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The Utilization of Stress Management in Critical Care Nurses to Decrease Nursing Burnout

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**DNP Manuscript: The Utilization of Stress Management in Critical Care Nurses to
Decrease Nursing Burnout**

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This Manuscript Partially Fulfills the Requirements for the

Doctor of Nursing Practice Program and is Approved by:

Dr. Robin Kirschner, EdD, DNP, RN, CNS

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**University of St. Augustine for Health Sciences
DNP Scholarly Project
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Abstract

Practice Problem: Since COVID-19, nurses have felt the pressure from the pandemic on their shoulders. The practice problem has helped nurses manage stressors to decrease the symptoms of burnout.

PICOT: In critical care nurses (P), how does the implementation of HeartMath techniques for stress management (I) compared to standard practice (C) affect rates of absenteeism, request for assignment transfer, and resignations (O) over 8-weeks (T)?

Evidence: The evidence that guided this project change is based on the Johns Hopkins nursing evidenced-based-practice model.

Intervention: The intervention assisted critical care nurses in dealing with stress and fatigue by using HeartMath to support mindfulness to decrease burnout.

Outcome: The available statistical evidence suggests that the measurement basis of the scales and subscales of the new POQA-R4 framework appears to be psychometrically sound and produced a significant positive change. Absenteeism, requests for transfers to other units, and resignations were all remarkably decreased.

Conclusion: This DNP project has decreased the effects of stress by using HeartMath stress management in critical care nurses. The project was implemented and analyzed the findings to establish clinical significance and suitability.

Utilization of Stress Management in Critical Care Nurses to Decrease Nursing Burnout

In this world plagued by COVID-19, critical care nurses were the frontline workers who were needed to care for critically ill patients requiring a higher level of care. Due to COVID-19, there was an increase in nurse burnout (While & Clark, 2021). Nursing burnout was first articulated in 1978 and measured by the Maslach Burnout Inventory (MBI) in 1981 (Green et al., 1991). Hospitals and nurses were overwhelmed with the high demands of COVID-19 patients entering the facility and requiring critical care services, which caused an increase in stress levels, fatigue, and eventually burnout (While & Clark, 2021).

This evidence-based practice (EBP) change project addresses critical care nurses' problems concerning warning signs of burnout. This scholarly project met its goal by reducing the number of stressful indicators that led to critical care nurses feeling tired or mentally exhausted with nursing by reducing symptoms of fatigue and stress levels, which led to improved patient care delivery. This project implemented an EBP strategy that educated nurses on managing stressors to ensure that nurses provided an elevated level of care (Mintz-Binder, 2021). The project implementation included leadership strategies focused on generating positive motivation through nurse appreciation techniques to highlight dedication, commitment, and challenging work.

Significance of the Practice Problem

Nurse burnout was and may forever be a huge problem in healthcare. The project focused on ICU nurses, and the project site has identified nurse burnout within the ICU as a leading concern. The project site has lost an average of 35% of nurses to other units or facilities because the nurses left due to feeling overworked and overwhelmed by the effects of COVID-19 (E. Eberhard, personal communication, August 10, 2021). These actions and statements align with

the MBI description of nursing burnout. Burnout refers to an individual's excessive stress, depersonalization, decreased personal accomplishment, or mental exhaustion (Maslach & Leiter, 2016). Nursing burnout often occurs when nurses have extended periods of a mismatch between their work demand and capacity (While & Clark, 2021). Nurse burnout has impacted nurses' resilience, both physiologically and psychologically, leading to difficulty in concentration, lack of sleep, and decreased activity levels; these changes directly influence nurses' ability to provide high-level nursing care and discernment (Ballesio et al., 2021).

Nurse retention was essential to facilities to provide quality patient care, mentor inexperienced staff, and maintain costs; when seasoned nurses leave, higher prices are associated with this loss. It can cost between \$38,000 and \$58,000 per nurse to train a replacement, adding millions of dollars to a hospital budget when high numbers of nurses quit or leave (Ambrose, 2021). In addition, there are inflated costs attached to retaining nurses who work long hours to fill staff shortages (Ambrose, 2021). The added stress of long hours and extra work took a toll on nurses, which was why facilities must have a process in place to support nurses with a balance of work and life stressors, aiding in job retention and delivery of high-level care.

The typical documented response from the nurses working in the ICU setting was the rewarding factor was going to work and saving a life. The pandemic had nurses afraid as they looked for answers because of the increase in patient deaths associated with COVID-19 (Goforth, 2021). Nurses struggled with the stress of being able to both physically and psychologically protect themselves while continuing to provide high-level care to their patients. Despite all the challenging work, patients of all ages have succumbed to the disease, leading to increased physiological and psychological stress, feelings of failure, and subsequent burnout, as indicated by the MBI (Green et al., 1991; Goforth, 2021).

Nursing burnout was identified decades before the pandemic; however, the pandemic has intensified nursing burnout due to the overwhelming effects on ICU nursing staff across the United States and other countries (Kok et al., 2021). Before the pandemic, 23% of nurses reported burnout symptoms, which increased to 38% (Kok et al., 2021). A solution to nursing burnout not only improved stress symptoms; it improved nurses' capacity to provide high-level care but also decreased the number of nurses who leave the ICU (Kok et al., 2021).

PICOT Question

In critical care nurses (P), how does the implementation of HeartMath techniques for stress management (I) compared to the standard practice of self-stress management (C) affect rates of absenteeism, request for assignment transfer, and resignations (O) over eight weeks (T)? The population for this change project was critical care nurses who worked in a unit that consistently provides high-level care to critically ill patients. The proposed intervention decreased stressors by implementing HeartMath mindfulness techniques to focus on a renewed sense of gratitude and improved stress management skills. The current standard of care was self-stress management with emergency action plan signs posted on the unit for staff to use independently. The proposed intervention decreased absenteeism, requests for assignment transfers, and resignations over 8-weeks.

Evidence-Based Practice Framework & Change Theory

The EBP project utilized the Johns Hopkins nursing evidence-based practice (JHNEBP) model to help construct the change (Johns Hopkins, 2020). The JHNEBP was a powerful model with a problem-solving approach that helped guide clinical decisions focused on evidence-based findings and applied them to patient care (Johns Hopkins, 2020). The JHNEBP framework has a three-step systemic process that includes the practice question, the evidence, and the translation

(PET), which supports positive change in healthcare (Johns Hopkins, 2020). The practice evidence phase consisted of a team identifying a practice concern, the circumstances, and the impact on patient care. This phase identified key stakeholders, the performance of gap analysis, and the PICOT question (Johns Hopkins, 2020). The evidenced phase consisted of the search, appraisal, and synthesis of the presented evidence to support the recommendation of change. The evidence phase of the project guided the evidence search strategy, themes, results, and practice recommendations (Johns Hopkins, 2020). During the transition phase, the team identified if the change was justified and reasonable. Once identified as appropriate, this phase guided the implementation of the practice change project, the outcomes, evaluation, and the dissemination of all findings (Johns Hopkins, 2020). The project manager gave the results to the critical stakeholders of the organization, Eleanor Eberhard, the chief nursing executive (CNE), and the patient care team. The CNE and the project manager developed the practice question for this project change due to the increased number of critical care nurses leaving the units.

Lewin's change theory (1947) assisted in guiding the implementation of the change project using HeartMath mindfulness techniques to implement with the critical care nurses a sense and feeling of renewed gratitude, which aided in creating a permanent change that helped decrease nurse fatigue. It improved the quality of care for the population and the facility (Hussain, 2018). Lewin's change theory, used as the foundation for this EBP change project, consisted of three phases: behavior by unfreezing, modifying behavior through movement by relocating the behavior, and refreezing, which entails conditioning to permanent change (Burnes, 2020). After analyzing the Lewin change model and HeartMath mindfulness techniques by focusing on gratitude to create a physiologic change in nurse burnout, the Lewin change model has three phases that helped make a permanent change in nurse burnout.

The unfreeze phase consisted of force field analysis, which identified the process of understanding the driven forces behind an individual who resists change because, for evolution to have occurred, the factors that drive the change have outweighed the drive to resist change (Burnes, 2020). In the unfreeze phase, critical care nurses were educated on the importance of HeartMath techniques, explained the potential of reduced stress, and helped to understand the importance of renewed feelings of gratitude. The feelings of appreciation contributed to decreased feelings of fatigue and burnout that improved patient quality care. During the unfreezing phase, the nurses recognized a need for change or realized the importance of change (Hussain, 2018).

Modifying behavior through the movement phase consisted of planning and implementing the critical care nurses taking part in HeartMath mindfulness techniques of breathing, meditation, reflection, and focusing on renewed gratitude. During this phase, the critical care nurses completed a questionnaire and agreed to participate in education about nurse burnout. It was vital to determine a baseline before the nurses participated in training and joined in mindfulness techniques that improved emotional wellbeing, fatigue, and burnout. Any changes in practices for stress management for nurse burnout received suggestions for approval by the project team before implementation. The appointed champions monitored the progress of the change project and its objectives. This phase was where the reality of change became real, and the struggle to deal with the shift potentially caused another level of stress marked with fear (Hussain, 2018).

The last stage is refreezing the change process (Burnes, 2020). The outcome expected was for the critical care nurses to feel decreased stress, improved balanced emotions, new feelings of gratitude, and revitalization in their nursing role. In addition, in this phase, the nurses

recognized how the unique sense of appreciation has helped in managing stressors in both personal and professional settings, positively impacting patient care delivery in the critical care setting. After completion of the change project, the project manager delivered the project's outcomes and suggestions about any further implementation dealing with nurse burnout to the hospital leadership and stakeholders.

Evidence Search Strategy

The databases used for the evidence-based search strategy consist of CINAHL, ProQuest, and PubMed. The keywords or phrases used in this search included "stress management," "critical care," and "nursing burnout." The Boolean operator, AND, was used in combination with the keywords. In the CINAHL database, the keywords "stress management," "critical care nurses," and "nursing burnout" yielded 2,200 citation matches. When filtered for peer-review, full text, and 2017-2021, the response lowered to 314 citation matches.

Further filtering by adding English language and publications within the United States provided 47 citation matches. Lastly, filtering for professional burnout led to a final four citation matches. The ProQuest database, using the exact keywords, yielded 21,781 citation matches. Then, placing a filter for 5 years and scholarly journals provided 2,853 citations. Further narrowed this search to the last 12 months, led to 724 citation matches, and filtered again for evidence-based practice, providing a final 17 citation matches. The PubMed database search used the exact keywords, which yielded 148 citations. Next, filtering for the last 5 years led to 48 citation matches, and adding peer review, provided a final 6 citation matches.

In all databases, using the exact words and phrases "stress management," "critical care nurses," and "nursing burnout" were used to provide consistency within the search. The difference is that CINAHL's timeframe is from 2017 to 2021; ProQuest had the highest number

of articles, filtered the search to the last 12 months, and PubMed's timeframe was over the previous 5 years. CINAHL had four final citations, ProQuest 17 final citations, and PubMed had 6 final, with an overall total of 27 sources selected for review for this project.

Evidence Search Results

In their entirety, the databases considered for this project were CINAHL, ProQuest, and PubMed. The number of records identified was 24,129 in total. However, 20,914 exclusions happened before the screening process. Therefore, the records screened were 3,215 in total. A further criterion was applied to filter the results, and all articles maintained eligible status through the keywords "stress management," "critical care nurses," and "nursing burnout," timeframes of publication, peer-reviewed, and EBP criteria were in consideration. The following section simulated the evidence search results used for Preferred Reporting Items for Systematic Reviews and Meta-Analyses "PRISMA" (Page et al., 2021). This PRISMA at face validity entailed flowcharts that improved evidence syntheses while allowing the readers to understand the core procedures allocated for the review (see Appendix A). The tool also enabled the abrasion of irrelevant records to sustain resources of the accepted standard and, therefore, the results inferred from the same. While PRISMA can simulate resources from registers and other sources, this project exclusively utilized the above databases.

A total of 27 EBP articles were reviewed for the desired variables, rationality, quality, and precision. The project change settled for eight credible sources and used the JHNEBP. Five of the eight were primary quantitative-based projects, while three were systematic qualitative reviews. The input from the evidence-based resources was significant for the project, and various sentiments were notable. The project has EBP articles among Level I and II categories of the JHNEBP, and they all have sustained the requirements of good and high quality. The results

were consistent and of sufficient sample sizes. The articles provided definitive conclusions that enlightened the project manager on optimal recommendations for this project (see Appendix B and C).

Themes with Practice Recommendations

The practice recommendation themes within the literature gave scenarios of stress management workshops, resiliency, improved interactions with colleagues, and nurse burnout. Many articles described nursing burnout as prolonged stress that caused psychological discomfort, enhanced by creating coping strategies to bring about job satisfaction and sustained positive emotions, which decreased the probability of nursing burnout (Friganović & Selič, 2021).

The literature showed a positive impact of stress management and resiliency training (behavioral training) for burnout, as described in three articles (Alkhaldeh et al., 2020; Friganović & Selič, 2021; Zhang et al., 2020). In one good-quality level II publication, the author showed that training on cognitive behavioral skills and mindfulness-based interventions effectively reduced occupational stress (Alkhaldeh et al., 2020; Kebapçı & Güner, 2021). The MBI is a validated tool that measures the data on several pre- and post-scales of the job, show fatigue, emotional satisfaction, and personal satisfaction (Friganović & Selič, 2021). Evidence in the literature showed a decrease in the symptoms of burnout when training took place on behavioral skills or mindfulness-based interventions (Friganović & Selič, 2021). The evidence in the data showed that both skill sets of resiliency training and mindfulness effectively demonstrated positive coping techniques that were beneficial individually to their patients and the employer (Turan, 2021).

A comprehensive project conducted by Turan (2021) investigated anger management, which showed that the anger management psychoeducation program enhanced the psychological resilience and emotional wellbeing of the population of intensive care nurses, thereby decreasing stress and nursing burnout. The behavioral themes echoed in two systemic reviews and two quantitative projects described critical care nurses' constant stress and fatigue before burnout (Alkhaldeh et al., 2020). Behavioral training and mindfulness are both stress management techniques that are vital in combating stressors because stress leads to fatigue and nursing burnout, and the HeartMath mindfulness intervention incorporates both by focusing on gratitude to create a physiologic change (Alkhaldeh et al., 2020; Friganović & Selič, 2021; Liu et al., 2021; Zhang et al., 2020).

da Silva (2020) conducted a project where the participants had different occupational stressors that affected their wellbeing. The stressors included long working hours, exposure to pain, suffering, and death; the burnout calculations were in the form of three dimensions: high, medium, and low levels. The results show the leading causes of burnout syndrome were lack of material human resources and acknowledgment, night shifts, and an unhealthy environment (da Silva, 2020).

This project change implementation utilized the tools of the HeartMath Institute, which provided intervention measures to bring the heart and brain mental, emotional, and physical together for coherent balance. HeartMath reduced stressors by creating an elaborate, insightful shift that helps with clarity, compassion, and confidence and assists with identifying practical approaches to any situation with emotional balance. HeartMath is the physiological and psychological equation that helped to acquire and develop the incredible intelligence of the heart.

HeartMath mindfulness techniques assisted with training nurses on stress reduction, breathing, and renewed feelings of gratitude focused on gratefulness that caused a physiological change.

Practice Recommendations

The intervention recommended for this EBP project was from the literature reviewed to intertwine the current policies with HeartMath at the facility. HeartMath has been available to all staff for the last two years, but records indicated HeartMath has been underused. Therefore, the recommendations were to effectively use the EBP of the HeartMath program modules and tools increased resilience and decrease nursing burnout. All suggestions correlated with the PICOT question, and the timeframe of 8-weeks for the EBP change project promoted healthy minds. The nurses in this project trained on mindfulness techniques because it reduced stressors and helped in renewed feelings of gratitude that encouraged a physiological change. The project change took guidance from Lewin's theory of unfreezing thoughts, relocated the behavior that focused on things to be grateful for, and refrozen the feeling of gratitude that created permanent change.

One of the main potential risks in this project change was the possibility of increased stress among the participants (see Appendix D and E). During the implementation phase, held a possibility that limitations could lead to a potential decline in mood or participation. Although this change project has little to no significant risk to the participants, it noted any potential dangers. The levels of stress were measured by using questionnaires. The participants in this EBP change project received questionnaires that tracked changes for increased or decreased signs related to nursing burnout.

Setting, Stakeholders, and Systems Change

Setting

The EBP change project occurred at a not-for-profit facility in the Northern part of California. A vast population is clients served at this quaint facility located 26 miles south of San Francisco. This facility does not treat children; however, they have a maternity unit and have collaborated with Stanford for a critical care nursery unit. The facility demographics include a diverse group of newborn babies, later teens, middle age, and older clients. The hospital's Heart and Vascular Institute is known and recognized for its advanced cardiac care. It also has an excellent comprehensive trauma and emergency care unit, including a birth center, diagnostic and breast center, cancer care, and orthopedics. The hospital has 330 beds with an admission rate of 23,000 per year. The city's population has 58.6% Caucasian, 14.52 Asian, and African American only 1.68%, women 50.2%, and persons 65 years and over 12.7% ("United States Census Bureau," 2021).

Typical Participant

In this project, the typical participant included critical care registered nurses. For the last two years, the United States has faced a pandemic that has caused the country to operate differently. The dramatic shift has caused many nurses to get overwhelmed. Caring for patients with COVID-19 can be scary and overwhelming; due to the personal risk of contracting coronavirus, many patients have died from the disease in correlation with the pandemic stats. The pandemic's unknown has caused many nurses to leave the critical care areas and some to quit the nursing profession altogether (Goforth, 2021). This project is excellent for this group of critical care registered nurses who wanted to learn ways to manage stressors in a productive way that decreased nursing burnout (Green et al., 1991).

Organization Structure and Culture

The facility's vision focused on a healthier future for all patients inspired by faith, driven by innovation, and powered by humanity. The mission is to make the healing presence of God known in our world with improved health of the people it serves, especially the vulnerable and advanced social justice. The facility belongs to 28 other hospitals in California and about 140 hospitals across 16 states. The organization has allocated \$20 million over the next six years to homeless people and other vulnerable people that require medical care. The facility has a chief executive officer (CEO), chief operating officer (COO), and chief nurse executive (CNE) who are a part of the senior leadership, as well as directors and managers who are midline leaders that oversee the hospital's day-to-day operations. The organization met the needs of the population it served and strived for the best care for all patients. The culture at this facility embraced a patient-centered approach to taking care of people. It has a community outreach program that helped with clients less fortunate in the surrounding areas.

Need, Stakeholders, and Support

During the organization meeting with the CNE and stakeholders, they identified a needed change project. It established this change project had assisted the facility in its area of need to reduce nurse burnout. The main stakeholders in this project change were the nurses, the champion nurse, patients, and their families, administrators, nurse managers, directors, and the CNE. The organization gave feedback and held meetings that assisted the project manager, which was vital to the success of this project change.

Plans for Sustainability Levels

The project planned for sustainability and created change at the micro-level for day-to-day clinician practice with EBP change. For the project to be sustainable, there was buy-in from the nursing staff, team collaboration, and received a ton of support from leadership. Interventions

were driven and recommended by the literature as they moved to the meso-level, which belonged to the population, and enhanced the macro level that created system-wide changes throughout the different facilities of the organization. It took collaboration with the nursing staff, physicians, chief medical officer, pharmacy, certified nursing assistants, CNE, patients, and the stakeholders to make this project change successful with sustainability. The HeartMath champions were essential and helped re-implement the program in the facility.

SWOT Analysis

A completed strength, weakness, opportunities, and threats (SWOT) analysis was to determine the organization's strengths and weaknesses (see Appendix F). Utilizing SWOT helped remove or discover threats to avoid, the weakness developed into strengths, and the power became an opportunity for the change project to be successful. A strength of this project was the strong leadership team who recognized the problem and devoted their time to assist and encourage critical care nurses to participate and utilize HeartMath tools. The weakness was that nurses were looking to leave the unit and did not want to participate in the project.

Another weakness was the unpredictability of the pandemic, which caused delays in the implementation of the change project. The opportunities were adequate communication to keep all parties informed of the importance of the project implementation and the benefits it has on the nursing staff. A colossal threat was managing meeting times with administration, the collaboration team, and the nurse champions to help keep the project change scheduled as schedules were hectic. Yet, collaboration among the group was vital throughout implementation and project completion.

Implementation Plan with Timeline and Budget

This project proposed that EBP has better effects than the hospital's standard practice in reducing burnout among critical care nurses. The current standard of care was self-stress management, with emergency action plan signs posted in the units for staff to use independently (Hussain, 2018). Since the first wave of the COVID-19 pandemic, critical care nurses have reported being overworked, not being appreciated, verbal abuse from COVID-19 deniers, and feeling emotionally exhausted; large numbers of critical care nurses have left the facility or transferred to other units (GoForth, 2021). The EBP burnout reduction strategies decreased the stressors that caused emotional fatigue by introducing stress management techniques through HeartMath. Nurses learned HeartMath mindfulness techniques that focused on a renewed sense of gratitude, creating a physiological change, and stress management techniques. The intervention used the HeartMath feedback system and assisted nurses with the methods to manage stress levels. HeartMath is a technologically innovative approach that improves emotional wellbeing (HeartMath Institute, 2017).

The objectives outlined for this project change used specific, measurable, achievable, realistic, and time-bound (SMART) goals:

1. Training took place at the hospital in person. It had 20% attendance of all the critical nurses taught on HeartMath's renewed feelings of gratitude during the 8-week implementation phase.
2. All nurses who participated in the change project filled out questionnaires initially and then bi-weekly for at least 90% of the time during the 8-week implementation phase.
3. At least 90% of the critical care nurses had fewer resignations during the 8-week implementation phase.

Nurse burnout was a significant problem and has increased since the start of the pandemic, leading to a decreased ability of staff nurses to provide high-level care to critical

patients. The facility for the change project mainly looked at the essential care nurses, including ICU and emergency room nurses. These two areas have felt extreme stress, and nurses have left or transferred to other units, leaving the critical care units short-handed. This change project helped critical care nurses deal with stress and fatigue and used HeartMath to support mindfulness to remediate symptoms that increased burnout. The goal was to decrease nursing burnout, absenteeism, resignations, and requests for transfers over an 8-week period.

Measurable

The MBI has been the standard to measure mental stress for years; however, this change project used the Personal and Organizational Quality Assessment – version Revised 4 Scale (POQA-R4) as part of the Institute of HeartMath, which helped to gauge the degree of stress amongst the critical care nurses. The POQA-R4 questionnaire assessed the quality of the workplace. It was self-reporting and asked questions about psychological and workplace issues and social demographics to better understand the organization's effectiveness. Monitored this project on nurses' emotions, stress, fatigue, sleeping difficulties, work-life satisfaction, and intent to quit (see Appendix G).

The project was attainable because of the support from the hospital administrators, the stakeholders, and approved participation from the critical care registered nurses. The nurses had the self-reporting survey and pre- and post-questionnaires that they filled out. The post questionnaire helped gauge the effectiveness of the change project by comparing the pre-scores against the post-scores, thus, making it measurable, attainable, and realistic. The POQA-R4 was a practical EBP tool that has proven to reduce workplace stress ("HeartMath Institute," 2021). Other metrics which influenced quality care were sick calls and resignations and evaluated requests for transfers to different work areas. The metrics were measured by completing the

questionnaires and then assessed the percentages and pre- and post-results for the change project over 8-weeks (see Appendix H and Appendix I).

The project manager identified the need to invite the critical-care nurses to the HeartMath meetings. Meetings with the stakeholders determined the baseline knowledge of nurse fatigue or burnout in the critical care area of the hospital and the barriers that existed. In this phase, communication was vital for nurses to buy into the proposed project change. The project manager was responsible for teaching, explaining the roles and responsibilities, and creating a calendar for implementation. The project manager also assessed the critical care areas that determined the motivation for change and any possible barriers to change. The project manager provided education on the importance of understanding the HeartMath tools, completing the questionnaires timely, and collaborating. An anticipated obstacle in the project was nurses were not initially open to communication about the logic taught through HeartMath mindfulness. Benefits of the ones who participated in the rebreathing techniques learned to focus on things to be grateful for at work and personal away from work.

In the moving phase, the project manager provided the learning needed to move or start transforming behavior. Communication was necessary to keep the critical care nurses intrigued and compliant in learning the techniques of reducing stressors that caused nurse burnout. The project manager and the clinical director ensured that participants completed the initial POQA-R4 questionnaire that determined baseline stress levels and the percentages placed under pre-training (see Appendices G and H) and ensured completion of bi-weekly surveys and post-questionnaire. Once established a baseline level, the formal training began, which taught HeartMath mindfulness techniques in breaths, meditation, and reflection, and focused on renewed gratitude (Hussain, 2018).

The refreeze phase thoroughly evaluates the sustainable permanent change with positive outcomes. The result was for the critical care nurses to feel a decrease in stress, improved balanced emotions, new feelings of gratitude, and a feeling of restored desire in their nursing role. Project evaluation compared the pre-and post-intervention scores in determining if the intervention was successful. The objective in the refreeze stage was for critical care nurses to have established a renewed sense of gratitude in all aspects of life and work. The project outcomes were disseminated and given to the leadership and stakeholders of the hospital. The project manager and the clinical director have created a sustainable plan to support the refreezing phase of this change project by planning for continuous positivity with the use of EBP, written policy, and procedures to support sustainability (Hussain, 2018).

Project Timeline

The project timeframe for this change project implementation was detailed and guided the project's development over an 8-week period (see Appendix J). The project proposal was sent to the University of St. Augustine for Health Sciences to be reviewed by the Evidenced-based Practice Review Council (EPRC) for approval and then sent to the facility for support before implementation. Frequent meetings took place with the stakeholders, clinical directors, and CNO to obtain project feedback and insight into the facility's environment. The performance of this project began in week seven and ended in week 14.

Upon approval from the EPRC and the facility, the project manager met with the stakeholders and key players that reviewed the timeline and visited vital information covering the project goals, expectations, roles, and responsibilities. The clinical director distributed the POQA-R4 questionnaire and obtained a baseline stress level correlated with reports of historical data from the previous 8-weeks to secure a baseline of sick calls, resignations, and transfers to

different departments for comparison. The project manager analyzed and disseminated the pre- and post-data findings to leadership and the key stakeholders and continued working with the clinical director to sustain positive results by creating policies and procedures that encouraged using HeartMath's mindfulness techniques, which helped decrease the symptoms of nurse burnout.

Project Resources and Budget

The budget breakdown face validity was detailed; a list of the cost to have implemented this change project in the hospital was as follows: \$2,160 was allocated for nurses to participate in the training of HeartMath and fill out the questionnaires. Estimated supplies were \$820, HeartMath services \$550, a statistician \$440, and \$50 for office supplies, which cost \$3,970 (see Appendix K). A grant of \$2,500 brought down the price to \$1,470. Resources supplied by the hospital decreased the numbers tremendously. The clinical directors, project managers, and stakeholders also volunteered to implement the change project.

Interprofessional Collaboration

Interprofessional collaboration was vital in creating a change project. The hospital promoted champions; nurses and physician champions were part of the collaboration team. Also included in the interprofessional collaboration team were the critical care nurses, patients, stakeholders, managers, directors, physicians, and the CNE. All the project members were assigned a portion of the tasks aligned with their scope of practice. The nurses and physician champions synthesized the data over weeks one and two and then bi-weekly. The project manager's role was vital to the success of this change project through communication, evaluation, and follow-up. The project manager collaborated with all parties associated with the

task to keep accurate information flowing, ensuring they followed proper EBP and that the project stayed within its time restraints and budget.

Evaluation Plan

Optimizing the critical care nursing team, which ensured quality patient care was imperative in having critical-care nurses who efficiently managed their stress to prevent fatigue and burnout. The change model implemented over the 8-week period established the foundation for this change project. Evaluating the effectiveness of the intervention on the critical care nurses who practiced stress management techniques by using HeartMath was vital to this project and determining sustainability. The HeartMath process promoted physiological coherence through the harmony of the heart and the body (HeartMath Institute, 2017). Nurses who implemented this intervention now have the tools needed to manage stress effectively, which led to a decrease in burnout symptoms, as opposed to nurses who did not learn the HeartMath techniques.

The evaluation of the intervention basis was on reducing stress and fatigue in critical care nurses; measured stress levels through the pre-and post-questionnaires completed by the participants. The intervention implementation occurred in a hospital setting after obtaining explicit permission from the facility's Institution Review Board and through the University of St. Augustine's ERCP process. Participants also signed consent forms. There were no exclusion criteria, except it was only open to all employed critical care nurses within the essential care areas. They were all encouraged to participate and had signed consent forms before participation.

The EBP change project utilized the POQA-R4 tool by HeartMath. The POQA-R4 scale was a self-reporting survey questionnaire that assesses the nurses' psychological, workplace, and organizational issues; it used this tool in combination with the JHNEBP and Lewin's change model. The HeartMate taught the nurses about stress control meditation techniques and used

Lewin's steps of unfreezing, relocating the behavior, and refreezing for permanent behavior change (Hussain et al., 2018). The change model and evidence-based tools assisted in empowering the critical care nurses with an effective process of learned stress management skills. The management skills centered on utilizing the intelligibility of the heart as the primary source of stillness and control of the mind, emotions, and the body has promoted self-care and resilience (HeartMate Institute, 2021). The main output of the POQA-R4 was the self-reported questionnaires which remained confidential and secured within a locked cabinet inside the hospital's administrative office, with access only to the designated project staff.

Evaluation

The evaluation of the training provided to nurses of the HeartMath technique intervention was analyzed and assessed based on the data collected through the POQA –R4 tool. The project manager evaluated the intervention on emotional stress, emotional vitality, physical stress, and organizational stress at the start and end of the 8-weeks. The POQA-R4 is a self-administered questionnaire that nurses completed and submitted to the administrator for analysis, grouping, and reporting. While the data collection process was straightforward, the nurses received information on the importance of completing the questionnaires and assurance of the highest confidentiality per the facility and Health Insurance Portability and Accountability Act (HIPAA) guidelines. The project manager and designated project staff have received training on HIPAA guidelines and the importance of confidentiality in this project. The questionnaires contained no vital information and gave the participants a secret code of numbers; additionally, the clinical director collected historical organizational data related to absenteeism, resignations, and requests for transfer before intervention implementation.

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This change project used HeartMath's mindfulness techniques which decreased nurse burnout and adopted the intervention through a sequence of inputs, activities, outputs, and outcomes that informed process change and outcome evaluation. The financial information for this project showed in Appendix K, which identifies the costs of staff training and technical assistance. The trained nurses also adopted stress management techniques and behavior changes for 8-weeks. The critical-care nurses filled out the POQA-R4 questionnaire before the intervention to gain a baseline and then after the completion of the intervention for comparison. The intervention collected data analyzed for individual and organizational quality demonstrated the project's outcomes of improved stress management and patient care delivery. Since this is an EBP project, the main aim was to evaluate the suitability and effects of implementing stress

management training and support systems in the hospital and improve the effectiveness of stress management techniques in critical care nurses. The HeartMath mindfulness tool, POQA-R4, was valid and reliable with significant empirical evidence and was appropriate for this evidence-based change project (HeartMath Institute, 2021). Process evaluation provided the measurable deliverables under inputs, activities, and outputs needed to implement the project. In contrast, outcome evaluation provided the measures of success for the project's outcomes in the short, medium, and long term. The evaluation logic model outlined the EBP project's action framework and gave insights into the implementation and sustainability of the project (see Appendix L).

Once the clinical director and project manager collected the data, the statistician evaluated the EBP project. Upon analyzing the data collected through POQA-R4 pre-and post-training, the quantitative ordinal data analyzed and reported as pre-and post-training charts illustrating the stress prevalence through individual and organizational qualities (Riley & Gibbs, 2013). Unique attributes in mood and stress symptoms were also analyzed using the POQA-R4. It also assessed managerial characteristics through employee absenteeism rates and the project results of pre-and post-training that utilized evaluation tools (see Appendix H and Appendix I) (Riley & Gibbs, 2013). Portions of change will highlight the differences in the nurses' individual and organizational qualities before and after adopting the HeartMath stress management techniques. However, the intervention assumed that all trained critical care nurses practiced the HeartMath stress management techniques and that all nurses had completed all the necessary parts of the POQA-R4. The analysis made the appropriate recommendation about the intervention.

The project required team leaders who helped with collaboration and information sharing, support from the management through finances for training, and time allowed for breathing and

meditation exercises, which promoted the implementation of the intervention. All stakeholders were assigned a section of the change by the project manager, which was synthesized weekly by the project management team. Insights from collaboration shed light on the generalizability and sustainability of the project.

Fethney (2010) noted that p values determined the statistical significance while confidence intervals determined the clinical importance. The p values were analyzed and compared with the pre-intervention stress management techniques using HeartMath to the post-intervention results. This change project evaluated these values for the effectiveness of stress management techniques using HeartMath. The significance level for this project is 0.5, using a statistical test to get the p -value to statistically analyze and compare the pre-intervention stress levels to post-intervention stress levels. The latter is critical for EBP projects since the focus is on determining the suitability of the intervention to practice (Fethney, 2010). In this case, the clinical significance helped establish whether the implementation change model for stress management techniques is beneficial for critical care nurses. The clinical significance of this change project looked at the practical importance of the intervention. The results of renewing a sense of gratitude are genuine, with noticeable results in the work environment and daily life.

The Results

Project Participants

The nurse participants were all from the critical care area and recruited for the project implementation and intervention by the project manager (PM). The PM met with the necessary care nurses to discuss the timeframe of 8-weeks, the interventions, and willing participants able to commit to the project. The PM sent an excellent project description to the team of critical care nurses via the ICU manager's email portal. Flyers that described the project intentions were

delivered and hung in the staff's breakroom, locker room, and bathrooms. Only actively employed critical care registered nurses participated in the project; excluded all others from participating in the change project. The final number of participants recruited for the change project included eight crucial care registered nurses.

The PM sent out weekly announcements via email to the key stakeholders communicating the implementation date along with details about extracting the information from the participants—the participants all preferred text messages to communicate. Therefore, weekly text messages sent to the participants were a continual reminder of the intervention for mindfulness techniques of HeartMath. The texts went out weekly to also receive the amount of usage of HeartMath during the week. POQA-R4 was the chosen questionnaire to give to the participants, then repeated a post-questionnaire at the end of the 8-weeks.

Statistical Data Analysis

Conduction of two statistical analyses to verify measurement validity and reliability. In the first, the seven scales and their associated subscales were subjected to an internal consistency of measurement analysis using Cronbach's coefficient alpha (α) (see Table 1).

Table 1

Results from Analysis of Internal Consistency of Measurement

	Number of Items	Internal Consistency α
Emotional Vitality	14	0.92
Emotional Buoyancy	8	0.90
Emotional Contentment	6	0.86
Organizational Stress	9	0.76
Pressures of Life	5	0.78
Relational Tension	3	0.69
Stress	1	-
Emotional Stress	15	0.92
Anxiety/Depression	7	0.90
Anger/Resentment	8	0.85
Physical Stress	10	0.87
Fatigue	4	0.87
Health Symptoms subscale	6	0.76
Intention to Quit	2	0.90

The results for the four primary scales showed that all constructs exceeded the criterion for technical adequacy ($\alpha > 0.75$): the alpha coefficients ranged from 0.76, for Organizational Stress, to 0.92 for Emotional Vitality and Emotional Stress. The results for the nine multi-item subscales showed that, with one exception (Relational Tension, $\alpha = 0.69$), these constructs also achieved or exceeded the criterion for technically adequate measurement reliability. Across the other eight multi-item subscales, the alpha coefficient ranged from 0.76, for Health Symptoms, to 0.90, for Emotional Buoyancy, Intention to Quit, and Anxiety/Depression. Table 1 lists the number of items and the alpha coefficient for each scale.

Demographic Results

Nurses' socio-demographic information describes the characteristics of the participants: educational level, employment status, and gender. All 100% ($n=8$) participants had a bachelor's degree and full-time employees working 36 hours a week or more. The gender of the eight participants were two males and six females, giving a distribution of 25% males and 75% females.

Validity and Reliability of Measurement

The psychometric integrity of the reorganization of the 49 items into these four factors was empirically verified by the validity and reliability of a measurement study conducted on the existing POQA-R database of 5,971 health care workers. The reorganization of items into this new framework resulted in the following range of item assignments: at the primary scale level (the four factors), the minimum number of items assigned to a factor was 8, and the maximum number of items designated was 15; at the subscale level (the sub-factors or components within a factor), the range of items assigned to a given subscale was from two to eight things. This new framework measures six of the nine multi-item subscales by five or more items. The original

version of the POQA-R assessment was to measure and evaluate two primary domains of workplace quality and function—Personal Quality and Organizational Quality. Each of these domains was subdivided into a set of 10 scales and 14 scales, respectively. The Personal Quality scales reflected employees' day-to-day moods, attitudes, and stress-related symptoms. The Organizational Quality scales measured vital areas of organizational climate that affect employee job involvement, performance, and essential factors related to employee behavior, attitudes toward work, and job performance ability.

POQA-R4 Outcome Measures

The following is to aid the interpretation of the results from the statistical analysis of the facility workforce's scores on the POQA-R4 scales and subscales. The score's basis is on an aggregated analysis of the usable data from completed surveys. The information presented was intended to provide a profile of the quality of the organization's workplace environment in terms of the significant factors hindering or detracting from effective work performance. Thus, this overall information design highlighted those aspects of the workplace environment that may require management attention and intervention to improve organizational performance.

Presented are the results of a pre-post analysis conducted on the initial (Time 1) and repeated (Time 2) administration of the POQA-R4 survey in Table 2.

Table 2

Results from the Raw Score Means

	Pre	Post	% Change
Organizational Stress			
<i>Pressures of Life</i>			
<i>Relational Tension</i>			
<i>Stress</i>			
Emotional Vitality	5.02	6.15	23%
<i>Emotional Buoyancy</i>			
<i>Emotional Contentment</i>	5.02	6.15	23%

Emotional Stress	3.45	2.16	-37%
<i>Anxiety & Depression</i>	3.50	2.16	-38%
<i>Anger & Resentment</i>	3.38	2.16	-36%
Physical Stress	4.10	2.96	-28%
<i>Fatigue</i>	4.69	3.38	-28%
<i>Health Symptoms</i>	3.63	2.63	-28%
Intention to Quit			

Raw score means and the percentage of change (Time 2 mean score minus Time 1 mean score) given for both the four primary scales and the nine subscales; a positive or negative number indicates the direction of difference from Time 1. Accordingly, to show whether the scale score value has increased or declined from the initial point of measurement. This analysis requires that each respondent completed both Time 1 and Time 2 administrations of the POQA-R4 survey and thus conducted on the subset of respondents with usable data from both time points. A matched pairs t-test difference means of Time 1 and Time 2 was computed, along with a test of the statistical significance of the mean difference. The difference indicates the degree to which the observed difference between the two means could explain that it occurred by chance. Observed differences in means that are statistically significant (cannot be explained by chance) are flagged in the table by one or more asterisks, signaling the significance level.

There were two formats of a seven-point ordinal Likert scale used to gather responses to the questions on the POQA-R4 survey: "Not at all" to "Always" and "Strongly Disagree" to "Strongly Agree." The results of the descriptive analysis showed the percentage of respondents reporting the subsets "Often" to "Always" or "Agree" to "Strongly Agree" of all items in each subscale presented below. Appropriate caution should be exercised by reviews when interpreting the pattern of results. The reader should refer to the analysis of pre-post change presented next

for information regarding the statistical significance of the observed direction and magnitude of differences.

Process Measures

The PM created a data form for the participants to fill out weekly for the nurses to write how often they utilized the tools learned during the implementation process. The format consisted of four options to answer the question: Do you use HeartMath daily to find things to appreciate? Instructed to write the number in the box to associate how often it uses daily HeartMath: (a) Very often, (b) Often, (c) Not too often, and (d) Not at all. Have completed six intervention meetings during the first week, covering three on dayshift and three on nights exceeding the intentional two.

Written comments from the participants were all positive and enthusiastic, stating, "The techniques and tools I learned to deal with stress are unbelievable and have changed my emotional state," "I didn't realize how stressed I was until learning how to deal with this stress." The last comment stated, "I no longer get palpitation before getting reports on the patients."

Data Integrity

At the end of the 8-week intervention, the project manager, with assistance from a hired statistician, analyzed all the data to help determine if the intervention made an impact (positive or negative) one way or another. All data collected possessed no name or socio-demographics. All participants created their 4-digit numerical code for questionnaires and surveys to avoid missing data. The pre-and post-questionnaires completed were immediately collected and mailed to HeartMath, then scanned and determined the data results. In addition, to reduce the occurrences of missing data, the amount of data collected had to stay at a minimum (Liang et al., 2020).

Protection of Human Rights and Confidentiality

The approval change project by the University of St. Augustine (USA) Nursing Evidence-Based Practice Review Council (EPRC) ensured that the proposal met the criteria of a DNP change project by identifying an organizational need for change through an EBP change project method (USAHS, 2021). The organization at the project site also had a process for approval at the facility level to ensure that the project consisted only of EBP and none of the research. Confidentiality of human subject protection was vital in the facility approval process and provided executed compliance guidelines. The review took three weeks for final approval, showing the project did not have protected health information (PHI) and had identified minimal risk for participants.

Although identified only minimal risk for participants, the data was collected and stored in the Nursing Administration office in a large envelope within a locked cabinet. This change project kept no files or data on the computers at the facility. The questionnaires given pre-and post-intervention were immediately put in the envelope and sent to the statistician at the end of the intervention. The statistician then took the pre-intervention scores and compared them to the post-intervention scores of the eight participants (see Table 2).

Clinical Significance

The clinical significance of this project has shown that the intervention improves stress levels which has three points. The first point is that it improved the mental being of the nurses. Secondly, it equates to better care delivered to the patients; thirdly, the organization was healthier due to less stressed nurses performing better. The POQA-R4 organizational stress scale measured employee stress in general, which measures the combined negative pressure from work, home, and life stressors (see Table 2). The higher scores on the POQA-R4 scale have a

mutual connection to the stressors the employees are experiencing while taking the survey. The project determined the employee stress level because the higher the stress load, the higher the probability of nurse burnout, which also interferes with work performance and can cause relationship deterioration. It shows initial signs of possible quitting intentions. Post-intervention scores dropped by -28% indicating a positive trend on the Likert scale compared to the preintervention questions. The POQA–R4 survey score on stress has shown a significant decrease down 37 points by the end of the eight-week project, starting from a scale of 0-100 with a medium average of 50 (see Table 2). The clinical significance is high scores on the survey suggest employees had experienced higher stress levels from work, home, and life in general.

This change project intends to decrease nurse burnout and create sustainability using HeartMath's mindfulness techniques, starting with nurses in the critical care area of ICU within the hospital setting. The purpose of the intervention was to intensely have the nurses focused on appreciation and find a renewed sense of gratitude that helped critical care nurses deal with the stressors of work, home, and life's difficulties. The renewed sense of gratitude and appreciation helps to put things into perspective and reduce the perceived levels of stressors, creating a sustainable coping mechanism. An outstanding patient care, in this case, results from giving nurses the tools to deal with stressors. These stress triggers stem from work, home, and their environments.

Impact

The change project's purpose was to focus on giving the critical care nurses the tools to deal with stress and concentrate on answering the PICOT question. The PICOT question: In essential nurses of care, how does the implementation of HeartMath techniques for stress management compared to the standard practice of self-stress management affect rates of

absenteeism, request for assignment transfer, and resignations over eight weeks? A pre-and post-questionnaire to the participants helped determine if anyone within the group had intentions to quit. The prequestionnaire showed that two participants had the intent to leave, and after implementation of HeartMath's mindfulness techniques, the two that had intentions of leaving no longer met the criteria as intent to quit. Overall, the results from both statistical analysis procedures confirm the validity of the item assigned to the scales and subscales and ensure that the measurement reliability is more than technically adequate. In short, all the available statistical evidence suggests that the measurement basis of the scales and subscales of the new POQA-R4 framework appears to be psychometrically sound. The intervention did lead to the positive change initially proposed through the PICOT.

The critical care unit has 40 nurses, and eight participated (eight participants equals 20% of the overall nurses) in the implementation to find ways to deal with stress through mindfulness techniques that focus on appreciation. The impact of absenteeism in ICU decreased by 20% and correlated with the percentage of nurses participating in the change project. Six months before the March 24, 2022 implementation, 12 critical nurses left the unit between transfer or resigning; on average, two nurses per month were leaving the department. Since the implementation, one nurse transferred to another team, decreasing the transfer and resignation to -75%, suggesting a positive impact.

This positive impact is significant enough to expand the practice of mindfulness techniques throughout the facility. The critical care area sustained the positive results by taking a few minutes during bed huddles to reflect on things or people they appreciate and breathe that appreciation in and out through their chest and to the heart. Assigned HeartMath champions to help promote HeartMath, took over the techniques and assisted in keeping the nurse's tools intact

to combat stressors. The ICU manager and or the clinical director took over measuring the continuation of success.

Limitations

The small size of participants can hinder the statistical significance. Another limitation is that the data were self-reports from survey participants and may or may not truly reflect the respondents' behavior, attitudes, or feelings. Also, the data collection has not employed random sampling methods, and the degree to which the results were generalized beyond the project's population was unknown. The analysis basis is on aggregating the data for the change population. The results may not accurately characterize the attitudes, feelings, or behavior of any subpopulation or individual. Limitations exist because it did not include any other unmeasured variables in the POQA-R4 assessment, which may or may not influence the observed results; one must interpret the results appropriately.

Dissemination Plan

The project manager (PM) delivered the results of the EBP change project by sharing the findings with the CNE of the facility as a slide presentation. Within the slide presentation, the results focused on the project's clinical significance. The change project had an 8-week timeframe; therefore, the results were made known to the direct system-level stakeholders within the facility via zoom conference after the 8-weeks.

Additionally, the project change is submitted to get archived at the University of Saint Augustine in the Health Sciences Library in the Scholarship, and Open Access Repository (SOAR), which stores student change projects. The publication of SOAR allowed students as professional academia to get published and gave scholarly access to the rest of the nursing world.

In addition, the project was submitted to HeartMath for approved placement in their database of research and dissertations.

Lastly, this DNP project aims to send the final manuscript to nursing journals focused on critical care nursing, psychiatric, physical, and emotional health. Evidence-Based Nursing (EBN) is a nursing journal by BMJ; this journal was peer-reviewed, covering the field of evidence-based nursing. Nursing Outlook is another peer-reviewed journal for nurses geared towards nurses and nursing leaders with innovative ideas. The topic areas will include stress management, preventing nurse burnout through using HeartMath mindfulness techniques, and focused appreciation. The DNP student's preceptor Dr. Eleanor Eberhard and primary faculty, Dr. Robin Kirschner, will peer-review the manuscript and presentation before submitting it to the journal. Dr. Eberhard and Dr. Kirschner were essential in the development and guidance of this project.

Conclusion

The COVID-19 pandemic has flooded hospital critical care areas across the United States and has caused a change in the way health care was delivered. This projected change has assisted in decreasing the effects of stress using HeartMath stress management techniques among critical care nurses. This intervention is clinically significant due to the prevalence of stress and burnout in critical care nurses, who experience individual struggles, low motivation, fatigue in caring for patients, sleep disturbances, and organizational barriers, including lack of managerial support and low morale. Negative feelings contribute to poor job satisfaction, lousy patient care, and depression (Green et al., 1991). HeartMath training techniques provide nurses with renewed feelings of gratitude for causing a physiological change and improving care delivery. Eight participants equaling 20% of the critical care unit, participated in the project. Absenteeism

dropped by 20%, correlating with the percentage of participants involved in the change project.

One nurse transferred out of the unit, decreasing nurses leaving, including transfers and resignations down -75%. All the available statistical evidence suggests that the measurement basis of the scales and subscales of the framework of POQA-R4 appears to be psychometrically sound, suggesting that a significant positive change occurred.

References

- Alkhaldeh, J. F. M. A., Soh, K. L., Mukhtar, F. B. M., Peng, O. C., & Anshasi, H. A. (2020). Stress management interventions for intensive and critical care nurses: A systematic review. *Nursing in critical care*, 25(2), 84-92. <https://doi.org/10.1111/nicc.12489>
- Ambrose, S. (2021). *Use of a mindfulness-based resiliency intervention to reduce nurse intention to quit the organization*. [Doctoral project, University of St Augustine for Health Sciences]. SOAR @ USA: Student Scholarly Projects Collection. <https://doi.org/10.46409/sr.HNIO5426>
- Ballesio, A., Lombardo, C., Lucidi, F., & Violani, C. (2021). Caring for the carers: Advice for dealing with sleep problems of hospital staff during the covid-19 outbreak. *J Sleep Res.* 30, e13096. <https://doi.org/10.1111/jsr.13096>
- Burnes, B. (2020). The origins of Lewin's three-step model of change. *The Journal of Applied Behavioral Science*, 56(1), 32-59. <https://doi.org/10.1177/0021886319892685>
- da Silva, A. P. F., Carneiro, L. V., & Ramalho, J. P. G. (2020). Incidence of burnout syndrome in nursing professionals in intensive therapy unit. *Revista de Pesquisa, Cuidado é Fundamental Online*, 12, 915-920. <https://badge.dimensions.ai/details/id/pub.1129529138/citations>
- Fethney, J. (2010). Statistical and clinical significance, and how to use confidence intervals to help interpret both. *Australian Critical Care*, 23(2), 93-97. <https://doi.org/10.1016/j.aucc.2010.03.001>
- Friganović, A., Selič, P., & Ilić, B. (2019). Stress and burnout syndrome and their associations with coping and job satisfaction in critical care nurses: a literature review. *Psychiatria Danubina*, 31(1), 21-31. <https://pubmed.ncbi.nlm.nih.gov/30946714/>

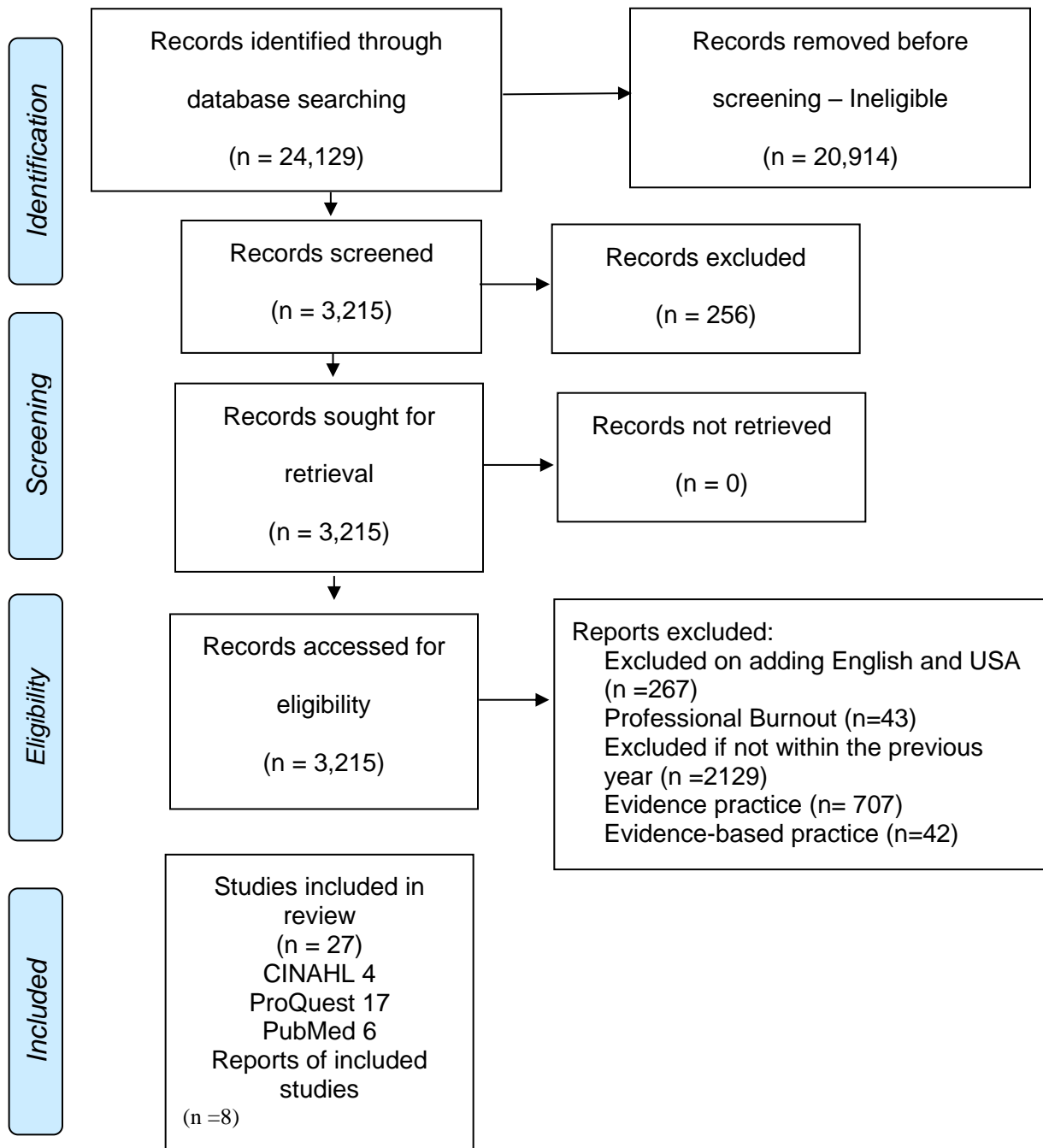
- Friganović, A., & Selič, P. (2021). Where to look for a remedy? Burnout syndrome and its associations with coping and job satisfaction in critical care nurses—a cross-sectional study. *International Journal of Environmental Research and Public Health*, 18(8), 4390. <https://doi.org/10.3390/ijerph18084390>
- Green, D. E., Walkey, F. H., & Taylor, A. J. (1991). The three-factor structure of the Maslach Burnout Inventory: A multicultural, multinational confirmatory study. *Journal of Social Behavior and Personality*, 6(3), 453. <https://psycnet.apa.org/record/1992-11360-001>
- Goforth, C. (2021). Our new normal: Back to the basics and creating our future. *Crit Care Nurse*, 41(1), 7–9. <https://doi.org/10.4037/ccn2021730>
- Heartmath Institute. (2017). *The science of HeartMath*. HeartMath. <https://www.heartmath.com/science/>
- Heartmath Institute. (2021). *Solution for burnout and fatigue*. HeartMath Institute. <https://www.heartmath.org/resources/solutions-for-stress/easing-fatigue-and-burnout/>
- Hilcove, K., Marceau, C., Thekdi, P., Larkey, L., Brewer, M. A., & Jones, K. (2020). Holistic nursing in practice: Mindfulness-based yoga as an intervention to manage stress and burnout. *Journal of Holistic Nursing*, 39(1), 29-42. <https://doi.org/10.1177/0898010120921587>
- Hussain, S. T., Lei, S., Akram, T., Haider, M. J., Hussain, S. H., & Ali, M. (2018). Kurt Lewin's change model: A critical review of the role of leadership and employee involvement in organizational change. *Journal of Innovation & Knowledge*, 3(3), 123-127. <https://doi.org/10.1016/j.jik.2016.07.002>

- Kebapcı, A., & Güner, P. (2021). "Noise Factory": A qualitative study exploring healthcare providers' perceptions of noise in the intensive care unit. *Intensive and Critical Care Nursing*, 63, 102975. <https://doi.org/10.1016/j.iccn.2020.102975>
- Kok, N., van Gorp, J., Teerenstra, S., van der Hoeven, H., Fuchs, M., Hoedemaekers, C., & Zegers, M. (2021). Coronavirus disease 2019 immediately increases burnout symptoms in ICU professionals: A longitudinal cohort study. *Critical care medicine*, 49(3), 419-427. <https://doi.org/10.1097/CCM.0000000000004865>
- Liang, W., Liang, H., Ou, L., Chen, B., Chen, A., Li, C., ... & He, J. (2020). Development and validation of a clinical risk score to predict the occurrence of critical illness in hospitalized patients with COVID-19. *JAMA internal medicine*, 180(8), 1081-1089. <https://doi.org/10.1001/jamainternmed.2020.2033>
- Liu, Y., Aunguroch, Y., Gunawan, J., & Zeng, D. (2021). Job stress, psychological capital, perceived social support, and occupational burnout among hospital nurses. *Journal of Nursing Scholarship*.
- Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry: Official Journal of The World Psychiatric Association (WPA)*, 15(2), 103–111. <https://doi.org/10.1002/wps.20311>
- Mintz-Binder, R., Andersen, S., Sweatt, L., & Song, H. (2021). Exploring strategies to build resiliency in nurses during work hours. *JONA: The Journal of Nursing Administration*, 51(4), 185-191. <http://do.org/10.1097/NNA.0000000000000996>
- Page, M., McKenzie, J., Bossuyt, P., Boutron, I., Hoffmann, T., Mulrow, C., Shamseer, L., Tetzlaff, J., Akl, E., Brennan, S., Chou, R., Glanville, J., Grimshaw, J., Hróbjartsson, A., Lalu, M., Li, T., Loder, E., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The

- prisma 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372. <https://doi.org/10.1136/bmj.n71>
- Riley, K., & Gibbs, D. (2013). Heartmath UK healthcare: Does it add up? *Journal of holistic healthcare*, 10(1), 6. <https://www.heartmathbenelux.com/doc/barts-heartmath-article-jhh-10.1.pdf>
- Turan, N. (2021). An investigation of the effects of an anger management psychoeducation programme on psychological resilience and effect of intensive care nurses. *Intensive and Critical Care Nursing*, 62, 102915. <https://doi.org/10.1016/j.iccn.2020.102915>
- While, A. E., & Clark, L. L. (2021). Management of work stress and burnout among community nurses arising from the COVID-19 pandemic. *British Journal of Community Nursing*, 26(8), 384–389. <https://doi.org/10.12968/bjcn.2021.26.8.384>
- Zhang, X. J., Song, Y., Jiang, T., Ding, N., & Shi, T. Y. (2020). Interventions to reduce burnout of physicians and nurses: An overview of systematic reviews and meta-analyses. *Medicine*, 99(26). <https://doi.org/10.1097/MD.0000000000020992>

Appendix A

PRISMA Literature Search Strategy Diagram



Note. Adapted from Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLOS Medicine*, 6(7), e1000097. <https://doi.org/10.1371/journal.pmed.1000097>

Appendix B

Summary of Primary Research Evidence

Citation	Design, Level Quality Grade	Sample Sample size	Intervention Comparison	Theoretical Foundation	Outcome Definition	Usefulness Results Key Findings
da Silva, A. P. F., Carneiro, L. V., & Ramalho, J. P. G. (2020). Incidence of burnout syndrome in nursing professionals in intensive therapy unit. <i>Revista de Pesquisa, Cuidado é Fundamental Online</i> , 12, 915-920.	Level I Good Quality	N=25	The participants are exposed to different occupational stressors that affect their wellbeing. These include long working hours and exposure to pain, suffering and death cases.	Burnout Syndrome as a setback for critical care and the occupational efficiency for the healthcare professionals	Burnout Syndrome varied in three dimensions; high, medium, and low levels.	Main causes for burnout syndrome were lack of material human resources, and acknowledgement, night shifts, and unhealthy environment.
Liu, Y., Aunguroch, Y., Gunawan, J., & Zeng, D. (2021). Job Stress,	Level 1 High Quality	N= 766	The Nurse Stressor Scale was employed	The causative factors of nursing burnout.	A structural relationship was confirmed across	Among the influencers of occupational burnout were psychological capital, job

<p>Psychological Capital, Perceived Social Support, and Occupational Burnout Among Hospital Nurses. <i>Journal of Nursing Scholarship</i>.</p>					<p>the variables of change project.</p>	<p>stress, and perceived social support significantly influenced occupational burnout</p>
<p>Turan, N. (2021). An investigation of the effects of an anger management psychoeducation programme on psychological resilience and effect of intensive care nurses. <i>Intensive and Critical Care Nursing</i>, 62, 102915.</p>	<p>Level I Good Quality</p>	<p>N=16</p>	<p>Psychoeducation programs sort to acquaint the participants with the necessary knowledge on anger management. A control group (n=16)</p>	<p>Anger management has beneficial outcomes for the overall effectiveness of intensive care nursing.</p>	<p>Change was observed in the scores of the evidence group while no change was noted in the control group's scores.</p>	<p>The anger management psychoeducation program enhanced the psychological resilience and emotional state of the intensive care nurses.</p>
<p>Kebapçı, A., & Güner, P. (2021). "Noise Factory":</p>	<p>Level 1</p>	<p>N= 5</p>	<p>The study utilized five physicians and</p>	<p>Noise has been termed as</p>	<p>Human-induced noise affected the</p>	<p>Human-induced noise escalates the exposure to</p>

<p>A qualitative study exploring healthcare providers' perceptions of noise in the intensive care unit. <i>Intensive and Critical Care Nursing</i>, 63, 102975.</p>	<p>Good Quality</p>		<p>ten registered nurses.</p>	<p>inevitable in the ICU units and affects the cognitive functions of the health providers.</p>	<p>cognition of the health providers, their concentration, and overall job performance.</p>	<p>job stress and nursing burnout among the critical care nurses.</p>
<p>Friganović, A., & Selič, P. (2021). Where to Look for a Remedy? Burnout Syndrome and its Associations with Coping and Job Satisfaction in Critical Care Nurses—A Cross-Sectional Study. <i>International Journal of Environmental Research and Public Health</i>, 18(8), 4390.</p>	<p>Level 1 High quality</p>	<p>N=620</p>	<p>Data collected through the Maslach Burnout Inventory and the ways of coping and Job Satisfaction Scale. The nurse's demographic profiles were utilized for a multivariate model</p>	<p>Burnout is psychological, and a syndrome related to work with long-term exposure.</p>	<p>There was no significant association between coping mechanisms, gender, and job satisfaction.</p>	<p>A significant negative relationship between nursing burnout and job satisfaction indicates the intensity of stress management and the need for hospital management teams to modify work environments.</p>

Appendix C

Summary of Systematic Reviews (SR)

Citation	Quality Grade	Question	Search Strategy	Inclusion/Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/Implications
Alkhalaf, J. F. M. A., Soh, K. L., Mukhtar, F. B. M., Peng, O. C., & Anshasi, H. A. (2020). Stress management interventions for intensive and critical care nurses: A systematic review. <i>Nursing in critical care, 25(2)</i> , 84-92.	Level II Good quality	What is the quality of the primary evidenced based on interventions for the management of occupational stress among intensive and critical care nurses?	The search strategy identified relevant project change by use of key terms on CINAHL, The Cochrane Library, PsycINFO, EBSCO, MEDLINE,	inclusion criteria were include ICU or Critical care unit nurses investigate interventions on managing occupational stress. Reported occupational stress by use of the Nursing Stress Scale (ENSS), Nursing	Data extracted was on authors' names, publication years, participants number and their details, methodological material, descriptions of the intervention and control group,	Training on cognitive behavioral skills and mindfulness-based interventions were effective scopes of reducing occupational stress.	Emphasis is drawn on methodological quality evidence-based practices on the effectiveness of stress management interventions.

Citation	Quality Grade	Question	Search Strategy	Inclusion/Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/Implications
			and PubMed databases	Stress Scale (NSS).	intervention details, follow up, outcomes, and their relevant measurements.		
Zhang, X. J., Song, Y., Jiang, T., Ding, N., & Shi, T. Y. (2020). Interventions to reduce burnout of physicians and nurses: An overview of systematic reviews and meta-analyses. <i>Medicine</i> , 99(26).	Level II High quality	What is the feasibility of individual-focused and combined interventions for nursing burnout?	The search was conducted within Cochrane Library, PubMed, Ovid, Scopus, EBSCO,	An inclusion criterion for the critical words such as burnout, physicians and nurses, and interventions were used.	A data spreadsheet that comprised of study characteristics, participant characteristics, outcome measures, and project change	Individual-focused and combined interventions provided a bundle strategy to combat burnout among	Health policy makers are tasked with developing suitable, feasible bundled strategies that respond to health practitioners' individual and group needs.

Citation	Quality Grade	Question	Search Strategy	Inclusion/Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/Implications
			and CINAHL for publications since inception to 2019. Relevant Google scholar searches were also added.		methods was utilized.	physicians and nurses.	
Friganović, A., Selič, P., & Ilić, B. (2019). Stress and burnout syndrome and their associations with	Level II High quality	Are systematic approaches sufficient for	Relevant studies were retrieved	Keywords used were burnout, coping	786 projects extracted on burnout and its variables. A	While burnout is an evidence-based public	Activities designed for stress management and subsequent burnout curbing should be an everyday experiment for the

Citation	Quality Grade	Question	Search Strategy	Inclusion/Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/Implications
coping and job satisfaction in critical care nurses: a literature review. <i>Psychiatria Danubina</i> , 31(suppl. 1), 21-31.		a standard intervention to nursing burnout?	from Scopus and PubMed Publication within the last 15 years.	mechanisms, job satisfaction, nurses, and intensive care.	qualitative approach arrived at 29 original evidenced-based articles.	health problem, there are no systematic approaches to its prevention.	healthcare professionals. individuals react differently to the interventions.

Legend:

Appendix D

How Stress Affects the Body

HOW STRESS AFFECTS THE BODY

Zzzz
Chronic Fatigue

60% to 80% of primary care doctor visits are related to stress, yet only 3% of patients receive stress management help.

JAMA Intern Med. 2013;173(1):76-77

Headaches, Dizziness, ADD/ADHD, Anxiety, Irritability & Anger, Panic Disorders

Grinding Teeth & Tension in Jaw

Increased Heart Rate, Strokes, Heart Disease, Hypertension, Diabetes Type I & II, Arrhythmias

Digestive Disorders, Upset Stomach, Abdominal Pain, Irritable Bowel Syndrome

Weight Gain & Obesity

Decreased Sex Drive

Muscle Tension, Fibromyalgia, Complex Regional Pain Syndrome

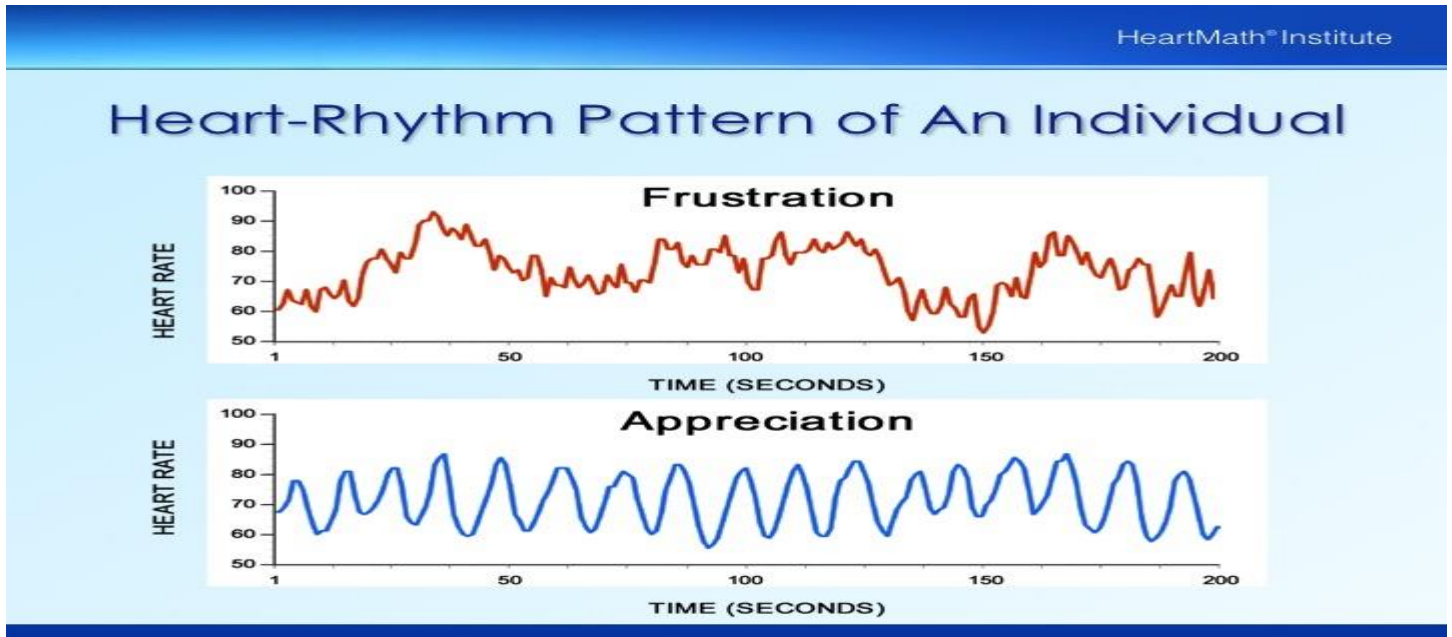


STRESS AFFECTS THE ENTIRE BODY & CAN CAUSE MANY OTHER PROBLEMS
42% of Americans report lying awake at night due to stress
American Psychological Association Stress in America Report 2013

DECREASED ENERGY LEVEL, MOOD & APPETITE

Appendix E

Heart-Rhythm When Feeling Frustrated Versus Appreciated



https://youtu.be/Kyfm5_LLxow

Appendix F

SWOT Analysis

<p style="text-align: center;">Strength</p> <ul style="list-style-type: none"> • Great Project Preceptor • HeartMath • Facility leaders' commitment • Champion team on board 	<p style="text-align: center;">Opportunity</p> <ul style="list-style-type: none"> • Incorporate the challenges of COVID into the change project • Create interest among the staff to want to join the intervention • Building support and training HeartMath • Create a system wide change
<p style="text-align: center;">Weakness</p> <ul style="list-style-type: none"> • Technological challenges that impede intervention • Challenges caused by the nursing union • Increase Fatigue 	<p style="text-align: center;">Threat</p> <ul style="list-style-type: none"> • Increase in COVID-cases • Scheduling conflicts • Lack of Leaders Commitments

Appendix G

POQA-R4

POQA-R4 Personal and Organizational Quality Assessment-Revised

This survey is voluntary and confidential.
Only summary, anonymous data will be provided to your organization.

INSTRUCTIONS: Please fill in the boxes below with the requested dates and ID number.
For the remaining items, FILL IN THE NUMBER of the response that describes you.

TODAY'S DATE		
Month	Day	Year
1	2	3
4	5	6
7	8	9
0	1	2
3	4	5
6	7	8
9	0	1
2	3	4
5	6	7
8	9	0
1	2	3
4	5	6
7	8	9
0	1	2
3	4	5
6	7	8
9	0	1

UNIQUE ID NUMBER			
0	1	2	3
4	5	6	7
8	9	0	1
2	3	4	5
6	7	8	9
0	1	2	3
4	5	6	7
8	9	0	1
2	3	4	5
6	7	8	9
0	1	2	3
4	5	6	7
8	9	0	1
2	3	4	5
6	7	8	9

Please enter the last four digits of your social security number. This number is used for matching your responses over time.

- 1. What is your GENDER?
 Male Female

- 2. What is your MARITAL STATUS? (fill in one only)
 Single Partnered Divorced
 Married Separated Widowed

- 3. Roughly how old are you?
 Under 21 31-40 51-60 Over 70
 21-30 41-50 61-70

- 4. What is your approximate salary range?
 Under \$20,000 \$70,000 - 79,999
 \$20,000 - 29,999 \$80,000 - 89,999
 \$30,000 - 39,999 \$90,000 - 99,999
 \$40,000 - 49,999 \$100,000 - 149,999
 \$50,000 - 59,999 \$150,000 or more
 \$60,000 - 69,999

- 5. What is your highest level of EDUCATION? (fill in one only)
 Elementary Bachelor's Degree
 Junior/Middle School Some Graduate
 High School Master's Degree
 Technical School Doctorate Degree
 Some College/Associate's Degree

- 6. Which of the following best describes your EMPLOYMENT STATUS? (fill in one only)
 Student Executive
 Laborer Engineer/Technical
 Skilled or Clerical Retired
 Management Unemployed
 Professional Other

- 7. How many HOURS PER WEEK do you usually work?
 Less than 25 hours 41-50 hours
 26-35 hours 51-59 hours
 36-40 hours 60 or more hours

- 8. How long have you been with this COMPANY or ORGANIZATION?
 0 - 6 MONTHS 5 YEARS - 10 YEARS
 6 MONTHS - 1 YEAR 10 YEARS - 20 YEARS
 1 YEAR - 2 YEARS 20 YEARS OR MORE
 2 YEARS - 5 YEARS

- 9. How long have you been in your CURRENT JOB or POSITION?
 0 - 6 MONTHS 2 YEARS - 5 YEARS
 6 MONTHS - 1 YEAR 5 YEARS - 10 YEARS
 1 YEAR - 2 YEARS 10 YEARS OR MORE

Please turn to the next page

PLEASE DO NOT WRITE IN THIS AREA

76414

DOQA-R4 Personal and Organizational Quality Assessment-Revised

INSTRUCTIONS:

Following is a list of words that describe feelings people sometimes have. Please FILL IN THE NUMBER which reflects how frequently you have felt the following during the LAST MONTH.

- 1. Resentful
- 2. Fatigued
- 3. Annoyed
- 4. Sad
- 5. Body aches (Joint Pain, Backaches, etc.)
- 6. Headaches
- 7. Rapid Heartbeats
- 8. Depressed
- 9. Exhausted
- 10. Blue
- 11. Appreciative
- 12. Relaxed
- 13. Anxious
- 14. Tired
- 15. My sleep is inadequate
- 16. Thankful
- 17. Indigestion, heartburn or stomach upset
- 18. Calm
- 19. Cynical
- 20. Muscle Tension
- 21. Grateful
- 22. Worried
- 23. Unhappy
- 24. Uneasy
- 25. Angry
- 26. Peaceful

	ALWAYS						
	VERY OFTEN						
	OFTEN						
	FAIRLY OFTEN						
	SOMETIMES						
ONCE IN A WHILE							
NOT AT ALL							
1	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2	(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	(1)	(2)	(3)	(4)	(5)	(6)	(7)
4	(1)	(2)	(3)	(4)	(5)	(6)	(7)
5	(1)	(2)	(3)	(4)	(5)	(6)	(7)
6	(1)	(2)	(3)	(4)	(5)	(6)	(7)
7	(1)	(2)	(3)	(4)	(5)	(6)	(7)
8	(1)	(2)	(3)	(4)	(5)	(6)	(7)
9	(1)	(2)	(3)	(4)	(5)	(6)	(7)
10	(1)	(2)	(3)	(4)	(5)	(6)	(7)
11	(1)	(2)	(3)	(4)	(5)	(6)	(7)
12	(1)	(2)	(3)	(4)	(5)	(6)	(7)
13	(1)	(3)	(5)	(2)	(5)	(7)	(7)
14	(1)	(2)	(3)	(4)	(5)	(6)	(7)
15	(1)	(2)	(3)	(4)	(5)	(6)	(7)
16	(1)	(2)	(3)	(4)	(5)	(6)	(7)
17	(1)	(2)	(3)	(4)	(5)	(6)	(7)
18	(1)	(2)	(3)	(3)	(5)	(6)	(7)
19	(1)	(2)	(3)	(4)	(5)	(6)	(7)
20	(1)	(2)	(3)	(3)	(5)	(6)	(7)
21	(1)	(2)	(3)	(3)	(5)	(6)	(7)
22	(1)	(2)	(3)	(3)	(5)	(6)	(7)
23	(1)	(2)	(3)	(4)	(5)	(6)	(7)
24	(1)	(2)	(3)	(3)	(5)	(6)	(7)
25	(1)	(3)	(3)	(4)	(5)	(6)	(7)
26	(1)	(2)	(3)	(4)	(5)	(6)	(7)

27. Over the last month my health has been:
 Excellent (1) Good (2) Average (3) Fair (4) Poor (5)

28. Fill in the bubble on the line below that indicates how stressed you have been in the past month:
 Most Calm I've Ever Been ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ Most Stressed I've Ever Been

Please turn to the next page

Following is a list of statements that describe the way people sometimes feel or think about themselves. Please FILL IN THE NUMBER which reflects how frequently you have felt or thought the following during the LAST MONTH.

	ALWAYS						
	VERY OFTEN			OFTEN			
	FAIRLY OFTEN						
	SOMETIMES						
	ONCE IN A WHILE						
	NOT AT ALL						
29. My life is deeply fulfilling	1	2	3	4	5	6	7
30. Dynamic	1	2	3	4	5	6	7
31. I get upset easily	1	2	3	4	5	6	7
32. I find it difficult to calm down after I've been upset	1	2	3	4	5	6	7
33. I feel loved by my spouse/partner	1	2	3	4	5	6	7
34. I feel optimistic about the future	1	2	3	4	5	6	7
35. I wake up and look forward to each day	1	2	3	4	5	6	7
36. Motivated	1	2	3	4	5	6	7
37. I am pleased with my life	1	2	3	4	5	6	7
38. I sometimes have urges to break, throw or smash things	1	2	3	4	5	6	7
39. I sometimes have a short fuse	1	2	3	4	5	6	7
40. Enthusiastic	1	2	3	4	5	6	7

We are asking about your feelings and experiences over the LAST MONTH. Please FILL IN THE NUMBER which reflects how much you AGREE or DISAGREE with the following statements as they apply to you, your job and place of employment during the LAST MONTH.

	STRONGLY AGREE						
	AGREE						
	SLIGHTLY AGREE				NEUTRAL		
	SLIGHTLY DISAGREE			DISAGREE			
	STRONGLY DISAGREE						
41. I am satisfied with my life	1	2	3	4	5	6	7
42. I am satisfied with my job	1	2	3	4	5	6	7
43. There is tension between management and staff	1	2	3	4	5	6	7
44. I feel there is never enough time	1	2	3	4	5	6	7
45. I feel pressed for time	1	2	3	4	5	6	7
46. The pace of life is too fast and I can't keep up	1	2	3	4	5	6	7
47. I feel like leaving this organization	1	2	3	4	5	6	7
48. I feel conflict between work and personal priorities	1	2	3	4	5	6	7
49. It takes a lot of effort to sustain my performance level	1	2	3	4	5	6	7
50. I feel like quitting my job	1	2	3	4	5	6	7
51. I work with people who don't get along with each other	1	2	3	4	5	6	7
52. I'm aware of power struggles between co-workers that damage morale	1	2	3	4	5	6	7

Thank You Very Much For Your Participation!

FOR OFFICE USE ONLY

A.

0	1	2	3	4	5	6	7	8	9
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

B.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

C.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----



To: The University of St. Augustine for Health Sciences


Date: November 29, 2021

Re: Permission for use of the Personal and Organizational Assessment-Revised (POQA-R)

This letter serves as permission for the use of the HeartMath™ POQA tool by Danny Atkins for his DNP project, that addresses The PICOT question of “Do critical care nurses, who practice stress management techniques, compared to critical care nurses who do not, reduce nursing burnout symptoms over an Eight-8-week timeframe?”

This tool is not authorized for use for any compensated activities. We are requesting that a final approved project paper be sent to the HeartMath Institute via Robert Browning.

Robert Browning PhD (h.c.)
Director Health Partnerships and Senior Trainer, HeartMath LLC
Cell: 831-247-9778
Work: 831-338-8752
Email: rbrowning@heartmath.com

 HeartMath.

Appendix H

Evaluation Tool

Evaluation Tools		
Assessment	Pre-Training	Post-training
Individual		
POCA-R4		
Organizational		
Employee turnover		
Absence		
Complaints		

Evaluation tool for pre-training and post-training for organizational and individual quality.

Riley, K., & Gibbs, D. (2013). Heartmath UK healthcare: Does it add up? *Journal of holistic healthcare, 10*(1),

6. <https://www.heartmathbenelux.com/doc/barts-heartmath-article-jhh-10.1.pdf>

Appendix I**Evaluation Tools**

Individual Quality	Pre-training (%)	Post-training (%)	(%) Change
Sleeping difficulties			
Work-life satisfaction			
Organizational Quality			
Intention to Quit			
Free open communication			

Evaluation tool to examine individual and organizational quality.

Riley, K., & Gibbs, D. (2013). Heartmath UK healthcare: Does it add up? *Journal of holistic healthcare, 10*(1),

6. <https://www.heartmathbenelux.com/doc/barts-heartmath-article-jhh-10.1.pdf>

Appendix J

Project Schedule

Activity	NUR7801								NUR7802								NUR7803							
	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 change project	x	x	x	x	x	x	x	x	x	x														
Collaborate with stakeholders		x		x					x		x			x	x	x	x	x	x			x	x	x
Begin project proposal and plan intervention			x	x	x	x	x	x																
Find mission and vision					x	x																		
Collaborate with interprofessional leadership team					x			x		x	x					x	x		x	x				
Prepare IRB and proposal								x	x	x														
Speak on the mission and vision to leadership								x	x	x														
Educate and train providers										x	x	x	x											
Spread resources											x	x												
Implement project												x	x											
Analyze data and feedback														x	x	x								

Appendix K

Change Project Budget

EXPENSES		REVENUE	
Direct		Billing	
Salary and benefits \$90 hour x 8 nurses for 3 hours each	\$2160	Grants	\$2500
Supplies	\$820	Institutional budget support	
Services (HeartMath)	\$500		
Statistician \$55 hour projected 8 hours	\$440		
Office Supplies	\$50		
Indirect			
Overhead			
Total Expenses	\$3970	Total Revenue	\$2500
Net Balance			-\$1470

Appendix L

Evaluation Logic Model

INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES		
Staff Infrastructure Time Training and Technical assistance Finances	Obtain permission to perform the project from the university and facility. Data collection pre- and post-training using the POCA-R questionnaire. Training on stress management (3 step Kurt model)	Critical care nurses with knowledge of stress management	Short-term	Medium-term	Long-term
			Critical care nurses with the capability to manage their stress levels effectively hence diminished stress symptoms and fatigue	Improved individual and organizational qualities. Quality patient care	Improved well-being of critical care nurses. Quality of life