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An Evidence-Based Approach for Decreasing Burnout in Health Care Workers

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**An Evidence-Based Approach for Decreasing Burnout in
Health Care Workers**

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This Manuscript Partially Fulfills the Requirements for the
Doctor of Nursing Practice Program and is Approved by:

Dr. David Liguori, DNP, NP-C, ACHPN

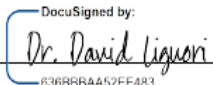
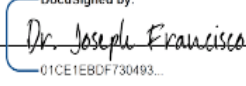
Dr. Joseph Francisco, DNP, NP-C

March 15, 2024

AN EVIDENCE- BASED APPROACH FOR DECREASING BURNOUT IN HEALTH CARE WORKERS

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Abstract

Practice Problem: Health care worker (HCW) burnout is a pervasive phenomenon within the healthcare industry, affecting professionals across various disciplines. Emotional exhaustion is a prominent feature, leading to feelings of being emotionally drained, overwhelmed, and unable to cope effectively with the demands of the job. Additionally, burnout often results in a significant lack of motivation among HCWs, who may struggle to find meaning and purpose in their work, exacerbating feelings of frustration and disillusionment. Consequences extend beyond individual well-being, impacting healthcare organizations with reduced work efficacy, low productivity, increased absenteeism, and high turnover rates. Addressing burnout requires a multifaceted approach, prioritizing supportive work environments, effective stress management strategies, and interventions aimed at promoting resilience and job satisfaction among healthcare professionals.

PICOT: The PICOT question that guided this scholarly project was: In healthcare workers (P) how does the HeartMath techniques (I) compared to standard mental health care (C) affect symptoms of burnout (O) within 8 weeks (T)?

Evidence: The literature evidence consistently demonstrated positive outcomes in preventing burnout among healthcare workers through the implementation of burnout prevention programs. These interventions equip healthcare professionals with the necessary tools and skills to effectively address their mental health challenges and uphold their physical well-being. By providing support mechanisms and promoting self-care practices, burnout prevention initiatives empower healthcare workers to proactively manage stressors inherent in their roles, thereby fostering resilience and sustaining optimal job performance. Such interventions not only benefit

individual healthcare workers but also contribute to the overall functioning and quality of healthcare delivery systems.

Intervention: The proposed intervention entailed implementing burnout management-based techniques developed by HeartMath within a primary care setting, aiming to mitigate burnout and address employment-related mental health concerns among staff. The program was designed to provide a sustainable framework for employees experiencing mental health challenges, ultimately enhancing their well-being, reducing absenteeism, and enhancing patient outcomes. This initiative sought to offer practical strategies for coping with workplace stressors, thereby fostering a healthier work environment and promoting the overall welfare of both healthcare providers and the patients they serve.

Outcome: The results of this scholarly change project indicated a significant difference in the mean scores between pre- and posttests on the Personal and Organizational Quality Assessment (POQA-R4), suggesting the effectiveness of the HeartMath intervention in improving mental health status and work productivity. The findings demonstrated clinical significance, as evidenced by a notable decrease in burnout levels following participants' exposure to the intervention. These outcomes underscore the potential impact of implementing HeartMath techniques to address burnout and promote overall well-being among individuals in professional settings.

Conclusion: The implementation of the HeartMath's burnout management-based techniques within a primary care setting demonstrated promising results in mitigating burnout and enhancing mental health status and work productivity among healthcare professionals. The significant difference observed between pre- and post-test scores highlights the clinical

significance of this intervention. These findings underscore the potential value of incorporating such interventions into organizational strategies aimed at addressing burnout and improving overall staff well-being. Further research and implementation efforts in similar contexts may provide additional insights into the effectiveness and scalability of these approaches in healthcare and other professional settings.

An Evidence-Based Approach for Decreasing Burnout in Health Care Workers

The effect of burnout within healthcare is well documented and continues to be a pervasive issue, particularly for healthcare workers (Vasquez et al., 2021). Additionally, burnout is a symptom of emotional exhaustion, and includes a sense of detachment from others, as well as reduced personal accomplishment. Equipping healthcare workers to manage daily stress and grip the unavoidable challenges that are causing distress to a person's mental health is important (Vasquez et al., 2021). Literature shows that an organizations' continued failure to address the lack of support for employees' psychological well-being often ends in costing the organization more money than if the problem had been initially addressed (Wakefield et al., 2023). Employees with high levels of burnout take more time off and show lower engagement and commitment at work, which reflects poorly on the employer (Fond et al., 2022).

There are numerous reports of work-related stress, in particular burnout, that has resulted in absenteeism and decreased productivity. Burnout can lead to personal and professional dissatisfaction, depression, and social isolation (Yu-Fang et al., 2022). This can ultimately have negative consequences on an individual's work performance, which can negatively impact patient outcomes.

The workplace, where many spend most of their waking hours each week, is often the most structured and controlled environment in healthcare workers' lives. Because of that, the employees' workplace is often the primary means of social and emotional support (Ahola et al., 2017; Nicolaou et al., 2021). Accordingly, the workplace is also a critical setting for understanding and supporting mental health. The primary care for employees' psychological well-being should be a fundamental expectation of employers (Rollin et al., 2022). Developing a

positive work environment and making mental health resources accessible to healthcare workers can also help entice top talent and improve workplace productivity (Vasquez et al., 2021).

The intent of this DNP scholarly project was to apply evidence-based practice interventions in an effort to reduce symptoms of burnout in health care workers (HCWs) in a community practice setting. The focus was reducing work-related burnout with burnout management-based techniques to mitigate absenteeism and increase HCWs mental wellbeing and productivity.

Significance of the Practice Problem

While mental health resources can be a great service, making those services easily accessible may be challenging. Thirty-seven percent of employees said employer-provided mental health resources can contribute to a better work environment (Guo et al., 2022). Developing a burnout prevention program for healthcare workers was expected to improve current knowledge on mental health issues and improve healthcare workers' mental health status (Miotto et al., 2020). Brooks et al. (2022) noted that more than half of all healthcare workers (52%) had questioned their career paths because of the mental health challenges they faced. Peney et al. (2023) found that up to 60% of workers considered leaving the healthcare profession, with between one-fourth to one-third planning to retire earlier because of the COVID-19 pandemic. Peney et al. (2023) found that up to 60% of workers considered leaving the healthcare profession, with between one fourth to one third planning to retire earlier because of the COVID-19 pandemic. A burnout prevention helped healthcare workers to have the tools and skills needed to address their mental health challenges and maintain good physical health.

The National Bureau of Economic Research data revealed that employees who did not use their well-being programs tended to have higher rates of medical care; annual medical costs

were about \$1,400 higher for such employees (Wakefield et al., 2023). Well-being programs such as Mental Health First Aid (MHFA) could help managers and supervisors assist staff undergoing a mental health or substance use challenge or crisis (Wakefield et al., 2023). MHFA is an evidence-based training administered by the National Council for Mental Well-being that explains how to identify, understand, and respond to signs of mental health issues (Brooks et al., 2022). In the same study, the authors demonstrated the effectiveness of MHFA training in increasing mental health literacy and support for those experiencing mental health issues .

However, according to the National Council for Mental Well-being, there are more than 2.6 million people across the United States, who have been trained in MHFA by a dedicated base of more than 15,000 instructors (Penev et al., 2023). Brook et al. (2022) conducted a study on the National Institute for Occupational Safety and Health Total Worker Health program, which showed that leadership training improved employees' feelings of well-being in the workplace; additionally, the program increased job satisfaction and reduced employee turnover (Brooks et al., 2022).

Ahola et al. (2017) predicted that healthcare workers would establish an evidence-based burnout prevention that would impact better healthcare delivery systems throughout the nation (Ahola et al., 2017). Moreover, this would ensure that there will be available, accessible, and equal help for all healthcare workers who experience burnout. A dedicated mental health program takes mental well-being seriously to enhance the healthcare delivery practice and system (Wakefield et al., 2023). This will secure adequate staffing levels and fair pay for workers, provide a simple process for taking sick leave, reduce absenteeism, combat stigma, and promote open dialogues about healthcare workers' mental health (Halladay et al., 2023).

PICOT Question

The PICOT question guiding this scholarly project was as follows: In healthcare workers (P) how does the HeartMath techniques (I) compared to standard mental health care (C) affect symptoms of burnout (O) within 8 weeks (T)?

Population

The target population for this project was healthcare workers experiencing mental health issues related to their work commitments at a community primary care clinic. The healthcare workers' ages range from 21 to 54 years of age.

Intervention

The proposed intervention was the introduction of HeartMath's burnout management-based techniques to a primary care setting, with a focus on decreasing burnout to assist employees with employment-related mental health issues. The program offered a sustainable program for employees experiencing mental health issues that improved employee well-being, decrease absenteeism, and improved patient outcomes.

Comparison

Brooks et al. (2022) found that up to 60% of employees considered leaving as a result of work-related stress and burnout. In the current practice setting, employees have been referred to outside resources to address their mental health issues. Moreover, an evidence-based approach changed project for decreasing burnout in healthcare workers (HCWs) has not existed.

The practice change project of incorporating EBP approach interventions for decreasing burnout in health care workers utilizing the HeartMath Burnout management-based techniques tool was compared to the current practice of community referral. Currently, lack of EBP approach interventions for decreasing burnout in health care workers can result in missed

opportunities to identify employees having work related difficulties and the inability to provide the assistance needed to address and deal with these work-related problems.

Outcome

The outcomes for this change project were both process and outcome measures. The process outcomes were EBP approach interventions utilizing HeartMath burnout management-based techniques, focus on a renewed sense of gratitude, and utilization burnout management skills for employees to include in education, awareness, and resources. Outcome measures included absenteeism/sick calls, program utilization of HeartMath, and employee satisfaction. It was expected that a tailored-fit burnout prevention-based intervention would largely benefit employees experiencing work related burnout by improving productivity and performance satisfaction (Penev et al., 2023).

Timing

The practice change project was conducted over an 8-week period.

Evidence-Based Practice Framework & Change Theory

To better address each phase of this DNP project, an evidence-based framework and change theory were the underpinnings to guide successful project development and implementation. The Johns Hopkins evidence-based practice model (JHEBP) and Lewin's change theory both offered a systemic approach to help navigate each stage of the DNP change project (Dang et al., 2022).

JHEBP Model

The JHEBP is a clinical decision tool intended to guide the problem-solving approach of the practicing clinician (Dang et al., 2022). It consists of a three-step process called PET:

practice question, evidence, and translation (Dang et al., 2022). Therefore, it was appropriate for this change project.

Question Phase

The EBP question was centered on developing an EBP approach change project for decreasing burnout for healthcare workers to examine a specific practice concern that included all relevant stakeholders, including its effect on burnout and absenteeism (Dearholt, 2022). The EBP question incorporated elements of PICO, explored and identified key stakeholders involved throughout the EBP process. The goal was to develop an evidence-based approach in implementing measures that collected evidence to establish its necessity to address mental health issues to subsequently increase workplace productivity. This approach utilized a database search and empirical research that guided the development of evidence-based approach interventions that resulted in an organizational change to benefit healthcare workers' mental health. Additionally, each organizational perspective in the following review offers generic considerations applicable to any setting and suggests that some conditions impinging on a setting that was manipulated to bring about a planned outcome for this change project (Dearholt, 2022).

Evidence Phase

This step involved a rigorous database search, a systematic literature review, and synthesizing all relevant studies (Johns Hopkins Medicine, n.d.). The review on internal and external sources of evidence appraised, summarized, and synthesized the evidence for this change project and later helped develop recommendations for change based on evidence synthesis (Endrejat & Burnes, 2022).

Translation Phase

The translation stage required synthesizing findings to develop recommendations (Johns Hopkins Medicine, n. d.) to determine the fit and feasibility of an EBP approach for decreasing burnout in the HCWs (Endrejat & Burnes, 2022). The researcher created, delivered, and implemented an action plan and evaluated the outcomes of EBP approach for decreasing burnout in healthcare workers intended for this DNP change project.

Lewin's Change Theory

Lewin's Change Theory was the theoretical foundation that guided this change project. Lewin's theory includes a three-step process: unfreezing, changing, and refreezing (Nursing Theory, n. d.). The three primary concepts include the *driving forces*, *restraining forces*, and *equilibrium* (Dearholt, 2022). Accordingly, certain driving forces push a course that sources change to transpire an effect (Dearholt, 2022). Nonetheless, the driving force, or change, pushes toward the desired direction, where the change causes a shift in equilibrium. The restraining force is the counterforce that hinders change. Equilibrium will be achieved (in refreezing) when the driving force equals the restraining force and no change occurs (Nursing Theory, n. d.).

Lewin's conceptual framework aligned with this project, and it guided the behavioral transformation project into a new norm. It is beneficial to understand the determinants of the transition process, identify the strengths, reduce resistance force, and sustain changes (Errida & Lotfi, 2021). During this project process, the unfreezing stage would require clinicians to understand and uncover the need for change and the knowledge deficit to eventually bridge the gap in practice.

The next stage involved the application of the driving force (Errida & Lotfi, 2021). It enabled change because it led the stakeholders to choose a direction that caused a shift in the

equilibrium toward change, and this was the theoretical groundwork of the planned change project (Endrejat & Burnes, 2022). The stage involved developing an EBP approach for decreasing burnout in the HCWs aligned to current system needs, re-engineering measurement systems, and creating new organizational structures. Therefore, carefully examining possible barriers at this stage was essential.

The final refreezing stage involved stability and sustained the change (Errida & Lotfi, 2021). Lewin's organizational change theory guided the development of an evidence-based approach to focus interventions for healthcare workers for health promotion, improving burnout management, and preventing absenteeism that reduced employee productivity at the workplace.

In addition, an evidence-based approach for decreasing burnout in HCWs served as an auxiliary support program to reduce the incidence of burnout and absenteeism that affected employees' productivity. This mental health program intervention for healthcare workers allowed the growth of an organization based on evaluative criteria set to adopt treatment plans after evaluating risk and the later refreezing stage where stability and change were sustained by incorporating supportive tools to reduce the anticipated barriers to change. The DNP student used Lewin's work as the basis for a selective coding framework for the content analysis during the empirical exploration of the project data (Endrejat & Burnes, 2022).

Evidence Search Strategy

The DNP student conducted an electronic literature search using University resources. The search included multiple databases including the MEDLINE PubMed database that covered nursing, healthcare systems, medicine, and allied health; it has an international scope, and is free and available to anyone 24/7 on the internet with a range of records up to 25+ million over 5,500 publications. The search also included JCR, the University of St. Augustine for Health Sciences

library, WebOPAC, Science Direct, Web of Science, Scopus, Google Scholar, EBSCO/non-EBSCO sites, CINAHL, data directory of Open Access Journals (DOAJ), BMC, APA PsychInfo, Gale Academic OneFile, e-books, online databases, and others that provided quick access to useful articles. The Centers for Disease Control website was one of the leading resources that supported this project's core elements, guidelines, and framework. The keywords in the search were in various combinations, including *community mental health services, health services needs and demand in adolescence, stakeholder participation, mental health, occupational health, peer counseling, work experiences, burnout psychology, well-being, health personnel, quality management, program development, medical personnel, care and treatment, health aspects, psychological aspects, mental health program, and mental health policy*. Initially, the date range of articles searched was from 2019 to 2023. The initial search yielded an insufficient number of articles; therefore, the DNP student expanded the dates of publication to find more articles for review. The revised search yielded a total of 116 articles. The abstract review eliminated 82 articles based on inclusion and exclusion criteria and any publication dates prior to 2012. The inclusion criteria included qualitative and quantitative research studies, healthcare workers with experience of burnout or frequented absenteeism, and community primary care clinic settings. Exclusion criteria included hospital or intensive care unit patients, mental illness, psychological disorders, and clinical disorders. The student researcher also used a quick abstract preview on all eligible articles prior to accessing the full-text articles.

Evidence Search Results

The initial portion of the search with key phrases yielded 212 articles. The preliminary abstract review resulted in a narrowed 65 articles after applying automatic exclusion criteria. Twelve qualified articles remained selected for the final full-body evaluation after the abstract

analysis and preview. Two articles focused on formal mental health programs were not consistent with the PICOT question and were excluded. Three articles were relevant to the decision to support healthcare program workers under an evidence-based approach for decreasing burnout in HCWs in the context of experiencing burnout and absenteeism.

Collectively, seven articles were included for the final literature synthesis. Three studies were conducted and published in the United States, two were European, one came from Asia, and one was from Saudi Arabia.

The John Hopkins Evidence-Based Practice Model Appraisal Tool was used to determine the credibility of the presented level of evidence and the quality of credible and eligible articles. Three systematic reviews and meta-analyses, two cross-sectional, and one qualitative study qualified for a level VI and grade A and B in quality (see Appendix A). Two articles with extensive systematic reviews of major randomized trials (RCT) rated as level I and IV for the strength of evidence and grades A and B for high quality (see Appendix B). A summary of the literature review process with eligible publications selected for the project is reflected in the PRISMA diagram (see Figure 1).

Themes with Practice Recommendations

A literature review revealed several themes regarding implementation of an evidence-based approach for decreasing burnout in HCWs in the community care practice setting. Even though all the articles included in the review reported implemented interventions, only seven articles provided data on their effectiveness based on the Johns Hopkins Evidence-based Practice Model Tools for Nursing and Healthcare Professionals.

Additionally, the literature review suggested the importance of developing interventions that target burnout reduction; RCT study methods are highly recommended to measure the

effects, safety, cost-effectiveness, and long-term impacts on certain dualistic interventions utilizing personal strengths of HCWs and organizational resources to alleviate burnout (Chen & Liu, 2023; Wakefield et al., 2023). The significant discoveries during the comparative meta-analyses (Vasquez et al., 2021; Zace et al., 2021) showed that there is an impact associated with standard mental health practices available that affect program utilization and absenteeism.

Organizational Support

The first identified theme was the need for organizational support to address how burnout impacts the mental health of HCWs and their performance in delivering care to patients.

Organizational support and planning during a pandemic were considered crucial for the mental health of HCWs by several articles included in the literature review. The establishment of a Psychosocial Pandemic Committee (PPC) was also a component of COVID-19 pandemic planning (Doukas et al., 2023). Planning needs to promote informative leadership, transparency, realism, and positive messages, as well as deal with the volume of delayed healthcare activities to support HCWs' mental health (Fond et al., 2022).

During the pandemic, special attention was paid to manpower allocation (Fond et al., 2022) and to adjustments of the working hours (Fond et al., 2022). The latter also allowed for training, inspection, and supervision for its staff (Doukas et al., 2023). Several hospitals had gone through the reorganization of healthcare facilities to ensure safer and healthier environments for HCWs (Fond et al., 2022).

Emotional and Psychological Interventions

Psychoeducation and training about mental health symptoms were considered of utmost importance to maximize the HCWs' resilience through effective preparation during pandemics (Vasquez et al., 2021). Occupational therapists at a Canadian hospital developed a pamphlet on

the signs of anxiety and stress (Zace et al., 2021), that also included information about support resources; it was distributed to every nursing unit in the facility (Priede et al., 2021).

Furthermore, normal stress response, psychological first aid, coping approaches, active listening, and personal resilience (Chen & Liu, 2023) were addressed in several audio and video mini-lectures, printed fact sheets, and onscreen notes (Doukas et al., 2023). Relaxation skills were taught with audio modules and the knowledge gained was reinforced by quizzes and games (Dang et al., 2022). The Mindfulness Based Interventions (MBI) General Survey, Cognitive-Based Interventions (CBI), and Positive Functioning Inventory (PFI) were used to measure emotional exhaustion as well as cynicism and professional efficacy in the study conducted by Vasquez et al. (2021). In-attendance training on normal stress responses, stress symptoms and signs, anticipated stressors, effective coping strategies, and the value of personal and organizational resilience (Zace et al., 2021) was also provided to healthcare workers.

The authors used a resilience plan to understand and manage the psychological impact on HCWs (Vasquez et al., 2021). The training offered in the pre-incident period explained the nature and impact of stressors and provided images of a hospital disaster response, enabling participants to create individualized resilience plans (Doukas et al., 2023). Posters with wellness tips and strategies for mental health protection for all the staff were used also during COVID-19 pandemic in Italy (Priede et al., 2021) and the United States (Doukas et al., 2023). Daily mood monitoring with positive self-affirmation training was created and constructed on the level of self-reporting emotions and was sent every evening to the medical team's online chat group to reinforce their self-affirmation during COVID-19 in China (Chen & Liu, 2023).

Mental Health Teams

Mental health teams consisting of psychiatrists, social workers, psychological counselors, and psychiatric nurses, have been established to psychologically support HCWs and to provide counseling according to their needs (Vasquez et al., 2021). A mental health team offered pieces of advice and support to the staff in Taiwan during a group session therapy (Chen & Liu, 2023). At hospital units in the United States, an occupational therapist and a physical therapist offered de-stress exercises to those dealing with burnout symptoms (Zace et al., 2021). However, in another hospital, a mental health consultant attended unit meetings to understand HCWs' activities and concerns, and also provided additional individual support (Vasquez et al., 2021).

Healthcare workers received online counseling, along with on-site psychological support and mindfulness decompression (Zace et al., 2021). Nonetheless, a mixed study showed that 53.6% of nurses selected from a group-based online intervention compared to 67% for the offline model intervention. The roles of managers as advisors and supervisors in the intervention comprised 74.5% (Ahola et al., 2017). Based on the findings, a primary impression that HCWs' experiences of coping and living with burnout suggests that an effective intervention program is considered necessary to support burned out nurses and HCWs in general (Guo et al., 2022).

Theory Used in Therapy and Rehabilitation

Cognitive Behavioral therapy (CBT) enables participants to understand and change the destructive and disturbing emotions that have negative impacts on their behavior (Doukas et al., 2023). CBT was part of a psychological intervention, including acceptance and commitment therapy, dialectical behavioral therapy, motivational interviewing, and early intervention program (Doukas et al., 2023; Priede et al., 2021). CBT was part of a three-phase intervention in the UK that aimed at facilitating the HCWs' recognition of coping strategies and resilience

factors (Doukas et al., 2023). Other digital platforms and support lines (Wakefield et al., 2023) have been formed during pandemics to provide psychological support and resources that can offer protection for psychological and physical well-being in frontline HCWs (Fond et al., 2022).

Efficacy of Interventions

A computer-assisted resilience training implemented in a primary community care hospital was successful in improving performance in their workplace (Chen & Liu, 2023). Authors reported that a higher proportion of participants 76% vs 35% (Guo et al., 2022) felt more confident to cope with work stressors after a resilience training on normal stress responses, anticipated stressors, principles of coping, and the value of organizational and personal resilience (Subash & Nielsen, 2023).

The psychological health support scheme, which included a daily measurement of mood, a daily mood broadcast with positive affirmation, an online peer-group activity, groups, and an after-work support team, enabled the staff to have an overall positive outlook (Guo et al., 2022). Furthermore, there was a daily report of mood index between 7 and 9 out of 10, for 6 weeks of continuous work (Chen & Liu, 2023). According to the authors, this was the average number of self-reports of life-related gains (gain-work, gain-life, and gain-physiology).

Nonetheless, HeartMath Institute (2021) mentioned that there were studies that reported an evidence-based practice that increased the intuition of participants to help with solving the problem, explored the perceived effectiveness of the burnout management techniques, and decreased the overall burnout of HCWs.

Recommendation

The presented research evidence assists in answering major components of the PICOT questions. Further research on the effects of burnout intervention would likely benefit the

establishment of guidelines of the definition and assessment process including evaluative tools to be used in measuring burnout. It is important to highlight the commonalities and comparative assessment of successful formal mental health programs to ensure that increased implementation of such interventions in the process of learning after systemic review to funnel down research pertaining to burnout and comparative meta-analyses to incorporate an employee burnout reduction protocol (Vasquez et al., 2021). This protocol is composed of the development of tools to measure burnout baseline to assess variables relevant to understanding burnout indicators to reverse adverse impact, which include performance feedback, self-esteem, burnout, and optimism to define indicators among HCWs.

Overall, while success from strategies mentioned in this section has been inferred from evidence-based research and varies from person to person, it is important to note that real world data are needed to document outcomes from the implementation of these strategies across organizations and settings (Subash & Nielsen, 2023). Continued efforts by organizations to measure and share successes and failures in implementing workplace mental health and well-being initiatives will strengthen future best practices recommendations.

Setting, Stakeholders, and Systems Change

Setting

The clinical setting for this scholarly project was a busy community based primary care clinic located in Gardena, CA. The clinic has several locations in California alone, which are all state funded. The community care clinic offers comprehensive medical care to adults and geriatric populations. The clinic provides same-day access, immunizations, health education, disease prevention, and chronic disease monitoring and management. The clinic consists of a facility director, an office manager, seven primary care providers (two physicians and five nurse

practitioners), nine registered nurses/case managers, two licensed vocational nurses, two social workers, three medical assistants, two office clerks, and 10 additional ancillary staff. In this project, the typical participant includes healthcare staff in the community care clinic setting with ages ranging from 21 to 54 years of age.

The organizational need for an evidence-based approach DNP change project for decreasing burnout in HCWs was established as it is currently unavailable in the clinic. The COVID-19 pandemic resulted in very high levels of global burnout among healthcare workers which hindered long-term health, growth, and success of healthcare workers and their organizations. This is particularly problematic in the mental health care profession, as there is a push for increased access to mental health care with a greater focus on early intervention and preventing severe illness. Therefore, the project need was identified, which included an implementation of an evidence-based approach interventions for decreasing burnout in HCWs through utilization of HeartMath burnout management-based techniques which was identified as highly relevant.

Stakeholders

The stakeholders for this DNP scholarly project included the facility director, office manager, providers, ancillary staff, patients, and families of stakeholders. The indispensable need for IT informatics experts becomes evident in the project; they supported data collection, stratification, and integrative application of the app system to facilitate technology-related functions and serve project change in the organization.

The organization gave their full support and feedback that assisted the DNP student, which was considered necessary to the success of this DNP change project. For the project to be

sustainable, staff participation and management support were vital for the project to be successful throughout the initiation to the evaluation phase of this project.

System Change

The system changes process of this scholarly project involved the *meso* and-*micro* level as it occurred in the outpatient clinic setting within the organizational level. At the meso level (Nelson et al., 2011), the change focused on collaboration among key stakeholders to support the implementation of the DNP project. At the micro level (Nelson et al., 2011) the transformation relates to day-to-day practice in which stakeholders (healthcare workers) participated in informed decision making together with other healthcare professionals at their level of stakeholder care.

The DNP student created a strength, weakness, opportunities, and threats analysis (see Appendix C) and developed plans for successful project implementation. Internal strengths included access to state funding, IT infrastructure, communication and interprofessional collaboration, facility leaders' commitment, a large pool of healthcare providers, dynamic interprofessional collaboration and relationships within the organization, and lastly, an abundance of support from management. Weaknesses included providers' resistance to adapt change and unwillingness to participate, technological challenges that limit intervention adaptation, a high risk of burnout among HCWs, and lack of time. External opportunities for implementing this project included incorporating the challenges of the change project, creating interest among the staff to participate, building support/training, increasing access to high-quality confidential mental health programs for all healthcare workers and potentially creating a system-wide change. Threats to the project were change of administration/leadership/socio-political

interests in the industry of healthcare, gaps in practice, some cultural factors affecting practice and lastly, the unprecedented COVID-19 pandemic.

Overall, clear clinical practice guidelines were provided to establish standard protocols in the implementation of burnout out prevention techniques in the facility. On the other hand, this project can be adapted and applied across other specialties within the community clinic settings as clinical practice guidelines (CPG).

Implementation Plan with Timeline and Budget

The project was aimed to employ evidence-based practice interventions in an effort to reduce symptoms of burnout in HCWs in a community practice setting. The focus was on reducing work-related burnout with burnout management techniques to mitigate absenteeism and increasing HCWs mental well-being and productivity.

There were three objectives that this DNP change project planned to achieve:

- Among stakeholders, at least 50% would be able to apply HeartMath Burnout management-based techniques at least twice a week during the 8-week implementation phase of the DNP change project.
- At least 50% of the stakeholders would have reduced absences/sick calls during the project's implementation phase.
- All of the participants would complete pre/post POQA-R4 questionnaires that were administered to take the baseline burnout level of HCWs and measure burnout levels after the 8-week program intervention.

The Personal and Organizational Quality Assessment (POQA-R4) is a named and validated assessment tool designed by the Institute of HeartMath to measure physical stress and burnout symptoms, psychological health, resilience, emotional competencies, and organizational

quality that were utilized in this project. In addition, HeartMath is a series of simple, self-regulation, and mindfulness-based techniques that can bring a person's best self to their professional, social, and personal lives (HeartMath Institute, 2021). The HeartMath tool includes mindfulness techniques in deep breathing, meditation, reflection, and renewed gratitude through the HeartMath application (HeartMath Institute, 2021, para 2).

In addition, burnout management-based techniques in HeartMath, such as the Renewed Feelings of Gratitude Appreciation Tool were considered an effective way to improve mental, emotional, physical, and spiritual well-being to invoke and sustain sincere appreciation such as "activating a positive feeling, focusing on something an individual truly appreciate while maintaining heart focus and breathing" (HeartMath Institute, 2021).

Upon approval from the facility and EPRC, the change project began. On the first day of the study, participants were escorted from their respective rooms by the Facility Director and DNP student and revisited the purpose of the study. In the pre-intervention (Time 1) administration, participants were instructed about confidentiality of the project. Some ethical considerations were maintaining the integrity of data that was collected such as privacy and confidentiality of the project.

The implementation focused on data from two specific phases of the project: the resting baseline period and the program intervention preparation period using the HeartMath burnout management-based techniques that transformed burnout into resilience and work productivity. The resting baseline period took 8 minutes, during which baseline burnout level data were collected using the POQA-R4. Then, the participants were asked to sit quietly and to refrain from talking, moving, falling asleep, or engaging in any specific technique or practice. The baseline period was followed by a HeartMath intervention preparation phase of 4 minutes. HCWs who

reported experiencing burnout were referred to as *participants* in this DNP project. Nonetheless, the participants were asked to bring their attention to the area of the heart. The participants were guided to imagine their breathing flowing in and out of their heart or chest area, while breathing a little slower and deeper than usual. Participants were asked to make a sincere attempt to experience a regenerative feeling such as appreciation or care for someone or something in their life.

Consequently, in the post-intervention (Time 2) participants were asked to prepare themselves in 4 minutes by practicing one of the positive emotion-refocusing techniques from the Institute of HeartMath (2021). The POQA-R4 tool was utilized by the researcher to facilitate the burnout management-based techniques for the stakeholders, which was designed to induce a shift into the psychophysiological coherence state through the self-activation of positive emotion after obtaining the baseline of burnout levels (Institute of HeartMath, 2021). The participants were reminded of the steps of the technique. For the Time 2 protocol at the control site, participants were again asked to use their own methods to prepare themselves for the task to focus on their breathing to the area of the heart. This was intended to shift participants' attention away from depleting thoughts to participants' heart or chest area in order to increase and bring coherence in their own system. Participants were encouraged to utilize this burnout reduction strategy throughout Week 8 of implementation phase.

Furthermore, HeartMath provided an important reliability component for measuring the impact of burnout on the subject participants. The significant evidence-based background of the HeartMath Burnout management-based techniques added a factor to POQA-R4 as a fit tool for the DNP change project. Moreover, it has a high validity and reliability assessment, which made

the tool significantly relevant in establishing the baseline before any intervention was introduced in implementing the change project (HeartMath Institute, 2021).

A Cronbach's alpha of HeartMath psychometric properties ranged from 0.76 to 0.92 which added integrity to the internal reliability of particular measures of the techniques to reduce burnout among HCWs. The HeartMath Tool showed an internal consistency coefficient of 0.80 for the EQ-I subscales based on obtained population samples. Other research supported the efficacy of HeartMath in improvement of emotional stability, psychosocial functioning, learning, and academic performance of participants in different levels from educational settings.

The evidence-based DNP change project utilized the JHEBP, which is a clinical decision tool intended to guide the problem-solving approach of the practicing clinician (Dang et al., 2022). It consists of a three-step process called PET: practice question, evidence, and translation (Dang et al., 2022).

Practice Question

The first step in the JHEBP process was the identification of the practice question. During a brief organization meeting with the facility director and stakeholders, the group identified a needed evidence-based approach DNP project for decreasing burnout in HCWs within the organization, while also mentioning COVID-19 pandemic which resulted in very high levels of global burnout among healthcare workers.

In addition, the EBP question was centered on developing an EBP approach change project intervention for decreasing stress for healthcare workers, relevant stakeholders, including its effect on burnout and absenteeism through utilization of HeartMath burnout management-based techniques.

Evidence

The second step in the JHEBP process is evidence. The DNP student was allowed to synthesize findings by conducting a thorough evidence-based literature search appropriate for addressing the practice question. The DNP student created, delivered and implemented an action plan incorporating HeartMath burnout management-based techniques and evaluated outcomes of EBP approach for decreasing burnout in health care workers intended for this change DNP project.

Translation

The third and final step is translation which is implementation and application of interventions (utilization HeartMath burnout management-based techniques) to practice; this was the core of this DNP change project. Several factors needed to be addressed to implement the EBP change project such as project goals, progress tracking, clearly defined roles, and responsibilities, established timeline, collaboration, and most importantly, communication between project manager and relevant stakeholders in order to for the project to be sustainable.

Kurt Lewin's organizational change theory also guided this evidence-based approach DNP project for decreasing burnout in HCWs by establishing health promotion, improving burnout management, and preventing absenteeism, which reduces employee productivity at the workplace setting (Guo et al., 2022). Lewin's change theory guided each project process and helped to identify the strengths to sustain the project (Errida & Lotfi, 2021).

Unfreezing

During the unfreezing stage, clinicians' awareness and understanding of the need for change was established. Communication was essential for healthcare workers to engage in the DNP change project during this phase. The project manager assessed specific areas in the

organization to determine motivation and possible barriers to change. The stakeholders required understanding and completing the questionnaires POQA-R4 (see Appendix E) at a specific time collaboratively. In addition, poster/flyers (see Appendix D) were posted in stakeholders' breakrooms and locker rooms to gain interest.

One anticipated barrier in the DNP changed project was stakeholders' resistance to the project about the significance behind HeartMath burnout management-based techniques. An advantage of this tool is to build relationships between stakeholders to participate in rebreathing techniques and learn to focus on things to be grateful for in the work setting and even outside the work environment.

Change

The next change step of Lewin's change theory involved increasing the driving force to overcome resistance (Errida & Lotfi, 2021). During this phase, communication was vital to keep the stakeholder's interest and compliance in learning the techniques of HeartMath for reducing stressors that lead to burnout. Hence, the facility director and project manager ensured that participants' interest in participating in the DNP change project was voluntary. The project manager ensured that all implementing guidelines and continuous support using EBP, appropriate policy, and procedures maintained the credibility and sustainability of the project.

Moreover, the completion of the adapted POQA-R4 questionnaires was used in making inferences of the baseline burnout level of participants. It was also used by the DNP student to measure the percentages set under conditions, including pre training (see Appendices F and G), and conducting bi-weekly monitoring on participant activity in the project; which was incorporated in the post data collection. Utilization of HeartMath burnout management tools by

stakeholders began when the baseline level of the participants was defined with the completion of initial questionnaires.

Refreezing

The final refreezing stage involved stability and sustained the change (Errida & Lotfi, 2021). This phase means that everyone involved in the project has bought into the changes and was committed to maintaining them (Hussain, 2018). The change project was thoroughly evaluated during this phase to sustain permanent change with positive and measurable outcomes. The expected results were for the primary care healthcare workers to significantly decrease their stress and burnout levels while incorporating new feelings of gratitude and gaining the desire again (post utilization of HeartMath burnout management-based techniques) within their respective roles in the organization.

Project evaluation compared pre/post-intervention scores to measure if the interventions were sustainable. The DNP project outcomes were disseminated and given to the leadership and stakeholders of the organization. The facility director and project manager created a measurable plan to support this phase by implementing and supporting continuous positivity using EBP, policy, and procedures to ensure the project's sustainability (Errida & Lotfi, 2021).

Interprofessional collaboration was vital throughout this project's planning, implementation, and evaluation stages. The DNP student collaborated with the stakeholders to keep track of and make sure the execution of the project occurred at the appointed time and within the allocated budget.

Overall, Lewin's organizational change theory guided the evidence-based approach intervention of HeartMath burnout management-based techniques utilization for healthcare

workers for health promotion, improved burnout management, and preventing absenteeism that reduced employee productivity at the workplace.

Project Timeline

The DNP change project schedule/timeline for implementation was detailed over eight weeks (see Appendix I). The University of St. Augustine for Health Sciences requires scrutiny of the entire project proposal for peer-review conducted by the Evidenced-based Practice Review Council (EPRC) subject for final approval. It will be made available to the organization for additional reviews or feedback if there are any.

Upon approval from the facility and EPRC regarding the proposed project, the DNP student met the stakeholders in the facility to revisit the timeline and cover significant aspects of the proposed project, such as the intent of the DNP project, roles, and expectations. The facility director and the DNP student distributed the POQA-R4 questionnaires to staff who volunteered to join the project to obtain significant baseline burnout levels from Week 8 and established a baseline of absenteeism, such as sick leave calls, resignations, or any transfers from different clinic locations for comparison by the facility director.

The DNP student analyzed and disseminated pre/post-data findings to management and stakeholders by utilizing the pre/post POQA-R4 scores. The DNP student worked closely with the facility director in creating ways to encourage staff to apply HeartMath's burnout management-based techniques to alleviate healthcare workers' stress and burnout within the organization.

Project Resources and Budget

The total cost to support the proposed project was valid and detailed; some of the funds were allocated for staff, such as HCWs involved in the training of HeartMath, and for filling out

questionnaires for the project. Supplies were \$610, services from HeartMath were \$400, and \$90 was for office supplies (binders, papers, staplers, pens) with an overall total of \$2,150 (see Table 1). A specific grant of \$1,500 decreased the total to \$650. The facility supplied additional resources, which decreased the specific total significantly. Several volunteers, such as the facility director, DNP student, and ancillary support, assisted in implementing the DNP change project.

Evaluation

Evaluating the effectiveness of the EBP approach interventions with HeartMath burnout management-based techniques on primary care HCWs was essential to this project and was pivotal in determining sustainability. Primary HCWs who applied and utilized this intervention were equipped with tools necessary to effectively manage burnout compared to stakeholders that did not utilize HeartMath burnout management-based techniques. The planned evaluation of intervention was based on reducing burnouts in HCWs. Subsequently, pre and post POQA-R4 questionnaires data revealed burn out levels among stakeholders.

The EBP change project utilized The Personal and Organizational Quality Assessment (POQA-R4), which is a named and validated assessment tool designed by the Institute of HeartMath to measure physical stress symptoms, psychological health, resilience, emotional competencies, and organizational quality. In contrast, HeartMath is a series of simple, self-regulation methods, and mindfulness-based techniques that can help a person to be their best in their professional, social, and personal lives (HeartMath Institute, 2021).

The Facility Director and DNP student discussed the purpose of the DNP research change project to the participants and disclosed the intent and scope of the change project after approval from ERPC and the organization. There were no exclusion criteria defined other than only HCWs working in a primary care community clinic setting within the essential care areas.

The DNP student reviewed and evaluated data as the project progresses during implementation and compared it with the baseline post-implementation. An independent paired *t-test* was used to evaluate the effectiveness of the intervention between two points in time (Beavans, 2022). A paired *t-test* determines whether the mean change for these pairs is significantly different from zero. It is also a procedure in inferential statistics because data collected before and after the intervention within the same group of populations is used to draw conclusions. (Beavans, 2022). The POQA-R4 tool consisted of a substructure that included an extensive face validity through the stratification of data collected to obtain confidence from a high reliability and validity component of data processed for this project.

The DNP student utilized the POQA-R4 scale by HeartMath tool as a self-reporting survey questionnaire with categorized nominal and ratio levels of data measurement. Nonetheless, that *p-value* was expected to define the probability under the assumption of no effect or significant difference in obtaining a result equal to or more extreme than what was observed to describe the statistical significance confidence interval, which determines the clinical importance of the outcome. The *p* stands for probability, and POQA-R4 measures how likely it was that any observed difference between HeartMath intervention groups was due to chance. The DNP student also used it to analyze and compare the preintervention for burnout using HeartMath techniques to the post-intervention data. This comparative analysis statistically compared the means and difference value at 0.05 using the p-value to analyze and compare the pre and post intervention burnout levels. The significance is usually denoted by a p-value, probability value depending on the threshold, or alpha value set at the most common threshold as $p < 0.05$, which is critical for EBP projects in determining the fitness of the practice intervention to be implemented. In addition, the POQA-R4 tool has high reliability and validity measurement

based on Cronbach's alpha coefficient at 0.80, and shows an internal consistency coefficient for the EQ-I subscales based on population samples obtained.

Nevertheless, this DNP change project was significant in grounding support to evidence-based intervention with utilization of HeartMath burnout management techniques through HeartMath with the intent to decrease burnout of HCWs in a primary care setting. The intervention group that employed HeartMath techniques during the evaluation phase was subject to data stratification for the collected scores to test the *p* value and evaluate the differences between the intervention group and practiced HeartMath burnout techniques in comparison to those scores obtained from taking POQA-R4 tool.

The data collection process was considered straightforward. The participants were given instructions on the importance of confidentiality per the Health Insurance Portability and Accountability Act (HIPAA). The DNP student gave the POQA-R4 to the participants and provided a unique code for each participant. The facility director provided the DNP student with pertinent information related to absenteeism, late/sick calls, and any resignations before implementation of interventions.

There was no concern about missing data; however, some threats to stakeholder's privacy and data might need to be considered. The facility director had an office and had the only key to it. The documents and data were stored in this office. The evaluation of the HeartMath burnout techniques interventions were analyzed based on the POQA- R4 pre/post questionnaires tool data which included emotional stress, emotional viability, physical stress at the end of Week 8.

Overall, it is important to note that the variance of scores from POQA-R4 was important to be considered when viewing all results. Equally important in accounting for variance were the average ages and other demographic variables presented for this DNP change project. This

change project intended to arrive at recommending interventions that targeted burnout reduction with concurrent RCT study methods that are highly recommended to measure the effects, safety, cost-effectiveness, and long-term impacts of HeartMath burnout technique interventions utilizing personal strengths of HCWs and organizational resources to alleviate burnout.

Results

This scholarly project aimed to arrive at an evidence-based approach to decreasing burnout in healthcare workers serving the community primary care setting to assist employees with employment-related mental health issues. Additionally, the project's objective was to establish measurable outcomes for the program using the HeartMath techniques impacting a preventive treatment protocol for burnout, leading the healthcare workers to the high incidence of absenteeism and decrease in work productivity more significantly than 10% from the baseline post-intervention over an 8-week implementation time frame. Moreover, this dataset includes responses to standardized POQA-R4 survey administered in pre and post intervention at an 8-week schedule that is presented using mean raw scale scores of four primary scales and the nine subscales obtained from nine HCWs who participated in the project. Hence, the effectiveness of the HeartMath intervention was also evaluated. Effectiveness was defined as reducing burnout levels with a consequential decrease in absenteeism, and a corresponding increase in work productivity rates along with the directional movement of increased relaxation by nine participants from a community primary care setting.

Demographics

The socio-demographic information of participants in this change project, including gender, age, race, ethnicity, tenure in the community primary care clinic, employment status, and length of service as registered nurses, are as follows: all nine participants (100%) were

professionals with a bachelor's degree, who were working full-time for 40 hours per week or more. The gender distribution consisted of four males and five females, representing 44.44% and 55.56%, respectively, in the change project. Inclusion criteria required registered nurses employed in a Gardena, California community primary care clinic who were experiencing burnout and negative mental health issues. Any missing data affecting participant adherence to the project protocol was carefully addressed during dataset analysis.

Statistical Analysis

The HeartMath data and its corresponding prescriber's pre and posttest were scheduled and entered in an Excel spreadsheet. Statistical analysis was achieved using the Intellectus Statistics program (Intellectus, 2022), which allowed datasets treated using descriptive analyses to present summary statistics that were calculated for each interval and ratio variable. Moreover, frequencies and percentages were calculated for each nominal variable. The data was calculated employing the paired *t*-test to evaluate its statistical significance before and after intervention. The project measured outcome using two-tailed paired samples *t*-test to examine whether the mean difference of pretest and posttest was significantly different from zero.

The results of the tests were significant based on an alpha value of .05, $W = 0.85$, $p = .005$. This result suggests that the differences in pretest and posttest were unlikely to have been produced by a normal distribution, indicating the normality assumption is violated. The results are presented in Table 1. A bar plot of the means is presented in Figure 1.

Table 1

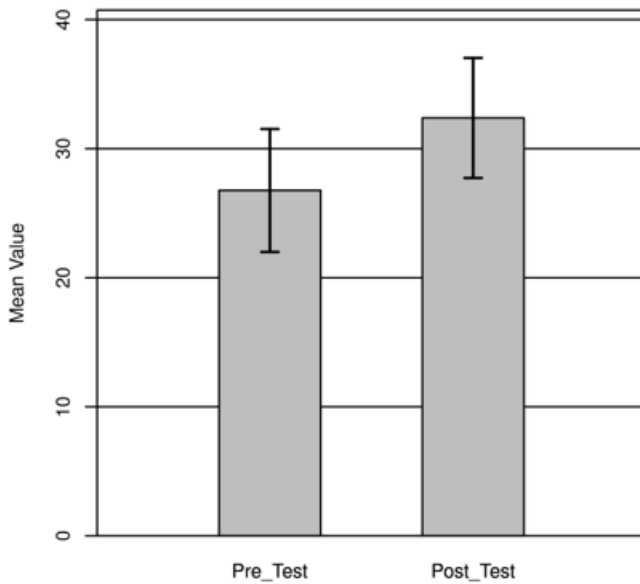
Two-Tailed Paired Samples t-Test for the Difference Between Pre_Test and Post_Test

Pre_Test		Post_Test		<i>t</i>	<i>p</i>	<i>d</i>
<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
26.76	11.14	32.38	10.87	-4.01	<.001	0.87

Note. N = 21. Degrees of Freedom for the *t*-statistic = 20. *d* represents Cohen's *d*.

Figure 1

The means of Pre_Test and Post_Test with 95.00% CI Error Bars



The findings of this scholarly project showed that difference in the mean of the pre-and post-test result was significantly different. Also, the project outcomes reflected that the HeartMath intervention used had clinical significance in improving mental health status and work productivity, as evidenced by a decreased burnout level after the participants were exposed to the intervention. Therefore, the Burnout had a Cronbach’s alpha coefficient of .83, indicating good reliability properties (see Table 2).

Table 2

Reliability Table for Burnout

Scale	No. of Items	α	Lower Bound	Upper Bound
Burnout	2	.83	.66	1.00

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

Validity and Reliability of Measurement

The psychometric properties of the POQA-R4 tool were assessed for validity and reliability. The reconstituted 52 items demonstrated acceptable alpha coefficients, indicating consistency and dependability. The scales measured Personal Quality and Organizational Quality, with Personal Quality assessing mood, attitudes, and burnout/stress-related symptoms. Organizational Quality evaluated commitment, performance, and indicators influencing work productivity.

All treatment interventions utilized HeartMath data without unique patient identifiers, stored securely in a password-protected computer within the clinic. Seven scales, with associated subscales, underwent internal consistency analysis using Cronbach's alpha.

Figure 2

Results from Analysis of Internal Consistency of Measurement

	Number Of Items	Internal Consistency α
Emotional Vitality	14	0.92
Emotional Buoyancy		
Emotional contentment		
Organizational Stress	9	0.76

Pressures of Life	5	0.78
Relational Tension	3	0.69
Stress	1	-
Emotional Stress	15	0.92
Burnout/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

Cronbach's alpha coefficient confirmed internal consistency reliability, with values ranging from 0.76 to 0.92. The HeartMath interventions were safe, and caused no physical or emotional harm to participants. The evidence-based change project proved practical for the community primary care facility.

POQA-R4 Outcome Measures

The participant dataset for this study comprised pre- and post-responses from nine HCWs who were undergoing a refined treatment protocol for burnout. The DNP student used Descriptive statistics and independent t-tests to assess feasibility and acceptability, which generated measurable outcomes for future mental health programs for HCWs (see Figure 3).

Figure 3 - Results from the Raw Scores Means:

Measure	Pre	Post	Change Difference
Organizational Stress	-	-	-
Pressures of Life	-	-	-
Relational Tension	-	-	-
Stress	-	-	-
Emotional Vitality	4.02	7.15	3.13
Emotional Buoyancy	-	-	-
Emotional Commitment	6.01	6.15	0.14
Emotional Stress	4.10	2.16	1.94
Emotional Buoyancy	4.69	3.38	1.31
Emotional Commitment	3.63	2.62	1.01
Physical Stress	5.02	3.84	1.18
Burnout/Fatigue	5.02	3.42	1.60
Health Symptoms	4.23	3.25	0.98
Intention to Quit	2	-	-

The analyses by the DNP student compared raw score means and pre/post differences and utilized t-tests to assess statistical significance. Two participants showed concerning scores on the intention to quit subscale, warranting further assessment. Responses were rated on a 5-point

Likert scale, and the POQA-R4 served as the primary data source, capturing various participant demographics and qualitative responses on absenteeism and burnout incidence.

A baseline measurement of burnout levels was established one week before implementation, with HeartMath data collected discreetly throughout the eight-week intervention phase due to intellectual property rights.

Process Measures

The DNP student provided participants with a weekly data sheet to record the frequency of using assessment tools during the change project. A key question addressed how often HeartMath was utilized daily, with responses categorized as (a) Very Often, (b) Often, (c) Not Too Often, and (d) Not At All.

Qualitative responses highlighted a positive sentiment towards HeartMath for alleviating burnout. Participants expressed surprise at the stress relief, with comments like, "HeartMath made me feel unburdened from stress," and "I don't feel emotionally bloated after using HeartMath." Another participant noted improved focus at work, gradually gaining control to meet targets.

Clinical Significance

This change project uncovered a noteworthy clinical significance: fostering better relationships among HCWs, their supervisors and co-workers led to a reduction in burnout levels, bringing them down to a manageable level of stress. Notably, the scores derived from POQA-R4 and the outcomes of HeartMath interventions exhibited an inverse relationship with higher burnout scores, significantly correlating with lower productivity indexes at work. This negative correlation was evident across all POQA-R4 scales and subscales. However, the distinct

changes observed after exposure to the HeartMath intervention suggested a particularly strong connection to work productivity and the construct of absenteeism.

Furthermore, the project hinted at potential gender differences in supervisor relations, which indicated that males might experience better relationships with supervisors compared to females. Despite this, no notable disparities between genders were observed concerning perceived levels of burnout and stress. The impact of the change project was evident in the positive feelings reported by participants following exposure to the HeartMath intervention. This suggests a clinically significant recommendation for the program, particularly among nurses and healthcare workers dealing with burnout issues. The program appeared to help manage work-related stress more effectively, reducing distractions and enhancing mental health in the face of a stressful work environment (refer to Figure 3 for mean differences).

Impact

The primary objective of this change project was to introduce an effective tool for managing burnout among healthcare workers (HCWs), with the intent to enhance their work productivity and overall well-being. Furthermore, the project intended to address the PICOT question pertinent to HCWs in the community primary care clinic.

To assess the impact of the HeartMath technique, a pre and posttest POQA-R4 questionnaire was administered to participants, to establish baseline data and track changes over the eight-week program. Initial findings revealed that two participants scored high on the Intention to Quit subset before the program. However, after completing the program, they reported positive effects, expressing feeling unburdened from stress and experiencing reduced emotional distress.

Statistical analysis indicated significant results (p-value: .586, t-value: 0.56), suggesting that the HeartMath techniques effectively reduced burnout levels among HCWs. This impact was particularly notable for participants initially indicating an intention to quit. The program also showed clinical significance in improving mental health, work attitudes, and productivity while reducing absenteeism. The findings underscore the importance of providing HCWs with accessible and efficient tools to combat burnout. The HeartMath program, requiring minimal time investment, emerged as a viable solution to manage stressors and support HCWs' well-being. Follow-up monitoring by clinic managers and office directors ensured sustained benefits, with booster sessions reinforcing positive outcomes, especially for those initially at risk of quitting.

In summary, the implementation of the HeartMath demonstrated significant positive changes in managing burnout among HCWs, highlighting the need for ongoing mental health support initiatives in healthcare facilities.

Limitations

This DNP change project has notable limitations. The first limitation is related to the lack of heterogeneity of the subject population. Diversifying the subject population could enhance the generalizability of findings. Additionally, the limited number of participants inherently reduces the statistical significance of the findings, implying that a larger sample size could produce stronger results that better reflect clinically meaningful outcomes.

Furthermore, reliance on self-reported data from survey questionnaires introduces potential measurement bias, as respondents may not accurately convey their feelings, behaviors, or attitudes due to fear of judgment or lack of self-awareness. This limitation underscores the

need for alternative data collection methods to mitigate bias and enhance the validity of the results.

Dissemination Plan

Findings of this DNP change project were presented to the Facility Director and all involved stakeholders via Zoom. The presentation emphasized the clinical significance of the DNP change project.

The DNP EBP change project will be archived in the University of St. Augustine in the Health Sciences Library and will become accessible in the Scholarship and Open Access Repository (SOAR). The significant advantage of SOAR lies in its capability to facilitate the publication of students' academic papers and provide access to a comprehensive database of nursing literature.

This scholarly DNP change project will be submitted to the Nursing Journal by BMJ, a comprehensive data pool of Evidence-Based Nursing; this journal allows scholarly publication work, research, and ideas to be reviewed by others who are experts in the same field of nursing. The Journal of Mental Health and Clinical Psychology will also be considered for manuscript submission.

Conclusion

Healthcare worker burnout remains a pervasive challenge across various disciplines within the healthcare industry; it is characterized by emotional exhaustion and diminished motivation. This phenomenon not only affects individual well-being but also has significant implications for healthcare organizations, leading to reduced efficacy, productivity, and increased absenteeism and turnover rates. Addressing burnout necessitates a multifaceted approach, as demonstrated by the implementation of HeartMath's burnout management-based

techniques in this scholarly change project. The intervention showed promising results in mitigating burnout and enhancing the mental health status and work productivity among healthcare professionals. The observed significant difference between pre- and post-test scores of the Personal and Organizational Quality Assessment (POQA-R4), underscores the clinical significance of this intervention. These findings highlight the potential value of incorporating such interventions into organizational strategies aimed at improving overall staff well-being and the quality of healthcare delivery. Further research and implementation efforts are warranted to explore the effectiveness and scalability of these approaches across different healthcare settings.

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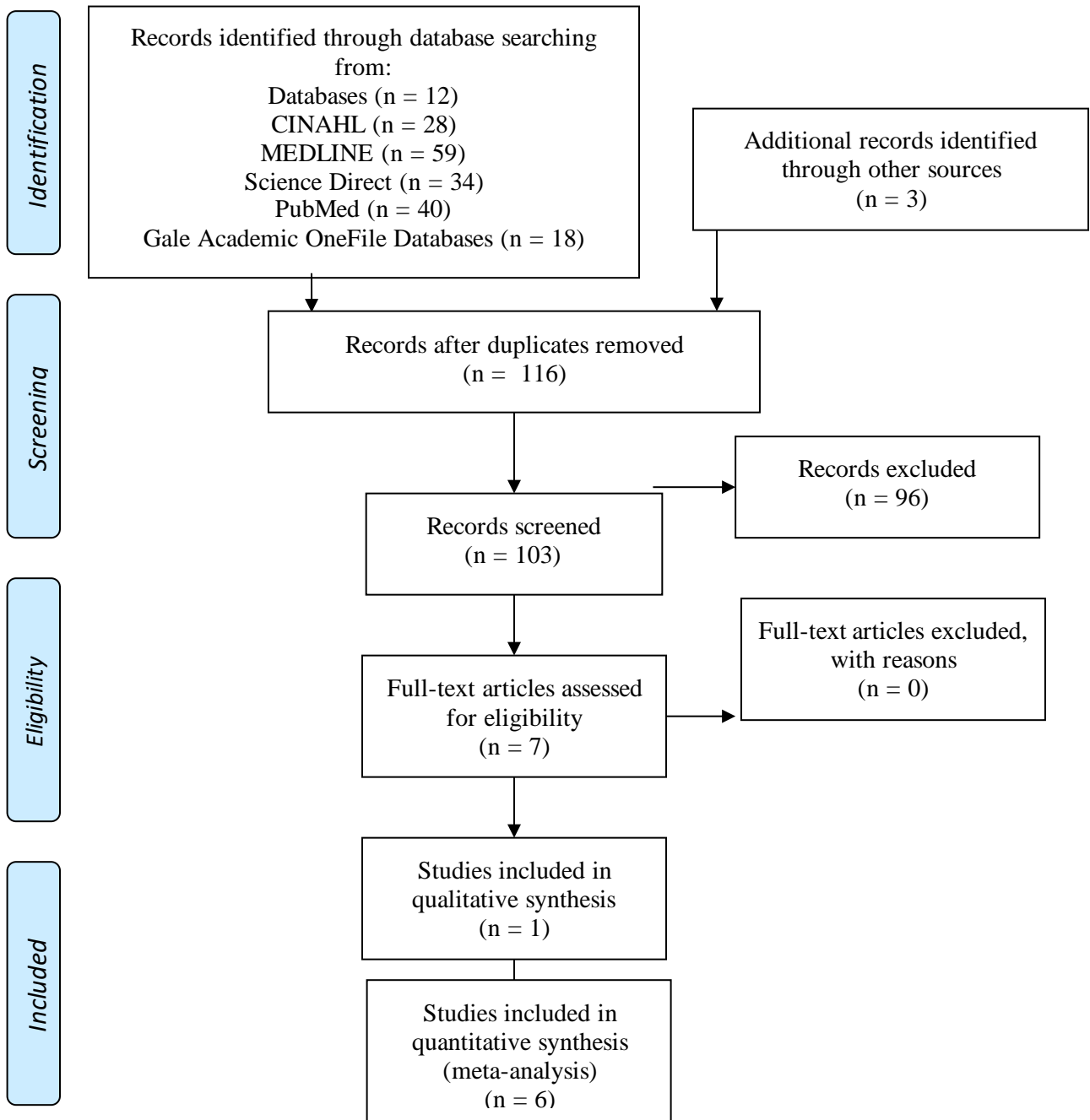
Table 1

Implementation EBP Project Budget

EXPENSES		REVENUES	
Direct		Billing	
Salaries and benefits	\$1050	Grants	\$1500
\$70/ hour x 5 nurses for 3 hours each			
Supplies	\$610	Institutional budget support	
Services (HeartMath)	\$400		
Office Supplies	\$90		
Indirect			
Overhead Projector			
Total Expenses	\$2150	Total Revenue	\$1500
Net Balance		\$650	

Figure 1

PRISMA Literature Search Strategy Diagram



Note. Prisma flow chart diagram from “Preferred Reporting Items for Systematic Reviews and Meta-analyses: The PRISMA Statement,” by D. Moher, A. Liberati, J. Tetzlaff, & D.G. Altman,

2009, *Annals of Internal Medicine*, 151(4), p.267 ([https://doi.org/10.7326/0003-4819-151-4-](https://doi.org/10.7326/0003-4819-151-4-200908180-00135)

[200908180-00135](https://doi.org/10.7326/0003-4819-151-4-200908180-00135)). Copyright 2009 by The American College of Physicians.

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
Wakefield et al. (2023) https://doi.org/10.1177%2F14782715221149625	Level V; C; Qualitative	18 participants	self-directed Creative and Expressive Writing	Innovative arts-based pilot program	Psycho-social wellbeing questionnaires (drawing on the Warwick-Edinburgh approach)	New methods that merge healthcare and the arts are an exciting, under-researched areas with potential to promote wellbeing and improve mental health.
Fond et al. (2022) https://doi.org/10.1016/j.ijnurstu.2022.104328	Level I; A; cross-sectional design	10,325 healthcare workers	Survey comprising a number of standardized scales; Online survey using Google Form; CES-D is a 20-item self-	Psychoeducational and cognitive-behavioral therapy	Professional and individual factors also had an indirect effect, with professional factors	Among professional factors, burnout, sustained bullying at the workplace and low decision-making

			<p>reported questionnaire; Center for Epidemiologic Studies- Depression Scale (CES-D); Pittsburgh Sleep Quality Index (PSQI); Maslach Burnout Inventory (MBI); Job Content Questionnaire</p>		<p>having again the strongest indirect effect. The results suggest that high rates of depression are likely to continue to impact on healthcare staff's ability to deliver effective care which is concerning given that the pandemic is far from over. Depression has a strong impact on productivity , absenteeism .</p>	<p>latitude had the strongest associations with depression, with burnout having the strongest associated</p>
<p>Guo et al. (2022)</p>	<p>Level I; B;</p>	<p>29 studies; (RCT)</p>	<p>Colleague Support Scale;</p>	<p>Cognitive behavioral; and</p>	<p>The first study to</p>	<p>Nurses and nurse</p>

<p>https://www.frontiersin.org/articles/10.3389/fpsyg.2022.1056738/full</p>	<p>Meta-Analysis (CMA); mixed method; Appreciative Inquiry (AI);</p>		<p>10-item General Self-Efficacy Scale; Psychological Capital Questionnaire; 10-item Rosenberg Self-Esteem Scale; Maslach Burnout Inventory (MBI)</p>	<p>Mindfulness Analyses</p>	<p>address nurse burnout using the MRC framework;</p>	<p>managers are encouraged to use dualistic intervention for alleviating burnout after advanced evidence on the effect of intervention in this study Key finding include that another challenge was promoting the feasibility of the intervention to nurse participants and nurse managers. Future studies are suggested to explore the experiences, concerns, and needs of nurses and nurse managers coping with burnout, which could be used to develop these complex interventions.</p>
<p>Subash & Nielsen (2023) http://dx.doi.org/10.1186/s12877-023-03951-w</p>	<p>Level IV; A;</p>	<p>5,379 Danish citizens</p>	<p>Web-based questionnaire with socio</p>	<p>Biopsychosocial framework; behavior change</p>	<p>Multivariate analysis found that</p>	<p>Psychological and behavioral factors based</p>

	Cross-Sectional Survey Design; multiple linear regression analyses		demographic data supplemented from a national registry	theories on Internal Locus of Control	health literacy, internal health locus of control, willingness to take health risks, self-rated health, and health and life satisfaction all showed a significant positive association with an expectation of reaching age 85	on behavior change theories to better understanding between subjective and statistical life expectancy.
Chen & Liu (2023) https://www.frontiersin.org/journals/public-health	Level II; A; Quantitative research in descriptive, relational, explanatory and experimental type of study	500 questionnaires, 358 returned, 40 were removed due to outliers and missing information down to 318 responses included in the study from 7 hospitals in Kerachi and Lahore, Pakistan.	A self-administered questionnaire was used as a data collection	theory of conservation of resources (TCOR)	Employees with an improved mental health level are more resilient and energetic to face the risk of BO.	This hospital implements flexible policies to provide a good work environment and life balance for its employees (employee related CSR). Therefore, CSR perceptions in employees' minds about their organization

						and employee-focused CSR activities are of profound importance to improving mental health and employee wellness. The healthcare administration needs to realize that with the rise of BO, the mental health crisis worsens, ultimately affecting employees' capability to deliver superior health to the citizens and patients, thereby creating a public health concern.
Priede et al. (2021) http://dx.doi.org/10.1016/j.rpsm.2021.01.005	Level I; B; Descriptive Study	50 responses received; 36 healthcare workers in different hospitals.	online survey was designed in Google Forms (Google LLC); Group interventions mainly used psychoeducati	Theory of psychoeducatio nal and cognitive-behavioral, and mindfulness	Developed mental health interventions for healthcare workers during the COVID-19 pandemic, deploying a	First study to describe mental health interventions for healthcare workers in Spanish hospitals during the first wave of COVID-19

			on and mindfulness.		wide range of therapeutic modalities and techniques	pandemic; several hospitals in Spain had developed some type of intervention to improve emotion regulation and/or to reduce anxiety/stress among hospital staff.
Doukas et al. (2023) https://0b34vb68j-mp02-y-https-onlinelibrary-wiley-com.prx-usa.lirn.net/doi/full/10.1002/ajim.23478	Level I; A; Descriptive statistics	421 treatment-seeking HCWs in an outpatient hospital-based mental health setting	Patient health questionnaire-9 (PHQ-9); Generalized anxiety disorder assessment-7 (GAD-7); PTSD checklist- 5th edition, specific version for DSM-5 (PCL-5); Alcohol use disorders identification test-consumption (AUDIT-C); The world health organization-five well-	Cognitive behavioral therapy	Fill gap in the literature by establishing the prevalence of anxiety, depression, post-traumatic stress, alcohol misuse, and well-being among treatment-seeking HCWs	Identified vulnerable groups that are underrepresented in the literature; findings highlight the need for targeted outreach and intervention among overlooked HCWs populations

			being index (WHO-5); self-report screening battery administered and managed using REDCap electronic data capture tools			
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Legend:

- PICO -Population, intervention, comparison, outcome
- RCT - Randomized Control Trials
- AI - Appreciative Inquiry
- BO - Burnout
- CSR - Corporate Social Responsibility
- TCOR - Theory of Conservation of Resources
- SR -Systematic Reviews
- MRC -Medical Research Council
- CMA -Comprehensive Meta-Analyses
- HCW -Healthcare Workers
- MCSR -Micro aspects of Corporate Social Responsibility
- CSRPG -Center for Stress, Resilience, and Personal Growth

Appendix B

Summary of Systematic Reviews (SR)

Citation	Quality Grade	Question	Search Strategy	Inclusion/Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/Implications
<p>Vasquez et al. (2021) https://prx-usa.lirn.net/MuseProxyID=mp03/MuseSessionID=0b32arxi/MuseProtocol=https/MuseHost=doi.org/MusePath/10.4300/jgme-d-20-01433.1</p>	<p>Level I; B; Meta-Analyses (Systemic Reviews);</p>	<p>Population: Identified peer-reviewed publications on GME burnout reduction programs through October 2019. Intervention: Effective approaches to burnout, aimed at addressing the impact of prolonged stress, may differ from those needed to improve wellness. Control: Article quality was assessed using the Medical</p>	<p>PubMed.</p>	<p>Formal mental health program; HCW; BO; systemic review; absenteeism; treatment period/ Psychiatric illness; non-professional healthcare workers; psychological disorders; suicide</p>	<p>Evaluation was based on participant scores on burnout reduction scales. Eleven produced significant results pertaining to burnout, 10 of which yielded a decrease in burnout. The most frequent pedagogical methods were discussion groups.</p>	<p>Curricula to reduce burnout among GME trainees varies. Most programs occurred during residents' protected education time.</p>	<p>Recommendation: Further randomized controlled trials within GME are necessary to draw conclusions on which components most effectively reduce burnout.</p>

Citation	Quality Grade	Question	Search Strategy	Inclusion/Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/Implications
		<p>Education Research Study Quality Instrument (MERSQI).</p> <p>Outcome: The literature of existing educational programs aimed to reduce burnout in GME.</p>					
<p>Zace et al. (2021) https://doi.org/10.1016/j.jpsychires.2021.02.019</p>	<p>Level IV; A; Systemic Review; RCT</p>	<p>Population: Health care workers (HCWs)</p> <p>Intervention: We considered as exposure the current and previous infectious disease outbreaks that have caused pandemics or epidemics and have put an extra burden on the healthcare</p>	<p>Open Access; Science Direct; Web of Science, PubMed, Cochrane, Scopus, CINAHL and PsycInfo electronic databases</p>	<p>Qualitative studies reporting experiences and describing any implemented intervention targeting mental health of HCWs, and quantitative studies reporting the effectiveness of interventions on mental health of HCWs during infectious</p>	<p>(1) Study identification: first author, title, publication year; (2) Study characteristics: country, design, infectious disease; (3) Population characteristics: sample size and type, occupation, sex, age; (4) Implemented intervention characteristics: intervention</p>	<p>Clear communication of directives/precautionary measures were seen by HCWs themselves as fundamental factors to help reduce mental health problems.</p> <p>Organizational interventions to improve HCWs' mental health were also reported by a Cochrane</p>	<p>Recommendation: Considering that, designing, and implementing interventions that expect HCWs to ask for help may not be much effective.</p>

Citation	Quality Grade	Question	Search Strategy	Inclusion/Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/Implications
		<p>systems of different countries</p> <p>Comparison: Not Applicable</p> <p>Outcome: Implemented interventions or strategies, which could have a direct or indirect impact on the mental health of healthcare workers during infectious disease outbreaks.</p>		<p>disease outbreaks.</p> <p>Formal mental health program; HCW; BO; absenteeism; treatment period/ Psychiatric illness; non-professional healthcare workers; psychological disorders; suicide</p>	<p>type; duration, setting, mental health indicators evaluated, psychometric instruments/tools utilized to evaluate mental health indicators; (5) Measure of effectiveness of the interventions.</p>	<p>review, which concludes that changing work schedules can reduce stress, but other organizational interventions have no clear effects.</p>	

Legend:

PICO -Population, intervention, comparison, outcome

RCT - Randomized Control Trials

BO - Burnout

MERSQI - Medical Education Research Study Quality Instrument

SR- Systematic Reviews

HCW- Healthcare Workers

GME- Graduate Medical Education

Appendix C

Strength, Weakness, Opportunities, and Threats Analysis

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none"> • State funding • Communication and interprofessional collaboration • Facility leader’s commitment • Large pool of healthcare providers • Dynamic interprofessional collaboration and relationships in the organization • Abundance of support from management. 	<ul style="list-style-type: none"> • Incorporate the challenges of the change project • Create interest among the staff to participate • Building support and training • Create a system-wide change
WEAKNESSES	THREATS
<ul style="list-style-type: none"> • Technological challenges limit intervention adaptation • High risk of burnout among HCWs • Resistance to change and unwillingness to participate • Lack of time 	<ul style="list-style-type: none"> • Change of administration/leadership/socio-political interests in the industry of healthcare • Gaps in practice • Some cultural factors affecting practice • Unprecedented pandemic

Appendix D

Stress and How it Affects the Body

HOW STRESS AFFECTS THE BODY

Zzzzz
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

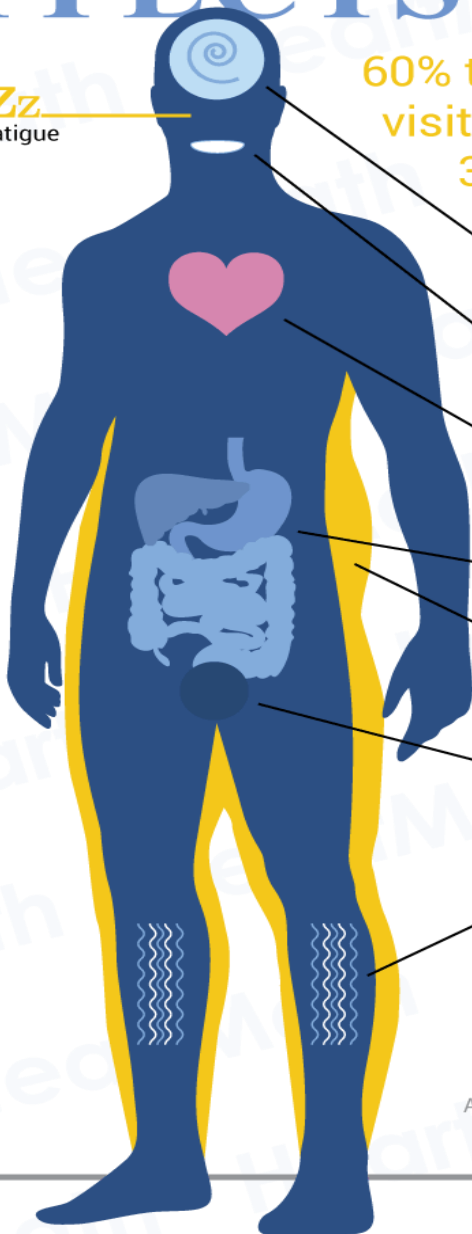


STRESS AFFECTS THE ENTIRE BODY & CAN CAUSE MANY OTHER PROBLEMS

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

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
2	3	4
5	6	7
8	9	0

UNIQUE ID NUMBER

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	0

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

- What is your GENDER?
 - 1 Male
 - 2 Female
- What is your MARITAL STATUS? (fill in one only)
 - 1 Single
 - 2 Married
 - 3 Partnered
 - 4 Separated
 - 5 Divorced
 - 6 Widowed
- Roughly how old are you?
 - 1 Under 21
 - 2 21-30
 - 3 31-40
 - 4 41-50
 - 5 51-60
 - 6 61-70
 - 7 Over 70
- What is your approximate salary range?
 - 1 Under \$20,000
 - 2 \$20,000 - 29,999
 - 3 \$30,000 - 39,999
 - 4 \$40,000 - 49,999
 - 5 \$50,000 - 59,999
 - 6 \$60,000 - 69,999
 - 7 \$70,000 - 79,999
 - 8 \$80,000 - 89,999
 - 9 \$90,000 - 99,999
 - 10 \$100,000 - 149,999
 - 11 \$150,000 or more
- Which of the following best describes your EMPLOYMENT STATUS? (fill in one only)
 - 1 Student
 - 2 Laborer
 - 3 Skilled or Clerical
 - 4 Management
 - 5 Professional
 - 6 Executive
 - 7 Engineer/Technical
 - 8 Retired
 - 9 Unemployed
 - 10 Other
- How many HOURS PER WEEK do you usually work?
 - 1 Less than 25 hours
 - 2 26-35 hours
 - 3 36-40 hours
 - 4 41-50 hours
 - 5 51-59 hours
 - 6 60 or more hours
- How long have you been with this COMPANY or ORGANIZATION?
 - 1 0 - 6 MONTHS
 - 2 6 MONTHS - 1 YEAR
 - 3 1 YEAR - 2 YEARS
 - 4 2 YEARS - 5 YEARS
 - 5 5 YEARS - 10 YEARS
 - 6 10 YEARS - 20 YEARS
 - 7 20 YEARS OR MORE
- How long have you been in your CURRENT JOB or POSITION?
 - 1 0 - 6 MONTHS
 - 2 6 MONTHS - 1 YEAR
 - 3 1 YEAR - 2 YEARS
 - 4 2 YEARS - 5 YEARS
 - 5 5 YEARS - 10 YEARS
 - 6 10 YEARS OR MORE
- What is your highest level of EDUCATION? (fill in one only)
 - 1 Elementary
 - 2 Junior/Middle School
 - 3 High School
 - 4 Technical School
 - 5 Some College/Associate's Degree
 - 6 Bachelor's Degree
 - 7 Some Graduate
 - 8 Master's Degree
 - 9 Doctorate Degree

Please turn to the next page

PLEASE DO NOT WRITE IN THIS AREA

65208

POQA-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.

							ALWAYS
							VERY OFTEN
							OFTEN
							FAIRLY OFTEN
							SOMETIMES
							ONCE IN A WHILE
							NOT AT ALL
1. Resentful	1	2	3	4	5	6	7
2. Fatigued	1	2	3	4	5	6	7
3. Annoyed	1	2	3	4	5	6	7
4. Sad	1	2	3	4	5	6	7
5. Body aches (Joint Pain, Backaches, etc.)	1	2	3	4	5	6	7
6. Headaches	1	2	3	4	5	6	7
7. Rapid Heartbeats	1	2	3	4	5	6	7
8. Depressed	1	2	3	4	5	6	7
9. Exhausted	1	2	3	4	5	6	7
10. Blue	1	2	3	4	5	6	7
11. Appreciative	1	2	3	4	5	6	7
12. Relaxed	1	2	3	4	5	6	7
13. Anxious	1	2	3	4	5	6	7
14. Tired	1	2	3	4	5	6	7
15. My sleep is inadequate	1	2	3	4	5	6	7
16. Thankful	1	2	3	4	5	6	7
17. Indigestion, heartburn or stomach upset	1	2	3	4	5	6	7
18. Calm	1	2	3	4	5	6	7
19. Cynical	1	2	3	4	5	6	7
20. Muscle Tension	1	2	3	4	5	6	7
21. Grateful	1	2	3	4	5	6	7
22. Worried	1	2	3	4	5	6	7
23. Unhappy	1	2	3	4	5	6	7
24. Uneasy	1	2	3	4	5	6	7
25. Angry	1	2	3	4	5	6	7
26. Peaceful	1	2	3	4	5	6	7

SAMPLE

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

SAMPLE

Thank You Very Much For Your Participation!

FOR OFFICE USE ONLY

A.

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

Appendix F

POQA-R4 tool Permission Letter

From: Robert Browning

Sent: Wednesday, July 19, 2023 11:03 AM

Subject: Re: The Use of HeartMath POQA-R4 tool and Poster

Hello Leonor Salalila,

You absolutely have our permission to use the POQA-R4 tool for your EBP change project for St. Augustine for Health Sciences. It will be an honor to support you with your DNP.

With deep care,
Robert

Robert Browning PhD (h.c.)

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Appendix G

Evaluation Tools

Evaluation Tools		
Assessment	Pre-Training	Post-training
Individual		
POQA-R4		
Organizational		
Employee turnovers		
Absences/Missed Work/Late Calls		
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 H*Evaluation Tools*

Individual Quality	Pre-training (%)	Post-training (%)	(%) Change
Sleeping difficulties			
Work-life Balance and satisfaction			
Organizational Quality			
Intention to Resign from the Organization			
Promote channels of communication among staff			

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>

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	
Finalizing Project							X	X																			
Educate and training providers											X	X	X	X													
Allocate/Spread Resources												X	X														
Project Implementation													X	X													
Analyze Data and Feedback/Post Implementation Reports															X	X	X										
Evaluation of the Project																				X	X	X					
Final Report																						X	X				
Dissemination of Results																							X	X			
Revise Manuscript																								X			
Finalize Manuscript																									X		
Construct Project Poster																								X	X	X	