental studies, with or without meta-analysis
Evidence Level III	Non-experimental study Qualitative study
Evidence Level IV	Non-research: clinical practice guidelines, consensus panel/position statements
Evidence Level V	Non-research: scoping reviews, literature reviews, quality improvement programs, case reports

Johns Hopkins Evidence Guide (Dang et al., 2022).

Quality A High Quality	Consistent, generalizable results; sufficient sample size for the study design; adequate control; definitive conclusions; consistent recommendations based on a comprehensive literature review that includes thorough reference to scientific evidence
Quality B Good Quality	Reasonably consistent results; sufficient sample size for the study design; some control; fairly definitive conclusions; reasonably consistent recommendations based on a fairly comprehensive literature review that includes some reference to scientific evidence
Quality C Low Quality	Little evidence with inconsistent results; insufficient sample size for the study design; conclusions cannot be drawn.

Johns Hopkins Quantitative Evidence Appraisal Tool (Dang et al., 2022).

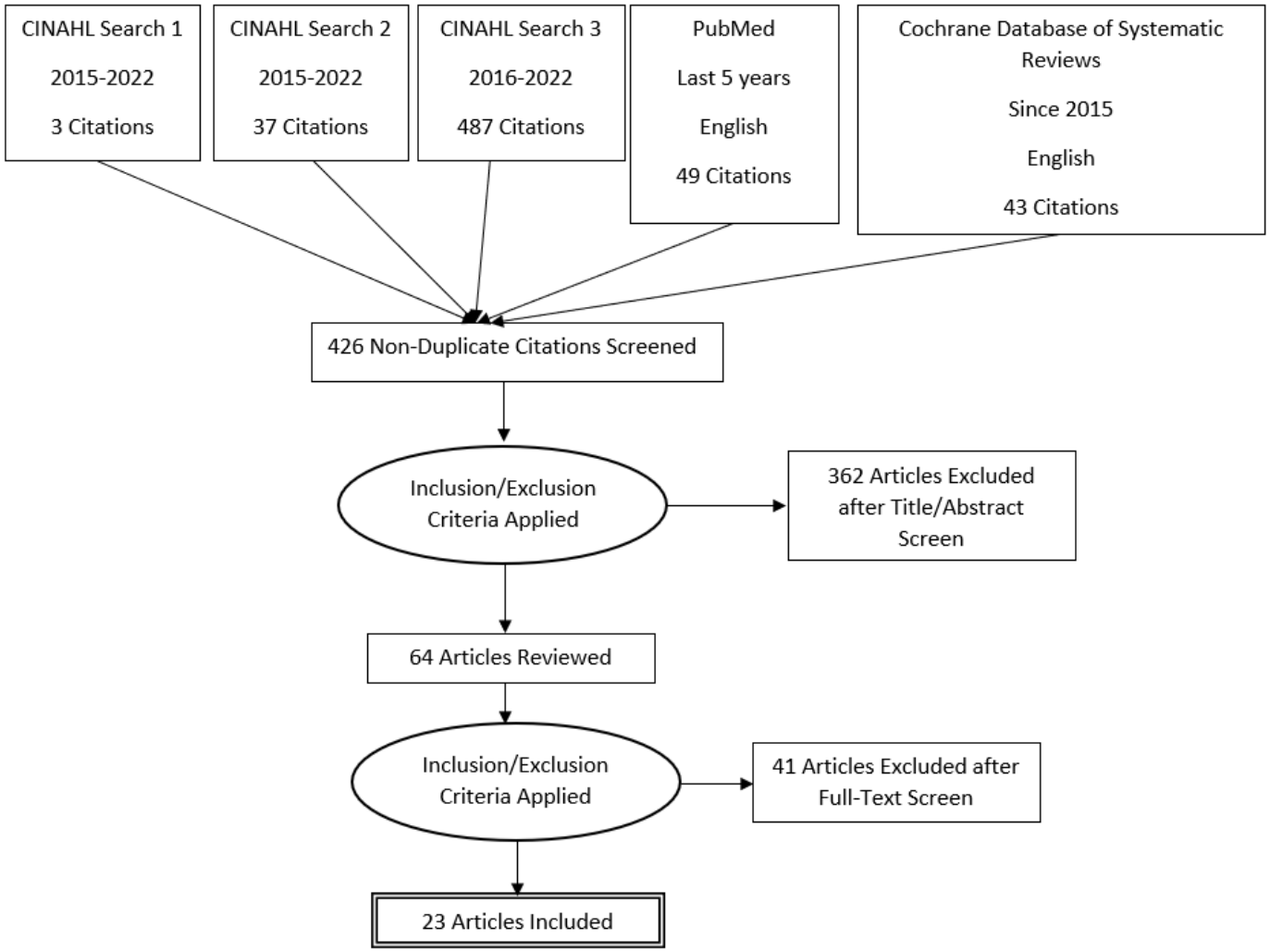
Quality A/B High/Good Quality	The report discusses efforts to enhance or evaluate the quality of the data and the overall inquiry in sufficient detail; and it describes the specific techniques used to enhance the quality of the inquiry. Evidence of some or all of the following is found in the report: - Transparency: describes how information was documented to justify decisions, how data were reviewed by others, and how themes and categories were formulated - Diligence: reads and rereads data to check interpretations; seeks opportunity to find multiple sources to corroborate evidence - Verification: the process of checking, confirming, and ensuring methodologic coherence - Self-reflection and self-scrutiny: being continuously aware of how a researcher's experiences, background, or prejudices might shape and bias analysis and interpretations - Participant-driven inquiry: participants shape the scope and breadth of questions; analysis and interpretation give voice to those who participated - Insightful interpretation: data and knowledge are linked in meaningful ways to relevant literature
Quality C Low Quality	Lack of clarity and coherence of reporting, lack of transparency in reporting methods; poor interpretation of data and offers little insight into the phenomena of interest; few, if any of the features listed for high/good quality

Johns Hopkins Qualitative Evidence Appraisal Tool (Dang et al., 2022).

Quality A High Quality	Contains high-quality quantitative and qualitative study components; highly relevant study design; relevant integration of data or results; and careful consideration of the limitations of the chosen approach
Quality B Good Quality	Contains good-quality quantitative and qualitative study components; highly relevant study design; relevant integration of data or results; and careful consideration of the limitations of integration
Quality C Low Quality	Contains low quality quantitative and qualitative study components; study design not relevant to research questions or objectives; poorly integrated data or results; and no consideration of limits of integration

Johns Hopkins Mixed-Methods Evidence Appraisal Tool (Dang et al., 2022).

Appendix B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Last 5 years
English
49 Citations
Cochrane Database of Systematic Reviews
Since 2015
English
43 Citations
426 Non-Duplicate Citations Screened
Inclusion/Exclusion Criteria Applied
362 Articles Excluded after Title/Abstract Screen
64 Articles Reviewed
Inclusion/Exclusion Criteria Applied
41 Articles Excluded after Full-Text Screen
23 Articles Included

Appendix C

Internal Factors	
Strengths	Weaknesses
- Chief Nurse Executive support of the change project - Evidence-based interventions to reduce burnout - Relatively low implementation/sustainment cost for a significant potential return on investment	- Additional time commitment away from duties for nursing staff - Requires the commitment of all stakeholders - Risk of reluctance to change
External Factors	
Opportunities	Threats
- POTFF is an embedded resource and is always available within the facility - Increase in morale attracts skilled & experienced medical professionals for hire - Successful project can serve as a template for other military units	- Potential scheduling conflicts for nurses in various duty sections (leave, Temporary Duty elsewhere, etc) - Increased operations tempo of a pandemic environment or military operations could threaten time for project interventions, participation, and sustainment

Appendix D

Project Schedule

	NUR7801								NUR7802								NUR7803							
Activity	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15
Meet with preceptor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Prepare project proposal	X	X	X	X	X	X	X	X																
Obtain permissions for Tools (MBI)										X														
Meet with Stakeholders		X		X		X		X	X		X					X						X		
Review project goals, timeline, roles & responsibilities, and expectations									X	X	X	X	X	X	X	X	X	X						
Meet with Nursing Staff to discuss the project					X						X		X									X		
Submit project proposal for approval									X															
Reserve Exec Conference Room for Nurse Meetings										X		X												

	NUR7801								NUR7802								NUR7803							
Activity	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15
Initial data collection and project overview with Nursing Staff											x	x												
Project Implementation											X	X	X	X	X	X	X	X						
+Build the Nurse Community; Peer Support																X		X						
+Mindfulness Training																X		X						
+Resilience Training																X		X						
Post-intervention data collection																X		X						
Outcome evaluation																	X	X	X	X				
Dissemination findings to stakeholders																					X			
Implement Sustainability Plan																					X	X		
Project Completion																							X	

Appendix E

Data Collection Tool for MBI Scores															
Participant Number	Pre EE	Pre DP	Pre PA	Post EE	Post DP	Post PA		Participant Number	Pre EE	Pre DP	Pre PA	Post EE	Post DP	Post PA	
1								26							
2								27							
3								28							
4								29							
5								30							
6								31							
7								32							
8								33							
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16								41							
17								42							
18								43							
19								44							
20								45							
21								46							
22								47							
23								48							
24								49							
25								50							

Legend
Pre = Pre-implementation
Post = Post-implementation
EE = Emotional Exhaustion
DP = Depersonalization
PA = Personal Accomplishment.

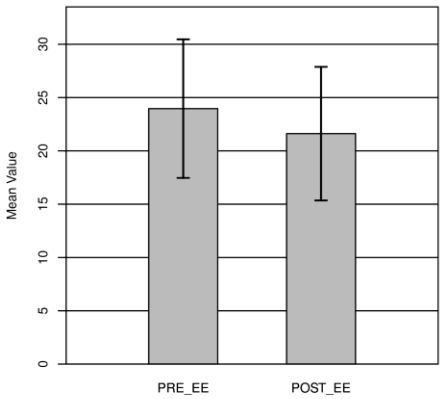
Appendix F

Two-Tailed Paired Samples t-Test for the Difference Between PRE_EE and POST_EE

PRE_EE		POST_EE				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
23.96	16.90	21.62	16.30	2.07	.049	0.41

Note. N = 26. Degrees of Freedom for the *t*-statistic = 25. *d* represents Cohen's *d.*

The means of PRE_EE and POST_EE with 95.00% CI Error Bars



Two-Tailed Paired Samples t-Test for the Difference Between PRE_DP and POST_DP

PRE_DP		POST_DP				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
7.08	6.97	7.00	6.30	0.09	.931	0.02

Note. N = 26. Degrees of Freedom for the *t*-statistic = 25. *d* represents Cohen's *d.*

Two-Tailed Paired Samples t-Test for the Difference Between PRE_PA and POST_PA

PRE_PA		POST_PA				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
36.31	7.37	37.58	6.36	-1.52	.142	0.30

Note. N = 26. Degrees of Freedom for the *t*-statistic = 25. *d* represents Cohen's *d.*

Appendix G

RN_MEDIC	PRE_EE	PRE_DP	PRE_PA		POST_EE	POST-DP	POST_PA
RN	31	3	37		21	0	39
RN	19	0	38		27	2	40
RN	49	14	34		52	16	41
RN	36	13	35		37	15	33
RN	33	15	33		36	14	35
RN	13	5	46		3	13	46
RN	44	16	40		46	14	35
RN	30	1	38		32	8	41
RN	23	15	22		21	14	30
RN	43	7	32		38	10	31
RN	19	3	42		20	6	40
RN	21	6	35		11	1	38
RN	39	11	44		28	7	47
RN	0	0	47		0	0	42
RN	1	2	48		0	1	47
RN	6	3	18		14	4	23
RN	7	4	35		7	5	32
RN	10	0	42		7	7	37
RN	5	0	35		5	0	41
RN	16	0	40		10	1	43
MEDIC	45	0	35		42	3	28
MEDIC	39	9	25		32	6	29
MEDIC	2	14	39		0	0	42
MEDIC	0	1	26		0	0	35
MEDIC	44	23	36		41	21	35
RN (S)	48	19	42		32	14	47
MEAN SCORES	23.96	7.08	36.31		21.62	7.00	37.58