



2022

The Measurement of the Impact of Well-being Resources on Moral Distress and Burnout following the COVID-19 Pandemic in Front-Line Nurse Leaders

Benjamin Hughes
b.hughes@uky.edu

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Recommended Citation

Hughes, Benjamin, "The Measurement of the Impact of Well-being Resources on Moral Distress and Burnout following the COVID-19 Pandemic in Front-Line Nurse Leaders" (2022). *DNP Projects*. 396.
https://uknowledge.uky.edu/dnp_etds/396

This Practice Inquiry Project is brought to you for free and open access by the College of Nursing at UKnowledge. It has been accepted for inclusion in DNP Projects by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

The Measurement of the Impact of Well-being Resources on Moral Distress and Burnout
following the COVID-19 Pandemic in Front-Line Nurse Leaders

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Nursing
Practice at the University of Kentucky

By

Benjamin Hughes, MSN, MS, RN, NEA-BC

Lexington, KY

2022

Abstract

Background: Due to the COVID-19 pandemic, there is significant burnout among front-line nursing staff. Little literature has been published about the measurement of burnout among front-line nursing leaders, such as nurse managers and directors, nor the interventions used to help with this ever-growing issue among this group. Since the pandemic began, there have been many resources identified to help front-line staff members with burnout, but none specifically looking at what has worked or been utilized by front-line nursing leaders.

Purpose: The purpose of this project was to describe what well-being resources were identified as being effective in decreasing moral distress and burnout in front-line nurse leaders during the COVID-19 pandemic.

Conceptual Framework: The conceptual framework used to guide this research project was Dorothea E. Orem's Self Care Deficit nursing theory. This theory supports not only nurses teaching and creating an environment for patients to care for one's self, but also for nurses to be prepared to care for themselves as a professional nurse.

Methods: This study employed a mixed method design. Phase I applied a quasi-experimental pre-test/post-test design using The Professional Quality of Life Scale version 5 (ProQOL) scale. Phase II used a qualitative design in which front-line leaders were asked two open ended questions focused on well-being resources and interventions used by front-line nursing leaders to decrease burnout.

Results: The results of phase I showed high burnout rates in assistant nurse managers (pre-intervention M=50.11 vs. post-intervention M=50.44) and nurse managers (pre-intervention

M=52.49 vs. post-intervention M=52.30) prior to and after the intervention. The phase II results demonstrated that themes such as exercise, mental distraction, and clinical interventions, such as meeting with a licensed healthcare professional, may be useful to reduce burnout in front-line nursing leaders.

Conclusion: The findings from this study suggest that there is significant burnout in front-line nursing leaders. Specific interventions need to be evaluated further, and if found to be effective, these interventions should be reinforced in an effort to reduce burnout in nursing leaders.

Acknowledgements

I would like to acknowledge Dr. Debra Hampton who served as my faculty advisor, committee chair, and academic mentor throughout my DNP program. Dr. Hampton helped me see potential in myself that I never knew was possible. Dr. Jean Edward, committee member, has provided me with an excellent education and greater understanding of what doctoral academic rigor is all about. Dr. Kimberly Blanton, clinical committee member and professional colleague, not only supported me academically but also supported me on the front lines of the COVID pandemic. Dr. Amanda Thaxton-Wiggins, DNP statistician and professor, was instrumental in helping me better understand the complexities of data and statistical analysis for this project.

Drs. Patty Hughes and Pamela Missi, my clinical site mentors, showed me what it is like to be a seasoned executive nurse leader at a time when the way nursing care was delivered literally got turned upside down due to the pandemic. Drs. Brandy Matthews and Gwen Moreland both served as my professional mentors and always encouraged me to complete my DNP as well as give me the freedom to do so. The immense support from my professional peers was invaluable and will never be forgotten.

Lastly, I would like to acknowledge Dr. Janie Heath and the numerous professors in the DNP program who would literally do anything to support me and ensure my success at a time when the world was in a panic.

Dedication

It is with great honor that I dedicate this project and my DNP journey to my wife and three amazing children. My wife, who has battled cancer throughout my DNP journey, has stood beside me every step of the way and encouraged me to keep going and finish this degree. She never once hesitated to help with “life” when I could not be there due to the demands and rigor of this prestigious program. Our three children, who on a daily basis teach me more about life, love, and myself than I could have ever imagined. They have been my drive and inspiration every step of the way to accomplish this degree.

To my many family, friends, classmates, and professional colleagues who have helped me personally, spiritually, and professionally. I could not have completed this project or degree if it were not for your unwavering support and love while on this journey. I will be forever grateful.

Lastly, I would like to dedicate this project to all of the frontline nursing leaders and staff who stood in the face of the COVID-19 pandemic. This project is a small step in the work that needs to be done to help us all heal as we move forward in our nursing careers. Your strength and courage fueled my passion to do this project and the desire to continue the conversation of how we recover as nursing professionals.

Table of Contents

| | |
|---|----|
| Abstract..... | 2 |
| Acknowledgements..... | 4 |
| Dedication..... | 5 |
| Background and Significance..... | 9 |
| Purpose and Objectives..... | 12 |
| Purpose Statement..... | 12 |
| Objectives..... | 12 |
| Theoretical Framework..... | 13 |
| Review of Literature | 13 |
| Synthesis of Evidence..... | 13 |
| Identification of Gap..... | 15 |
| Proposed Strategy to Address the Gap..... | 15 |
| Methods..... | 16 |
| Design..... | 16 |
| Setting..... | 16 |
| Sample | 17 |
| Procedure | 17 |

| | |
|--|----|
| IRB Approval..... | 18 |
| Description of Evidence-based Intervention..... | 19 |
| Measures and Instruments..... | 22 |
| Data Analysis..... | 23 |
| Results | 23 |
| Discussion | 25 |
| Implications for Practice, Education, Policy and Research..... | 28 |
| Limitations..... | 29 |
| Conclusion | 30 |
| References..... | 32 |
| Tables..... | 38 |

List of Tables

| | |
|---|----|
| Table 1 - Participant Demographics..... | 38 |
| Table 2 - Differences in Pre-intervention and Post-intervention ProQOL Scores based on a Paired T-test..... | 39 |
| Table 3 - Differences in Pre-intervention and Post-intervention ProQOL Scores based on Position..... | 40 |
| Table 4 - Participant Intervention..... | 41 |
| Table 5 - Phase II Survey Results..... | 42 |

Background and Significance

In December 2019, in the Chinese city of Wuhan, the first SARS-CoV-2 (COVID-19) virus was detected and very quickly spread like no other virus had through the whole world in recent years. The first reported case of COVID-19 was identified on January 20, 2020 in the United States in Washington State (Holshue et al., 2020). With COVID-19 officially confirmed in the United States, it spread just as fast, or faster than it did in any other country. As the death tolls quickly escalated, the United States healthcare system found itself failing to meet the demand the virus was putting on the human race. The healthcare system was also ill prepared to support the physical and emotional needs of frontline healthcare workers, and just as important, the needs of front-line nursing leaders. There was rationing of personal protective equipment (PPE), patient deaths in certain hospitals ranging in the hundreds per day, and healthcare workers dying due to the lack of appropriate PPE. There were also clinicians having to make moral decisions about whether someone was going to be resuscitated, and for how long, before having to move on to the next patient in which they would be faced with the same decision. Day after day, week after week, and month after month, COVID continued to unfold in hospitals of all sizes all over the nation. Within ninety days, the novel coronavirus was discovered in almost every state of the United States.

At the center of it all, nurses were one of the few groups of healthcare professionals who were asked to care for COVID patients on a 24 hour/7 day a week basis, and this has taken its toll on the profession. The year of 2020 was designated by the World Health Organization as the “International Year of the Nurse and Midwife”. It was to be a celebration in honor of the 200th anniversary of Florence Nightingale’s birth. Instead, nurses were seen on the covers of newspapers, magazines, and social media sites in tears from exhaustion and from being

overwhelmed, scared, and ultimately burnt out from the toll this disease put on the art and science of their nursing practice. Nurses that worked on the front-lines with COVID-19 patients very quickly found themselves questioning their choice of profession, their leaders, their employer, and the healthcare system of the United States (Morley et al., 2020). Taking it one step further, front-line nursing leaders are the ones left over after this disease has peaked multiple times; now they find themselves trying to define a new way to not only manage their post-traumatic stress, but also the distress that is in the team of nurses still willing to take care of COVID patients. Terms like burnout, moral distress, moral injury, and post-traumatic stress disorder are now being used to describe what is going on with the nursing profession and specifically among front-line nursing leaders (Hossain & Clatty, 2020). These terms are psychological descriptors typically used in times of military war, but are now being used to describe feelings and attitudes of nurses and other healthcare professionals.

Front-line nursing leaders exposed to COVID-19 have a high risk of developing unfavorable mental health outcomes and may need psychological support or interventions. Burnout, as defined by the World Health Organization, is not classified as a medical or mental condition, but as a syndrome (WHO, 2019). The ICD-11 classification defines burnout as a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: feelings of energy depletion or exhaustion, increased mental distance from one's job or feelings of negativism or cynicism related to one's job, and reduced professional efficacy (WHO, 2019).

Many studies have shown that nursing is one of the most stressful occupations, and nurse burnout was on the rise long before COVID-19 ever made its way to the United States. In stressful work environments such as healthcare, there are significantly higher rates of turnover,

lessened productivity, worsening patient outcomes, and increased costs to patients and the organizations (Moss, 2019). As recent as August 2019, a systematic review article demonstrated a correlation between burnout and increased patient safety concerns (Garcia et al., 2019). In April of 2019, Professional Research Consultants (PRC) published the National Nursing Engagement Report and noted that of the 2,000+ healthcare partners responding to the survey, 15.6% of all nurses self-reported feelings of burnout, with emergency room nurses being at a higher risk (Brusie, 2019). A few months later, in July 2019, the Joint Commission published a safety advisory about these findings and a bulletin labeled “Developing Resilience to Combat Nursing Burnout”. At the time of these publications, nursing leaders had no idea what was about to overcome them in the few short months ahead with the onslaught of a pandemic.

Due to the nature of the COVID-19 disease and the impact it has had on nursing, there is very little published scientific data on the burn out rate of front-line nurse leaders who have managed teams taking care of COVID-19 patients. Studies that have been published, mostly from China and Europe since those areas were the first hit with the disease, have confirmed that the perceived threat generated by COVID-19, coupled with the psychosocial factors of demand and lack of adequate resources lead to burnout in nursing staff (Li et al., 2018; Garcia et al., 2019). Nursing professionals’ well-being is conditioned by the work and personal resources available. Work resources refer to the physical, psychological, organizational, or social aspects of the work that must be performed to provide quality care (Baker & Demerouti, 2017). Personal resources refer to a person's characteristics, including those relating to a sense of control and resilience in trying to control their surrounding environment. The theory of demands and resources states that work challenges require effort and energy and are predictive of variables such as psychological exhaustion, while resources seek to satisfy basic human needs and help to

restore the balance (Bakker & Demerouti, 2017). An imbalance between demands and resources is likely to result in the emergence of psychosocial risks such as burnout syndrome (Farreros-Nogueras & Calvo-Francés, 2008). No longer is there a perspective that the individual management of burnout is the responsibility of the nurse leader to take care of themselves; it has now shifted to the organization being reasonable and accountable, and moreover, it is being demanded.

Purpose and Objectives

Purpose Statement

The purpose of this project was to describe what well-being resources were identified as being effective in decreasing moral distress and burnout in front-line nurse leaders during the COVID-19 pandemic. In an effort to slow the progression of burnout in front-line nurse leaders, interventions need to be developed to not only help nurse leaders in the moment care for COVID-19 patients but also to help them cope while outside their work environment.

Objectives

1. Discuss the relationship between moral distress and burnout of front-line nursing leaders after a pandemic or serious traumatic event in the workplace.
2. Compare what intervention worked best in reducing moral distress and burnout in front-line nursing leaders in the immediate recovery phase of a pandemic or traumatic event.

3. Describe strategies for preventing moral distress and burnout in front-line nursing leaders.

Theoretical Framework

The theoretical framework used to guide this project was Dorothea Orem's Self Care Deficit Theory. The philosophy of the Orem's Self-Care Deficit theory is that all patients want to care for themselves, and they are able to recover more quickly and holistically by performing their own self care as much as they are able (Cafemedia Publisher, 2020). Orem's theory is comprised of three related parts: theory of self-care; theory of self-care deficit; and theory of nursing system. This theory supports not only nurses teaching and creating an environment for patients to care for one's self, but also for nurses to be prepared to care for themselves as a professional nurse. Translating this theory and how it applies to nursing, leaders have not focused on the development of self care practice skills, particularly during large scale crisis, such as COVID-19 (Miller & Reddin-Cassar, 2021). Because nurses overall have been ill prepared to develop their own self care practices, it is important that research studies like this one provide better insight into what interventions may work in like or similar circumstances in years to come.

Review of Literature

Synthesis of Evidence

The current literature provides an overall assessment of the burnout rate of nurses due to the effects of delivering care to patients that contracted COVID-19. There are many systematic reviews and meta-analysis articles that clearly define the scope and depth of nursing burnout, and

in particular, how it effects patient outcomes (Li et al., 2018; Gómez-Urquiza et al., 2017; Pradas-Hernández et al., 2018; Jarden et al., 2019; López- López et al., 2019). When compounded with a large scale disaster or a pandemic, there is associated stress due to lack of or misinformation and greater vulnerability to burnout, fear for self (Hu et al., 2020 ; Labrague & de los Santos, 2020b ; Li et al., 2020 ; Pouralizadeh et al., 2020 ; Huang et al, 2020), fear for family and friends (Hu et al., 2020 ; Labrague & de los Santos, 2020b ; Li et al., 2020), staff turnover (Labrague & de los Santos, 2020b), low morale (Nyashanu et al, 2020), and stress due to lack of resources, particularly personal protective equipment (PPE) (Pouralizadeh et al., 2020). These specific things, coupled with the duration of the COVID pandemic, are what has made burnout much harder to manage individually and as an organization. All of these factors that contribute to burnout of direct care nurses also cause burnout for front-line nursing leaders, in addition to other contributors. There may be times when nursing leaders have overseen care for one of their own staff members that have been infected with this disease, or a family member or a close friend.

Similar to burnout for staff nurses, burnout and turnover of front-line nursing leaders was well documented in the literature (Zastocki, 2010; Pine & Tart, 2007; Warshawsky & Havens, 2014). In one study, it was noted that 72% of front-line nurse managers planned to leave their position within the next five years (Warshawsky & Havens, 2014). In addition to burnout and turnover, there is an ever-looming concern about not only the number of qualified nurses and nurse leaders, but the concern and reality of those in these roles and their overall mental health (Ross, 2020). While these studies identified that there were various factors that led to burnout, to date, there have been very few studies published that specifically show what intervention

decreases burnout and moral distress in front-line nursing leaders after a large-scale disaster or pandemic.

Identification of Gap

It is evident from the literature and our lived experience in management roles that the pandemic intensified burnout in nurses and front-line nursing leaders, but very few studies have tested interventions to scientifically measure the impact on burnout and moral distress in frontline nurse leaders (White, 2021). The desired goal is to have controlled studies that demonstrate the effect of individual interventions as well as various group interventions that lead to a perceived reduction of burnout during extreme moments of stress for nurses, such as during a pandemic. If certain interventions can be demonstrated to be impactful in reducing burnout, then the translational science could be applied in future pandemics or an ongoing natural or human made disaster that would expose nurse leaders to extreme work situations or significant deaths of patients.

Proposed Strategy to Address the Gap

As the country reels from the COVID-19 pandemic, natural disasters, and social disruption that defined 2020 to 2021, nurse leaders must drive political awareness and policy development, addressing threats to healthcare professionals, patients, and communities (Nickitas, 2020). As an example, since the outbreak of the COVID-19 pandemic, nurses have garnered attention and generated swift responsiveness and engagement in political and legislative action calling upon hospital systems, local and state officials, including governors, to pressure the President to use the Defense Production Act (DPA) to increase the domestic production of

medical supplies and equipment that hospitals, health systems, and all front-line providers so desperately need. While this is one example, there will need to be a wide array of interventions available and policy changes made for staff and front-line nursing leaders to mitigate burnout. These interventions and policy decisions should address the various risk factors that are multivariate in design and specifically tailored to the individual, work unit, socioeconomic background, and will need to be in line with their cultural/spiritual beliefs (Cunningham & Cayir, 2021).

Methods

Design

This study employed a mixed method design. Phase I applied a quasi-experimental pre-test/post-test design using The Professional Quality of Life Scale version 5 (ProQOL) scale. Study participants completed an anonymous survey on the Research Electronic Data Capture (REDCap) system. Phase II used a qualitative design in which front-line leaders were asked two open ended questions focused on well-being resources and interventions used by front-line nursing leaders to decrease moral distress and the feeling of burnout.

Setting

The setting for this study was an academic medical center consisting of 927 licensed beds and greater than 60 specialty outpatient clinics, strategically located in central and eastern Kentucky. This medical center houses a level I adult and children's trauma center, a level IV neonatal intensive care unit, and a National Cancer Institute designated cancer program. The academic medical center has clear ties and congruency with their mission, vision, values, and strategic plan of being the premier medical center for the Commonwealth of Kentucky. This

study will help organizational leaders understand the impact COVID-19 has had on front-line nursing leaders and its relation to moral distress, burnout, and secondary trauma stress. This research could be utilized by other healthcare organizations to guide their response to frontline nursing leaders' moral distress and burnout. The barriers to this study were that some front-line leaders were not motivated to participate in research due to busy schedules and trying to balance work and home responsibilities as the pandemic continued.

Sample

Through an email invitation, 150 front-line nursing leaders were invited to participate in both phases of this study. For phase I of the study, 6 nursing leaders fully participated and 144 declined or did not participate in the study. For phase II of the study, 23 participated and 127 chose to not participate. The inclusion criteria titles were assistant nurse managers, nurse managers, and department and/or service line directors within University of Kentucky Healthcare. In addition, participants had to be in a formal nursing leadership position that had clinical, operational, and human resource management responsibilities in an acute care inpatient or outpatient area. Those excluded from the study were any frontline nursing leaders that had been in their role less than three months. Names and email addresses of the applicable nursing leaders were provided by the nursing services office.

Procedure

For Phase I of this study, the baseline ProQOL pre-survey was sent to front-line nursing leaders with a 3-week time period to respond. Once the deadline closed for the first survey, the front-line nursing leader was to choose which intervention they wanted to participate in to

decrease moral distress and burnout. The front-line nursing leader was asked to participate in the intervention of their choice over a 30-day period. After the 30-day period, the ProQOL post-survey was sent to participants in an effort to see if the intervention they chose decreased their perception or moral distress and burnout. The REDCap study survey link was deployed via email. Front-line nursing leaders were able to complete the survey at their leisure, within the 3-week time period.

The study period for Phase II was for one week. Phase II consisted of an e mail sent to participants who could either respond to the e mail with their answers or contact the primary investigator to share their answers in which the primary investigator would write down the answers to each question. The two questions asked were:

1. What wellbeing resources or interventions did you use to decrease your stress level during the COVID-19 pandemic?
2. What wellbeing resources or interventions do you think might help reduce stress in front-line nursing leader?

IRB Approval

A waiver of documentation of informed consent was requested from the University of Kentucky Institutional Review Board for each phase of the study. Both phases of the study were approved under IRB# 70469.

Description of Evidence-based Intervention

In phase I of the study, participants had the opportunity to select one intervention listed in the three categories of interventions used for mitigating or decreasing moral distress (see *Figure 1*). The first category of interventions focused on self, such as meditation, exercise, mindfulness practices, or reflective counseling. The second intervention group looked at self-interventions that have organizational structure, such as group mindfulness practices, battle buddy collaboration, and computer-based resilience training, such as a learning module that helps one calm emotions during or after stressful events. The last intervention category was group interventions, such as social support, psychological first aid, or the SOAR (Supporting One Another to Rise) program. Those participating in the study were to identify which intervention worked for them the best.

Figure 1. *Intervention Description*

| Self-Interventions | Self-Interventions with an Organizational Structure | Group Based Interventions |
|---|---|---|
| <p style="text-align: center;"><u>Meditation</u></p> <p style="text-align: center;">15 minutes per day</p> <p>1) Take a seat Find place to sit that feels calm and quiet to you.</p> <p>2) Set a time limit If you're just beginning, it can help to choose a short time, such as five or 10 minutes. <u>For this study, 15 minutes is recommended.</u></p> <p>3) Notice your body You can sit in a chair with</p> | <p style="text-align: center;"><u>Group Mindfulness Practices</u></p> <p style="text-align: center;">15 minutes per day</p> <p>1) Body scan meditation Lie on your back with your legs extended and arms at your sides, palms facing up. Focus your attention slowly and deliberately on each part of your body, in order, from toe to head or head to toe. Be aware of any sensations, emotions or thoughts associated with each part of your body.</p> | <p style="text-align: center;">Social Support Group</p> <p style="text-align: center;">As prescribed</p> <p>Social support groups can be found within many healthcare organizations and are typically offered through the organizations Human Resources Departments. Example social support groups that the University of Kentucky EAP offers are:</p> <p>1) Mental health services 2) Well-being coaching sessions</p> |

| | | |
|---|--|--|
| <p>your feet on the floor, you can sit loosely cross-legged, you can kneel—all are fine. Just make sure you are stable and in a position you can stay in for a while.</p> <p>4) Feel your breath Follow the sensation of your breath as it goes in and as it goes out.</p> <p>5) Notice when your mind has wandered Inevitably, your attention will leave the breath and wander to other places. When you get around to noticing that your mind has wandered—in a few seconds, a minute, five minutes—simply return your attention to the breath.</p> <p>6) Be kind to your wandering mind Don't judge yourself or obsess over the content of the thoughts you find yourself lost in. Just come back.</p> <p>7) Close with kindness When you're ready, gently lift your gaze (if your eyes are closed, open them). Take a moment and notice any sounds in the environment. Notice how your body feels right now. Notice your thoughts and emotions.</p> | <p>2) Sitting meditation Sit comfortably with your back straight, feet flat on the floor and hands in your lap. Breathing through your nose, focus on your breath moving in and out of your body. If physical sensations or thoughts interrupt your meditation, note the experience and then return your focus to your breath.</p> <p>3) Walking meditation Find a quiet place 10 to 20 feet in length, and begin to walk slowly. Focus on the experience of walking, being aware of the sensations of standing and the subtle movements that keep your balance. When you reach the end of your path, turn and continue walking, maintaining awareness of your sensations.</p> <p>Note: You may choose one or a combination of any of these practices.</p> | <p>3) Counseling sessions 4) Online assessments, and information 5) 24-hour support groups 6) On-demand crisis intervention.</p> |
| <p><u>Exercise</u></p> <p>For substantial health benefits, adults should:</p> | <p><u>Battle Buddy Collaboration</u></p> <p>At least 15 minutes per day during a workday</p> | <p>SOAR Program</p> <p>As prescribed</p> |

| | | |
|--|--|---|
| <p>1) Do at least 150 minutes (2 hours and 30 minutes) to 300 minutes (5 hours) a week of moderate-intensity exercise. Ex: Walking, biking, lite jogging, rowing.</p> <p>Or</p> <p>2) Do 75 minutes (1 hour and 15 minutes) to 150 minutes (2 hours and 30 minutes) a week of vigorous-intensity aerobic physical activity. Ex: Weightlifting, sprinting, interval training, or any burst of rapid intensity training.</p> <p>Or</p> <p>3) Do an equivalent combination of moderate- and vigorous-intensity aerobic activity. Preferably, aerobic activity should be spread throughout the week. Ex: Walking and weightlifting.</p> | <p>Battle buddy collaboration is a dialogue between two work colleagues in which each team member asks each other open-ended questions about various things going on in their work and home life. It is dialogue to discover if there are suggestions that each other can fix or work on, or potentially identify issues that need help from a supervisor or counselor.</p> <p>Example questions:</p> <ul style="list-style-type: none"> • Catch me up on your family. • How have you been spending your time? • What is a typical day like? • What are you doing to take care of yourself? How is that going? • (If he/she is a parent) What's it been like for you to be with your kids after the COVID pandemic? | <p>(Duration is from 15 min to 1 hour)</p> <p>Supporting One Another to Rise, or SOAR, is a team of trained peers who provide supportive care through active listening and empathy to colleagues involved in an emotionally traumatic event.</p> <p>How the SOAR program can help:</p> <ul style="list-style-type: none"> -Provide a safe zone to express thoughts and reactions to enhance coping. -Ensure that information is strictly confidential. -Provide one-on-one peer support or team support for a group, and explore the staff's normal reactions and feelings that often occur after a stressful or emotionally traumatic event. -Assess and make appropriate referrals to additional resources. <p>For more information about the UK SOAR program, please contact us at: 859-323-7627 (SOAR) ukhcsoar@uky.edu.</p> |
|--|--|---|

The goal of Phase II of the study was to identify interventions, in addition to those used as in Phase I of this study, that participants used to decrease moral distress and burnout. The goal of this phase of the study was to identify interventions that fell outside of the categories in Phase I and ascertain themes of interventions that might be useful to explore in future studies

addressing this topic. Since both phases were blinded, there is no way to know who participated in phase I and or phase II of the study, nor if any overlapped.

Measures and Instrument

The pre and post survey for Phase I of the study included demographic information related to age, gender identity ethnicity, years as a healthcare worker, type of leadership role, and length of time in a leadership position. Study participants were asked to provide a unique four digit identifying number. This unique identifier was used to link pre and post survey responses within REDCap, while maintaining anonymity of participants.

Both the pre and post surveys of phase I used the Professional Quality of Life Scale, known as the ProQOL. It is the most commonly used measure of the positive and negative effects of working with people who have experienced extremely stressful events (Stamm, 2010). The ProQOL scale, a 30-item survey that uses a 5-point Likert-type scale ranging from “1 = never to 5 = very often,” measures four components: compassion satisfaction (CS), compassion fatigue (CF), burnout (BO) and secondary trauma stress (STS). The ProQOL survey tool has good construct validity; there are more than 100,000 articles using this tool on the internet. To further understand the measurement of the instrument, it is important to understand the definition of each of these scales. Compassion satisfaction is focused on deriving pleasure from doing one’s work well and positively contributing to the work or lives of colleagues. Compassion fatigue has two parts: burnout represented by feelings of exhaustion, frustration, anger and depression and secondary trauma stress, a negative feeling driven by fear and work-related trauma. The work-related trauma can be both primary and secondary trauma.

Data Analysis

Phase I of the study, participants included in the data analysis completed the three required study components to include: pre-test, a 30-day intervention, and post-test. Data were summarized using descriptive statistics, including mean, standard deviations or frequency distributions, as appropriate. A paired t-test was used to analyze the pre and post intervention scores for the ProQOL subscales including compassion satisfaction, burnout, and secondary trauma stress. Statistical significance was considered as p values less than or equal to .05. All data analysis was conducted using SPSS, version 28.

For phase II of the study, participant comments were categorized based on various themes. The categories were: (a) exercise as defined by some form of physical activity; (b) mental distraction defined as an intervention that takes a person's mind off of work after having cared for COVID patients; and (c) clinical intervention where a frontline nursing leader seeks professional clinical help from a licensed healthcare worker trained in mental health.

Results

Phase I of this study involved inviting 150 front-line nursing leaders to participate in this project by first taking the Professional Quality of Life survey. Of the 150 invited, 11 participated in the pre-survey. The majority of participants were female (91%) with 9% identifying as African American or Black and 91% identifying as White or Caucasian (see *Table 1*). The average age was 43.2 years (SD=8.4), and participant ages ranged from 29 to 58. The most frequently reported years of experience as a healthcare worker was 16 or more years (64%), followed by 6-15 years (36%). There were four participants that identified as an Assistant

Patient Care Manager, six as a Patient Care Manager, and one as a Director. The experience in a leadership role ranged from 6 people (55%) having greater than 3 months but less than 6 years of experience and five people (45%) having greater than 6 years to greater than 12 years of experience in a leadership position.

Six nursing leaders who completed the pre-survey also completed the post intervention survey. There was no change in compassion satisfaction (CS) from pre-intervention to post-intervention (M=50.6, SD=12.98 vs. M=50.0, SD=10.0; $p=.682$, see *Table 2*). The post survey burnout score (BO) increased (M=46.4, SD=11.0 vs. M=50.0, SD=10.0; $p=.374$, see *Table 2*). Lastly, Secondary Trauma Stress (STS) also increased post-intervention (M=46.6, SD=11.3 vs. M=50.0, SD=10.0; $p \text{ value}=.054$, see *Table 2*).

There were four assistant patient care managers who participated in the pre-intervention survey and two who participated in the post intervention survey. There was no significant change in the ProQOL (see *Table 3*). There were six patient care managers who participated in the pre-intervention survey and three who participated in the post intervention survey. Again, no significant changes were noted in the ProQOL subcategories (see *Table 3*). There was one nursing director who participated in the pre-intervention survey and three who participated in the post intervention survey. While their scores looked very different than the scores of the assistant care manager and the patient care manager, there was not a significant change post intervention; see *Table 3*). Of the six who participated in the intervention, meditation ($n=2$), exercise ($n=2$), social support group ($n=1$), and other ($n=1$) were chosen. None of the participants chose mindfulness practices, battle buddy collaboration, or the SOAR program (see *Table 4*).

For Phase II of the study, 23 participants provided answers to both questions. For the first question “What wellbeing resources or interventions did you use to decrease your stress level during the COVID-19 pandemic?”, the themes identified were exercise (n=9), mental distraction (n=11), and a clinical intervention (n=3). Examples given for exercise were taking a walk, trying a new fitness routine, and yoga. Mental distraction examples given by the study participants were reading a book or playing a video game. Clinical intervention examples included sought help from their primary care provider or saw a mental health practitioner. For the second question, “What wellbeing resources or interventions do you think might help reduce stress in front-line nursing leaders?” The themes identified were exercise (n=18), mental distraction (n=8), and a clinical intervention (n=3). The examples given for exercise were that the study participant thought it would be good to start an exercise routine such as walking daily or going on a hike. The suggested examples given for mental distraction were to read a book or take a college class to take one’s mind off of work. The examples of clinical interventions given were to seek help from a mental healthcare worker or join a work-related support group (see *Table 5*).

Discussion

The aim of this mixed method design project was to determine what interventions decreased perceived moral distress and burnout in frontline nursing leaders during a pandemic. The results of phase I of this study did not indicate that the interventions used by participants were effective in reducing the feeling of moral distress and burnout based on the small sample of participants. For years, it has been identified that nurse managers were already burnt out and had an intent to leave their roles (Warshawsky & Havens 2014). In the Warshawsky and Havens study the four most common reasons to leave were burnout, career change, retirement, and

promotion. The importance of the findings from this study was that nursing managers were clearly identified as already having a high level of dissatisfaction with their job and a significant level of burnout prior to attempting an intervention that is designed to reduce these feelings.

Of the six who participated in the full study, there was no significant change in the compassion satisfaction scores. Compassion satisfaction is about the pleasure one derives from being able to do one's work well. Higher scores represent greater satisfaction related to ability to be an effective caregiver in one's job. The higher the score, the more the participant derives a good deal of professional satisfaction from their position (Stamm, 2010). Since burnout is an element of compassion fatigue, it is usually associated with the feeling of hopelessness and difficulty in dealing with work or doing one's job effectively. The negative feelings are usually associated with a very high workload or a non-supportive work environment. Higher scores for this domain mean one is at higher risk for burnout. If the score is below 23, it strongly reflects feelings about one's ability to be effective in their work. If the score is above 41, typically one feels they are not effective in their current position or work environment. If the score remains high, even after an intervention, there may be concern for issues outside of the work environment (Stamm, 2010). As the results indicated, the assistant patient care manager and the patient care manager burn out scores were in the 50 plus range for the pre and post survey indicating a high level of burnout. The burnout score for the director was in the acceptable range of when one is effective in their role.

The second domain of compassion fatigue is secondary traumatic stress. Secondary traumatic stress is associated with continued exposure to extremely stressful or traumatically stressful events. This component is complicated because nurse leaders involved in taking care of

COVID patients are at risk for more of a primary exposure to stressful and traumatic events. They are also surrounded by co-workers who are sharing stories about their own stress and traumatic events, and this causes secondary traumatic stress. Typically, this is described as difficulty sleeping, having disturbing images pop into one's mind, or trying to avoid things that remind a person of an event or primary traumatic event (Ross, 2020). If a person's score is above 43, it is recommended that the person take some time to think about what may be frightening to them or if there is another reason for an elevated score outside of work (Stamm, 2010). Again, like the burnout scores for the assistant patient care manager and manager, their secondary traumatic stress scores pre and post survey were already above 40, indicating a high level of secondary traumatic stress.

For this project, participants had seven different interventions that they could choose to participate in over a thirty-day period. Of the seven, only three were utilized, and due to the structure of the study, there was no reason given as to why a participant choose one intervention over another. Even though there is a large body of evidence supporting the practice of mindfulness and other interventions proven to be beneficial in occupations with high emotional and cognitive demand there is very little literature specific to the role of a front-line nursing leader (Ceravolo & Raines, 2019). Khoury et al. (2015) and Lamothe et al. (2016) concluded that mindfulness-based stress reducing interventions were moderately effective in reducing stress, depression, anxiety and distress and in ameliorating the quality of life of healthy individuals. In the Lamothe et al. (2017) study, mindfulness-based interventions were shown to decrease stress, anxiety, and depression and improve mindfulness, mood, self-efficacy, and empathy in healthcare professionals. With this being understood, the interventions chosen for

this study were based off of the variety of interventions proven to have some effect on burnout and moral injury in healthcare professionals.

Phase II of this study identified themes related to interventions participants had used during the pandemic to help them cope with burnout or that they felt would offer benefit to reduce stress. The intent of this portion of the study was to explore other interventions that might be perceived to reduce stress, burnout, and the overall health of the study participants. The findings of this study were in line with other studies done that showed interventions targeting diet, body composition, physical activity, or stress are most likely to have positive outcomes for nurses' health and/or wellbeing (Stanulewicz et al., 2019). Many of the respondent's answers were already an option in phase I of this study, but there were other suggestions such as playing video games or watching a television series as a method to decreasing their stress and burnout. Playing video games and watching television, which were stress relief distracters, were two of the most popular identified interventions that front-line nurse leaders specifically chose to reduce their stress. Even though there was a small sample size for the qualitative portion of the study, potentially looking at other non-traditional interventions could show potential utility in future studies. While the clinical intervention category only had three responses for both questions, it is important to always have this option available to front-line leaders.

Implications for Practice, Education, Policy and Research

It is clear from this study and by the reviewed literature that the rate and depth of burnout and moral distress on healthcare workers and nursing leaders during the COVID-19 pandemic has been significant. There will continue to be studies with various healthcare subgroups, such as nurse leaders, to identify specific ways to reduce burnout. Future studies need to include a

larger sample and managers from different organizations, but ones in similar roles. In addition, investigating organizational leadership style, type of units managed, or number or diversity of staff supervised may affect the practice of mindfulness or the impact of various interventions on the nurse manager quality of work life, risk for burnout, or perceived wellness is warranted (Ceravolo & Raines, 2019). In addition to future studies, there needs to be significant education provided to healthcare professionals about the short and long-term effects of burnout. As described in the paper, burnout was well identified in nursing leaders prior to the COVID pandemic and it has only intensified as the COVID pandemic continued on for months across the world. To support and enforce this, healthcare institutions and lawmakers need to collaborate and develop mandatory policies that outline not only what burnout is clinically, but also what training and treatment should be mandatory in an effort to reduce and support burnout in healthcare workers.

Limitations

The primary limitations of this study were the small sample size, timing of the study, single institution study site, duration of the study, and survey fatigue. While there were 150 invited to participate, only 6 completed phase I of this study and 23 completed phase II of the study. The timing for phase I of this study was not ideal in that the intervention study period occurred during the Christmas holidays and was during the wave of the delta variant of COVID-19. Anecdotally, many felt that the delta was the most severe wave due to the extreme illness of the patients presenting to the hospital. The timing of phase II of this study was during the peak of the omicron variant wave when frontline nursing leaders were taxed with large volumes of COVID-19 patients and continually had to change unit and hospital operations as well as staffing

models to manage the sheer volume of patients being admitted. The stress of having to act quickly to make life, death, and operational decisions occurred on an hourly basis for days on end and gave little to no downtime for care teams or front-line leaders to focus on interventions to help with their moral distress and burnout. Since the beginning of the pandemic, there have been multiple surveys sent to nurses all around the world for various reasons and to try to gain a better insight about nurse's feelings. Realizing this, a potential reason for a low response rate could also be survey fatigue since nurses are getting surveys from their employers, researchers, and from organizations such as the American Nurses Association, the American Association of Critical Care Nurses, etc.

Conclusion

These are challenging and uncertain times for the nursing profession and the entire health care delivery system. Most of America's nurses feel stressed, frustrated, and exhausted (American Nurses Foundation, 2022). This study focused on what intervention might be useful in reducing burnout and moral distress in frontline leaders. The findings from this mixed method study demonstrated that front-line nursing leaders had significant burnout due to the COVID-19 pandemic and participants identified some interventions that helped reduce their burnout and moral distress. These findings underscore the mental and emotional state of front-line nursing leaders during the COVID-19 pandemic as well as potential novel research ideas, such as non-traditional mental distraction interventions. Nurse Managers need to be actively supported during a pandemic to address anxiety, ways of coping and intent to leave the organization or profession (Middleton et al., 2021). There will need to be a continual focus on organizational and personal interventions that are demonstrated to work in an effort to help mitigate the severity

of burnout and mental distress nurses and nurse leaders are currently being overwhelmed with during this pandemic.

References

- American Nurses Foundation. (2022, March 1). *PDF Viewer*. Pulse on the Nation's Nurses Survey Series: COVID-19 Two-Year Impact Assessment Survey. Retrieved March 3, 2022, from <https://chrome.google.com/webstore/detail/pdf-viewer/oemmnadbldboiebfnladdacbfmadadm>
- Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology, 22*(3), 273–285.
- Brusie, C. (2019, April 7). *Study reveals alarming statistics on nurse burnout*. Nurse.org. Retrieved February 20, 2022
- Cafemedia Publisher. (2020, July 19). *Orem's self-care deficit nursing theory*. Nursing Theory. Retrieved February 24, 2022, from <https://nursing-theory.org/theories-and-models/orem-self-care-deficit-theory.php>
- Catania, G., Zanini, M., Hayter, M., Timmins, F., Dasso, N., Ottonello, G., Aleo, G., Sasso, L., & Bagnasco, A. (2021). Lessons from Italian front-line nurses' experiences during the COVID-19 pandemic: A qualitative descriptive study. *Journal of Nursing Management, 29*(3), 404–411.
- Cathro, H., & Blackmon, E. (2021). Nurse Leaders' Experiences and Learnings Navigating Through the Chaos of a Pandemic. *The Journal of Nursing Administration, 51*(2), 63–66.
- Ceravolo, D., & Raines, D. A. (2019). The Impact of a Mindfulness Intervention for Nurse Managers. *Journal of Holistic Nursing: Official Journal of the American Holistic Nurses' Association, 37*(1), 47–55.

- Cunningham, T., & Çayir, E. (2021). Nurse Leaders Employ Contemplative Practices to Promote Healthcare Professional Well-being and Decrease Anxiety. *The Journal of Nursing Administration, 51*(3), 156–161.
- Farrerons-Nogueras, L. & Calvo-Francés, F. (2008). Descriptive study of burnout syndrome in a sample of nursing professionals in the southern area of Gran Canaria. *Anxiety and Stress, 14*(1), 101-113.
- Fernandez, P. R., Lord, H., Halcomb, P. E., Moxham, P. L., Middleton, D. R., Alanzeh, D. I., & Ellwood, L. (2020). Implications for COVID19: A systematic review of nurses' experiences of working in acute care hospital settings during a respiratory pandemic. *International Journal of Nursing Studies, 103*637.
- Garcia, C. L., Abreu, L. C., Ramos, J., Castro, C., Smiderle, F., Santos, J., & Bezerra, I. (2019). Influence of Burnout on Patient Safety: Systematic Review and Meta-Analysis. *Medicina (Kaunas, Lithuania), 55*(9), 553.
- Gómez-Urquiza, J.L., De la Fuente-Solana, E.I, Albendín-García, L., Vargas-Pecino, C., Ortega-Campos, E.M., & Cañadas-De la Fuente, G.A. (2017). Prevalence of burnout syndrome in emergency nurses: A meta-analysis. *Critical Care Nurse, 37*(5).
- Heath, C., Sommerfield, A., & von Ungern-Sternberg, B. S. (2020). Resilience strategies to manage psychological distress among healthcare workers during the COVID-19 pandemic: a narrative review. *Anesthesia, 75*(10), 1364–1371.
- Holshue, M. L., DeBolt, C., Lindquist, S., Lofy, K. H., Wiesman, J., Bruce, H., Spitters, C., Ericson, K., Wilkerson, S., Tural, A., Diaz, G., Cohn, A., Fox, L., Patel, A., Gerber, S. I., Kim, L., Tong, S., Lu, X., Lindstrom, S., Pallansch, M. A., Washington State 2019-

- nCoV Case Investigation Team (2020). First Case of 2019 Novel Coronavirus in the United States. *The New England Journal of Medicine*, 382(10), 929–936.
- Hossain, F., & Clatty, A. (2021). Self-care strategies in response to nurses' moral injury during COVID-19 pandemic. *Nursing Ethics*, 28(1), 23–32.
- Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Zhu, L. X., et al. (2020). Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: a large-scale cross-sectional study. *EClinicalMedicine*, 24.
- Jarden, Jarden, A., Weiland, T. J., Taylor, G., Bujalka, H., Brockenshire, N., & Gerdtz, M. F. (2021). New graduate nurse wellbeing, work wellbeing and mental health: A quantitative systematic review. *International Journal of Nursing Studies*, 121, 103997–103997.
- Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *Journal of Psychosomatic Research*, 78, 519-528.
- Lamothe, M., Rondeau, E., Malboeuf-Hurtubise, C., Duval, M., & Sultan, S. (2016). Outcomes of MBSR or MBSR based interventions in health care providers: A systematic review with a focus on empathy and emotional competencies. *Complementary Therapies in Medicine*, 24(2), 19-28.
- Li, H., Cheng, B., & Zhu, X.P. (2018). Quantification of burnout in emergency nurses: A systematic review and meta-analysis. *Int Emerg Nurs*, 39, 46-54.
- López- López, I.M., Gómez- Urquiza, J.L., Cañadas, G.R., De la Fuente, E.I., Albendín- García, L., & Cañadas- De la Fuente, G.A. (2019). Prevalence of burnout in mental health

- nurses and related factors: a systematic review and meta- analysis. *Int J Ment Health Nurs*, 28(5) 1032-1041.
- Labrague, L. J., & de los Santos, J. A. A. (2020a). Fear of COVID-19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of Nursing Management*, 00, 1–9.
- Labrague, L. J., & de los Santos, J. A. A. (2020b). COVID-19 anxiety among front-line nurses: predictive role of organizational support, personal resilience and social support. *Journal of Nursing Management*, 28, 1653–1661.
- McConville, J., McAleer, R., & Hahne, A. (2017). Mindfulness training for health profession students—The effect of mindfulness training on psychological well-being, learning and clinical performance of health professional students: A systematic review of randomized and non-randomized controlled trials. *Explore: The Journal of Science and Healing*, 13(1), 26-45.
- Miller, J. J., & Reddin-Cassar, J. (2021). Self-care among healthcare social workers: The impact of COVID-19. *Social Work in Health Care*, 60(1), 30–48.
- Middleton, R., Loveday, C., Hobbs, C., Almasi, E., Moxham, L., Green, H., Halcomb, E., & Fernandez, R. (2021). The COVID-19 pandemic - A focus on nurse managers' mental health, coping behaviors and organizational commitment. *Collegian (Royal College of Nursing, Australia)*, 28(6), 703–708.
- Morley, G., Grady, C., McCarthy, J., & Ulrich, C. M. (2020). Covid-19: Ethical Challenges for Nurses. *The Hastings Center Report*, 50(3), 35–39.

- Moss, J. (2019). Burnout is about your workplace, not your people. *Harvard Business Review*. 2019, December 11. <https://hbr.org/2019/12/burnout-is-about-your-workplace-not-your-people>.
- Nickitas, D.M. (2020). The Politics of the COVID-19 Pandemic. *Nursing Economics*, 38, 222-223.
- Nyashanu, M., Pfende, F., & Ekpenyong, M. (2020). Exploring the challenges faced by frontline workers in health and social care amid the COVID-19 pandemic: experiences of frontline workers in the English Midlands region. UK. *Journal of Interprofessional Care*, 34 (5), 655–661.
- Owen, R. D., & Schimmels, J. (2020). Leadership After a Crisis: The Application of Psychological First Aid. *The Journal of Nursing Administration*, 50(10), 505–507.
- Pine, R., & Tart, K. (2007). Return on investment: Benefits and challenges of a baccalaureate nurse residency program. *Nursing Economics*, 21(5), 13-18, 39
- Pouralizadeh, Bostani, Z., Maroufizadeh, S., Ghanbari, A., Khoshbakht, M., Alavi, S. A., & Ashrafi, S. (2020). Anxiety and depression and the related factors in nurses of Guilan University of Medical Sciences hospitals during COVID-19: A web-based cross-sectional study. *International Journal of Africa Nursing Sciences*, 13, 100233–100233.
- Pradas-Hernández, L., Ariza, T., Gómez-Urquiza, J.L., Albendín-García, L., De la Fuente, E.I., & Cañadas-De la Fuente, A. (2018). Prevalence of burnout in pediatric nurses: A systematic review and meta-analysis. *PLoS One*. 13(4), 25-37.
- Ross J. (2020). The Exacerbation of Burnout During COVID-19: A Major Concern for Nurse Safety. *Journal of Perianesthesia Nursing: Official Journal of the American Society of PeriAnesthesia Nurses*, 35(4), 439–440.

- Stanulewicz, N., Knox, E., Narayanasamy, M., Shivji, N., Khunti, K., & Blake, H. (2019). Effectiveness of Lifestyle Health Promotion Interventions for Nurses: A Systematic Review. *International Journal of Environmental Research and Public Health*, 17(1), 17.
- Stamm, B.H. (2010). *The Concise ProQOL Manual*, 2nd Ed. Pocatello, ID: ProQOL.org.
- Teall, A. M., & Mazurek Melnyk, B. (2021). An Innovative Wellness Partner Program to Support the Health and Well-being of Nurses During the COVID-19 Pandemic: Implementation and Outcomes. *Nursing Administration Quarterly*, 45(2), 169–174.
- Warshawsky, N. E., & Havens, D. S. (2014). Nurse manager job satisfaction and intent to leave. *Nursing Economics*, 32(1), 32–39.
- White, Jane H. “A Phenomenological Study of Nurse Managers' and Assistant Nurse Managers' Experiences during the COVID-19 Pandemic in the United States.” *Journal of Nursing Management* vol. 29,6 (2021): 1525-1534.
- World Health Organization. (2019, May 28). Burn-out an occupational phenomenon: International Classification of Diseases. https://www.who.int/mental_health/evidence/burn-out/en/
- Zastocki, D. (2019, October 11). Retaining nurse managers. Retrieved March 29, 2022, from <https://www.myamericannurse.com/retaining-nurse-managers/>

Tables

Table 1. *Participant Demographics*

| | <i>Mean (SD); or n (%)</i> |
|--------------------------------|----------------------------|
| Age | 43.18 (8.43) |
| Gender | |
| Male | 1 (9.1%) |
| Female | 10 (90.9%) |
| Ethnicity | |
| African American or Black | 1 (9.1%) |
| White or Caucasian | 10 (90.9%) |
| Years as a Healthcare Worker | |
| 6-10 | 2 (18.2%) |
| 11-15 | 2 (18.2%) |
| 16-20 | 1 (9.1%) |
| >20+ | 6 (54.5%) |
| Leadership Role | |
| Assistant Patient Care Manager | 4 (36.4%) |
| Patient Care Manager | 6 (54.5%) |
| Director | 1 (9.1%) |

Table 2. *Differences in Pre-intervention and Post-intervention ProQOL Scores based on a Paired T-test.*

| | Pre-intervention Mean (SD) | Post-intervention Mean (SD) | <i>p</i> |
|-------------------------|-------------------------------|--------------------------------|----------|
| Compassion Satisfaction | 50.6 (13.0) | 50.0 (10.0) | .682 |
| Burnout | 46.4 (11.0) | 50 (10.0) | .374 |
| Secondary Trauma Stress | 46.6 (11.3) | 50 (10.0) | .054 |

Table 3. *Differences in Pre-intervention and Post-intervention ProQOL Scores based on Position.*

| | Pre-intervention Mean (SD) | Post-intervention Mean (SD) |
|--------------------------------|-------------------------------|--------------------------------|
| Assistant Patient Care Manager | (n=4) | (n=2) |
| CS- | 51.55 (6.07) | 51.06 (2.76) |
| BO- | 50.11 (8.77) | 50.44 (11.41) |
| STS- | 53.51 (8.49) | 53.95 (6.51) |
| Patient Care Manager | (n=6) | (n=3) |
| CS- | 51.55 (4.47) | 52.49 (4.30) |
| BO- | 52.49 (9.84) | 52.30 (7.55) |
| STS- | 53.73 (3.51) | 56.64 (1.76) |
| Director | (n=1) | (n=1) |
| CS- | 61.49 | 60.82 |
| BO- | 31.61 | 33.67 |
| STS- | 35.15 | 36.66 |

Table 4. *Participant Intervention*

| Intervention | Number of Participants |
|----------------------------|------------------------|
| Meditation | 2 |
| Exercise | 2 |
| Mindful Practices | 0 |
| Battle Buddy Collaboration | 0 |
| Social Support Group | 1 |
| SOAR Program | 0 |
| Other | 1 |

Table 5. *Phase II Survey Results*

| What wellbeing resources or interventions did you use to decrease your stress level during the COVID-19 pandemic? | | What wellbeing resources or interventions do you think might help reduce stress in front-line nursing leaders? | |
|---|---|--|--|
| Classification | Examples Given | Classification | Examples Given |
| Exercise (n=9) | -Walking -Running -Yoga -Exercise -Hiking -Work out -Exercise and lose weight -Took up exercising | Exercise (n=18) | -Walking -Running -Exercise -Hiking -Work out more -Take kids for a walk outside. -Do some form of physical fitness. |
| Mental Distraction (n=11) | -Read a book -Getting off the unit during my lunch break to give myself a break from seeing and hearing about COVID so much. -Played video games -Binge watch Netflix series -Spent time with my kids to distract myself from work. | Mental Distraction (n=2) | -Read -Take a college class to take up time and not focus on work or COVID. |
| Clinical Intervention (n=3) | - Utilized free five therapy sessions provided by UK. - Spoke with my PCP about my feeling and was put on an anti-depressant. | Clinical Intervention (n=3) | -Seek help from a licensed counselor. -Don't be afraid to ask for help. -Find a healthcare worker support group and participate. |

| | | | |
|--|--|--|--|
| | -Participated in debriefings at work led by a therapist. | | |
|--|--|--|--|