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Nurse Leader Burnout: A Pre-Survey/Post-Survey Quality Improvement Project

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Abstract

Title of the Project: Nurse Leader Burnout: A Pre-Survey/Post-Survey Quality Improvement Project

Objective/Purpose of the project: The objective of the project was to provide time for inpatient nurse leaders to take time to visit the resiliency room and or cart. The purpose of the study is to determine if scheduled use of the resiliency room and or cart can help improve nurse leaders' ability to clear their mind and decrease burnout.

Methods: Sample size of 17 inpatient nurse leaders at Sky Ridge Medical center were sent via Survey Monkey, a pre-survey using the Occupational Fatigue Recovery scale (OFERs). After six weeks of utilization of the recharge/resiliency room and or cart, a post-survey was sent to the participants. The pre/post survey data was compared to determine the overall impact of the resiliency/recharge benefits.

Results: The results data show that leaders utilizing the recharge/resiliency room were positively impacted in decreasing nurse leader fatigue/stress and burnout. The mean OFERs score revealed statistical significance ($t=7.584$, $p=<.001$), with a moderate reliability of Cronbach alpha score (0.565).

Conclusions/Application to practice:

This quality improvement, quasi experimental project, was found to be statistically significant. The PICO question, "does visiting the resiliency room allow nurse leaders time to step away from work demands, decrease nurse leader burn out"? Scheduling time in the resiliency/recharge room made a positive impact on the inpatient nurse leaders and should be spread throughout hospital leadership teams.

Keywords: nurse leader, burnout, resiliency room, nurse leader fatigue, leader fatigue, nurse leader burnout in healthcare, nurse leader resiliency, and nurse leader turnover rate

Executive Summary

Project Title: Nurse Leader Burnout: A Pre-Survey/Post-Survey Quality Improvement Project

Problem: Increased stress, burnout and fatigue are ongoing challenges nurse leaders face daily, which results in turnover. Within many health systems, the rate of nurse leader turnover has skyrocketed and, in some areas, causing executive leaders to step in as front-line leaders (Prochnow et al., 2021). Healthcare burnout is becoming a growing public health concern and has been well studied for nurses; yet little has been studied on nurse leaders (Prochnow et al., 2021).

Purpose: The purpose of the study is to determine if scheduled use of the resiliency room and or cart can help improve nurse leaders' ability to clear their mind and decrease burnout. This project was created from the DNP student's observation and experience with nurse leader burnout.

Goals: The main goal is to partner with nurse leaders at Sky Ridge Medical center to decrease stress/burnout measured as evidenced by improved scores on Occupational Fatigue Exhaustion Recovery scale (OFERS) post resiliency/recharge intervention.

Objectives: The objective of the project was to educate and provide time for the nurse leaders to take time to visit the recharge/resiliency room or to do an activity unrelated to work to refocus.

Plan: This quality improvement project followed a pre-intervention survey data, six weeks of intervention, followed by a post-intervention survey data collection. The pre-survey data was compared to the post-intervention survey to determine the overall impact of the resiliency/recharge benefits.

Outcomes and Results: The results data show that leaders utilizing the recharge/resiliency room had a positive impact in decreasing nurse leader fatigue/stress and burnout. The mean OFERs score revealed statistical significance ($t=7.584$, $p=<.001$). Cronbach's score resulted in a moderate reliability (0.565). The value would have been higher with a higher sample size.

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Table of Contents

List of Figures

List of Appendices

Nurse Leader Burnout: A Pre-Survey/Post-Survey Research Design

A doctor of nursing practice (DNP) graduate is well-prepared to integrate nursing sciences with knowledge from organizational, biophysical, psychological and analytical sciences (Zaccagnini & Pechacek, 2021). "A nurse leader is a forgotten warrior" (Hill et al., 2020, p. 66). Nurse leaders assist in creating healthy environments in which individuals, teams, departments, and hospitals can thrive. Increased stress, burnout, and fatigue are ongoing challenges that nurse leaders face daily, which results in turnover. Nurse leaders also have high expectations to keep staffing safe and patients cared for, in an often chaotic and demanding environment. There has been little research conducted on nurse leaders' experience with fatigue, burnout and increased stress (Steege et al., 2017). Fatigue plays a role in decreased performance, safety, and productivity in the workforce (Shortz et al., 2019). Nurse leaders are part of these work environments and yet their experiences of fatigue have not routinely been considered (Steege et al., 2017)., n.d.).

Problem Recognition and Definition

Statement of Purpose

The purpose of the project is to determine if scheduled use of the resiliency room and or cart can help improve nurse leaders' ability to clear their mind and decrease burnout. This project was created from the DNP student's observation and experience with nurse leader fatigue/burnout. Nurse leader stress, exhaustion and fatigue lead to burnout, which ultimately leads to increased turnover rates.

Within today's complex healthcare systems, nurse leaders are responsible for achieving high quality patient care and organizational outcomes (Steege et al., 2017). "Occupational fatigue is a complex multidimensional condition with emotional, physiologic, cognitive/mental

and sensory components that occur as a consequence of excessive work demands and insufficient energy restoration" (Steege et al., 2017, p. 277). Work-related stress is a concern for succession planning for nurse leaders in the future. Leaders relate fatigue and other variables of workload and stress, which may have implications for retaining and recruiting nurse leaders (Steege et al., 2017). Aging leaders, increased retirement in the baby boomer population and negative perceptions of the role are also contributing factors to recruiting and retaining nurse leaders (Steege et al., 2017). Leadership roles have become drastically more challenging with accountability, struggle with staffing and the technological advancement as there is little to no time to turn off and recharge (Priddy, 2019). "Nurse managers are faced with elevated levels of job-related stress. Performance expectations are often unrealistic and potentially harmful to the well-being of the nurse leader" (Rosa-Besa et al., 2021, p. 42).

Acute fatigue is tiredness related to doing one's job every day and becoming stressful when there is inadequate time to recover (Hill et al., 2020). Work-related stress can be influenced by processes within the organization, job autonomy and upper leadership support (Salmela et al., 2020). "Prolonged exposure to a stressful healthcare work environment can result in anxiety, compassion, fatigue, job dissatisfaction, negative health outcomes, decreased productivity and increased absenteeism" (Salmela et al., 2020, p. 58). Resilience is an internal resource that allows one to cope with stress and yield better positive outcomes (Salmela et al., 2020). "The creation of quiet restorative areas allows individuals and small groups to refresh and renew, building resilience and positively impacting self-care and the working environment" (Salmela et al., 2020, p. 58). A study conducted by Salmela et al., 2021 resulted in nurses sharing that they were able to step away to a quiet place to recharge. The study resulted in evidence showing interventions improved nursing staff and lead to resiliency and retention (Salmela et al., 2020).

Support from nursing leaders and executives is essential in creating places for employees to go and take a break to refocus.

Problem Statement

Increased stress, burnout and fatigue are ongoing challenges nurse leaders face daily, which results in turnover. Within many health systems, the rate of nurse leader turnover has skyrocketed and, in some areas, causing executive leaders to step in as front-line leaders (Prochnow et al., 2021). In a recent report by the National Academies of Sciences, Engineering, and Medicine, shared that between 35% and 54% of nurses in the United States have major symptoms of burnout (Prochnow et al., 2021). Healthcare burnout is becoming a growing public health concern and has been well studied for nurses; yet little has been studied on nurse leaders (Prochnow et al., 2021). Turnover is an added financial strain on any organization and has a negative effect on patients, nurses and the hospital. The national average for nurse leader turnover rate is 18.6% and the average cost of turnover for a nurse leader is estimated at $68,000-$110,000 depending on location and hospital size (DailyPay, 2021). With the project site averaging a much higher than national average, 25% nurse leader turnover rate, this has become a financial burden. The rate of nurse leader turnover has become the highest the project organization has seen in over ten years. Due to the high rate of turnover, the executive leadership team supports this project.

Population-Intervention-Comparison-Outcome (PICO) Question

The PICO question: Does visiting the resiliency room allow nurse leaders time to step away from work demands, decrease nurse leader burn out?

P = Population/Patient/Problem – Nurse leaders at Sky Ridge Medical Center

I = Intervention – Participation in regularly scheduled visits to a resiliency room and or use of resiliency cart at least three to five times per week

C = Comparison – Irregular or limited use of the resiliency room/cart as prior to intervention

O = Outcome – Decrease nurse leader stress/burnout measured as evidenced by improved scores on Occupational Fatigue Exhaustion Recovery scale (OFERS) post intervention

The group of nurse leaders will be given a pre-survey and post-survey using a Likert scale to identify if the interventions were successful. The long-term goal is to decrease nurse leader turnover rates; however, the goal does not fit within the limited scope/timeline of this project.

Project Significance and Scope

As previously stated, there is an increase in nurse leader burn out and limited to no succession planning. Supporting literature will discuss the impact of nurse leader burnout. An intervention that allows nurse leaders scheduled time away from the constant demands could decrease burnout, increase succession planning and ultimately decrease turnover.

Theoretical Foundation

Nursing theories provide a foundational knowledge of care concepts that enable those in the profession to explain rationale and reasons for their actions to their patients. This is important because it helps nurses articulate evidence that justifies the methodologies behind their practice (Jasovsky et al., 2010). The theory chosen to support this project is Katharine Kolcaba's theory of evolution of the mid-range theory of comfort for outcomes research. The theory states "in stressful health care situations, unmet needs for comfort are met by nurses" (Kolcaba, 2001). This theory of comfort helps nurses re-conceptualize nurse productivity. With this project, the focus is on nurse leaders' work and burnout. Implementing strategies to schedule visits and utilize the resiliency room to relax and recharge. This will allow nurse leaders time and

opportunity to recharge and step away from the nursing unit to take some self-help time. This theory fits with the DNP project and aligns with the vision of the research study design.

The non-nursing theory that relates to the DNP project is the PDSA Cycle (Plan-Do-Study-Act) and is a systematic process for gaining valuable learning and knowledge for the continual improvement of a product, process, or service Deming's, Plan, Do, Study, Act model (W. Edward Deming Institute, 2021). This model leads a step-by-step process of change and is easy to understand and follow. It showcases a plan, do, study, act model which aligns with this DNP project and also allows for each step to be explained and evaluated and in some cases, move back a step. Within this model is an opportunity to perform quick cycles to advance interventions, while being able to go back and re-study the approach.

Review of Evidence

An extensive systematic review of evidence (SRE) resulted in little research identified on nurse leaders exclusively. Most studies incorporate nurse leaders along with nurse practitioners and nurse midwifes. Many of these roles include nurse management as part of the study. Article searches were conducted using databases with a variety of keywords. The main databases that yielded articles were CINAHL, EBSCOhost and Medline. Keywords utilized include nurse leader fatigue, nurse leader burnout, nurse leader burnout in healthcare, nurse leader resiliency, and nurse leader turnover rate. These searches yielded 28,732 articles, of which 8,752 resulted from nurse leader fatigue and burnout alone. To narrow the search further, a combination of key terms was used: nurse leader burnout/retention/resiliency; nurse leader burnout/retention/self-care. Initially 52 articles were reviewed for alignment with this researchers PICO question. Of the 52 articles 44 are used for this research project. Literature from the search resulted in both

empirical and theoretical application that range in years from 2011-2021 with the majority between 2017-2020. See Appendix F for a complete list of literature that supports this project.

The goal of the SRE was to incorporate articles that align with this DNP project. Very few were found that was directly related to nurse managers, therefore nurse leaders (supervisors, managers, assistant managers, directors and executives) were used. Once the articles were gathered and researched, they were aligned with the PICO question. Primary studies chosen were qualitative, quantitative and systematic review of literature. Overall, the systematic review resulted in high quality articles that were used in this DNP quality improvement project.

Six of the articles reviewed were systematic or meta-analysis, two were randomized control, one was a controlled study without randomization, four were case-control or cohort study, twenty-one were a systematic review of qualitative study, nine were qualitative or descriptive and two opinions or consensus (see below Table 1). Burnout and stress are qualitative descriptors and can be quantified if using the Likert or numerically associated scale. The goal was to review a variety of research designs, however deep into the research review, it was qualitative study designs were most prominent. The articles reviewed are highlighted below in table 1 and are usable as they have information valid to this DNP project. The articles with the greatest impact to this DNP project are qualitative studies with quantitative information. For example, the study by Steege et al., 2017 has a large amount of qualitative information while utilizing the Occupational Fatigue Exhaustion Recovery scale to showcase quantitative information. This approach is similar to the work on this DNP project. Over seventy-five percent of the articles reviewed, included some sort of survey to their nurse leaders, which resulted in quantitative measures. “Decades of research has shown that if a person does not refill his or her own cup, that person has little energy available to give to those in his or her care”

(Priddy, 2019, p. 289). Executives and nurse leaders need to understand the importance of refilling their cup to continue to sustainability in leading others.

Thematic Analysis

Four common themes were identified with the literature review: 1.) nurse leaders lack ability to disengage when not at work (Hill et al., 2020). Technology has been one of the best inventions to connect, however it has also created a round the clock connection. This causes unwanted stress and inability to disengage from work responsibilities. 2.) nurse leaders lack protected time away from responsibilities during the workday. During the workday, nurse leaders are often juggling many responsibilities, while wearing many hats. It is a delicate balance to have an open door, while trying to handle issues with numerous interruptions. This creates stress, especially when timelines are not achievable. 3.) competing priorities result in long hours for nurse leaders. Front line nursing leaders are often the first to help out in staffing emergencies or crises, and yet they have demanding tasks such as timecard management, schedule changes, patient issues and putting out daily behavioral fires. This often leads to quick burnout and fatigue (Hughes-Warden, et al., 2021). 4.) Nurse leaders lack supportive coverage to have protected time away from responsibilities. It can be challenging to have another nurse leader cover them while they are on vacation due to everyone having larger teams due to nurse leader turnover (Hughes-Warden, et al., 2021).

These themes were common throughout most of the articles reviewed. With a twenty-four-seven society, nurse leaders lack the ability to turn off and receive protected time away from work. Many of these themes can be corrected with support, resources and buy-in from executives, staff and peers. All four of these themes relate to this DNP project and align with the interventions created.

Table 1

Four Tiered Levels of Evidence

Level	Description	Number of articles found
I	Systematic Review or Meta-analysis of Randomized Controlled Trials	6
II	Randomized, Controlled Trial	2
III	Controlled Trial without Randomization	1
IV	Case-control or Cohort Study	4
V	Systematic Review of Qualitative or Descriptive Studies	21
VI	Qualitative or Descriptive Study	8
VII	Opinion or Consensus	2

(Houser & Oman, 2011)

Market/Risk Analysis

A project needs to have an analysis of strengths, weaknesses, opportunities, and threats (SWOT) to ensure the project is successful (see table 2). Factors that might impact the project include lack of participation by nursing leaders, lack of time management to use resiliency room, lack of back-up for nurse leaders to get protected time in the resiliency room and IRB approval. To ensure a successful completion of the project, the researcher's focus was on obtaining executive sponsorship prior to the start of the project, ensure resiliency room is stocked and ready for use, ensure resiliency cart is stocked and ready for use, meetings are set up to educate nursing leaders on the project expectations, meeting invites sent to give nurse leaders time to complete the survey, meeting took place with capstone mentor and faculty mentor and IRB submission is timely to the institution and Regis Institutional Review Board.

Table 2

SWOT Analysis

Project strengths • Executive Support • Use of facility resources approved • Strengthen nurse leader resiliency • Potential healthier work environment • Potential improvement in nurse leader burnout • No cost associated with project • Potential positive impact on stress reduction • Potential improvement in work-life balance for nursing leaders • Potential improvement in succession planning • Potential in improvement in employee satisfaction	**Project opportunities** • Improved nurse leader engagement • Improved knowledge of nurse leader understanding of research • Improvement in student knowledge of research process • Improved nursing leader networking • Increased nursing leader understanding of resiliency room • Self-awareness of resiliency and factors related to burnout • Increased awareness of nursing leadership tools and development
Project weaknesses • Competing priorities of nurse leaders • Lack of coverage for nurse leaders to visit resiliency room • Inability to visit resiliency room • Time restraints on project • Lack of ability to validate statistical implications **Project threats** • Lack of nursing leader participation • Inconsistent back up coverage for nurse leader participation • Lack of executive buy-in	**Strategies to overcome or prevent weaknesses** • Resiliency cart created to meet the leaders where they are • Goals and objectives clearly defined and stated • Early engagement with nurse leaders • Meeting with statistical professor to identify variables • Set up meeting invitations early

Driving and Restraining Forces

An important part of a project is clearly identifying and understanding potential risks to the project. Every project has driving and restraining forces and identifying them early in the project helps prevent unnecessary challenges. Driving forces push forward in a direction that causes change to occur. The greatest driving force for this project is executive sponsorship. With the higher than national average turnover rate in nurse leaders at Sky Ridge Medical Center, executive leadership was gained early in the project. Leadership buy-in is another driving force since nurse leaders are seeking help to decrease burnout and fatigue and ultimately improve turnover rates. Another driving force is staff buy-in to help support their leader, which should result in more focused leaders. With the nurse leaders receiving support to recharge, the perception of nurse leaders should also improve and create more successors into leadership.

Restraining forces defy change or resist change. The largest restraining force for this study is culture change within the nurse leaders. Nurse leaders' range in experience from three months of leadership experience to thirty-five years as a nurse leader. Some nurse leaders may perceive the protected time away as wasted or invaluable time, so culture change will be one of the top restraining forces. The second restraining force will be ensuring the nurse leaders receive protected time away from their duties to use the resiliency room. To help mitigate that restraining force, a resiliency cart was incorporated and was used to meet the leader on their units. The final two restraining forces are project timeline and time management within the nurse leader group. With a limited amount of time to implement an intervention, the project must continue advancing forward, therefore quick PDSA cycles were used.

Feasibility of the project related to the time it took to engage nurse leaders, time it took to develop the survey monkey and time to analyze the data. There was a risk to the project with

leaders fear of being perceived of not being visible or taking time away from their tasks resulting in delay in work completion. The unintended consequences of the project are the continued education to new leaders and re-education to leaders within the organization.

Need, Resources and Sustainability

This project required nurse leaders to understand the project goals and willingly participate in the pre-survey and post-survey questionnaire. It is important for nurse leaders to understand the purpose and expectations of the interventions for the project to be successful. The resources needed were email access, electronic survey tool and resiliency room/cart access. Sustainability of the intervention requires a culture change, re-educating new nurse leaders and educating during the onboarding of newly hired nurse leaders.

Stakeholders and Project Team

Stakeholders for this project included the hospital executive team, nurses, patients and nurse leader development team. Each of these stakeholders have a vested interest in the project intervention, implementation and sustainability of the project success. The project team included the DNP student/investigator, the DNP capstone project chair, the CNO and nurse leaders.

Cost-Benefit Analysis

A cost-benefit analysis quantifies costs associated with a project and consequences or harm related to interventions implemented in a project. It is a powerful tool to promote a project to sponsors or other vested parties (Zaccagnini & Pechacek, 2021). A cost-benefit analysis was completed and resulted in low cost associated with this project. The low cost is the time the nursing leaders took away from work to visit the resiliency/recharge room. All items in the resiliency room and cart were donated by the physician group. To start up a resiliency room or cart, the costs would be between $3,000 to $10,000, depending on how extravagant the room.

Items in this quality project resiliency room, totaled approximately $7,000. Breakdown of the costs of two massage/zero gravity chairs, white noise machine, herbal teas and essential oils (Appendices G). Benefits of the resiliency room outweigh the cost associated with creating the room; decreasing a nurse leader's burnout, decrease turnover and improve nurse leader's ability to problem-solve.

Project Objectives

Mission, Vision and Goals

The mission of this project is to create a safe, secure space for nurse leaders to recharge. The vision for this project is to provide a positive culture that promotes nurse leader resiliency and attracts succession planning to provide great leaders for our teams and the community we serve.

The primary goal for this project is to improve leader resiliency. Long-term goals for the project are to decrease nurse leader burnout and improve nurse leader turnover rates. This long-term goal does not fit within the limited scope/timelines of this project. Identified objectives and outcomes for this project are to provide resiliency rooms/carts to improve nurse leaders' ability to recharge. Improve nurse leader satisfaction and decrease nurse leader burnout and occupational fatigue. Outcomes and processes of this project are used to achieve the goals and will be discussed in the logic model section for this project.

Project Processes and Outcome Objectives

Resiliency rooms and carts provide space and resources to allow employees the ability to pause and recharge. "Resiliency will instill in the nurse leader a positive attitude and motivation to accept accountability and responsibility, and to find opportunities to continue to learn and

grow" (Rosa-Besa et al., 2021, p. 45). The project intervention included education for the nurse leaders, access to the resiliency room and cart, and scheduled time to frequent the room/cart. This DNP student will educate nurse leaders, at their weekly leader meeting, followed by an email to reiterate the expectations of the intervention. It is important for nurse leaders participating in the study to understand the significance of the study. Therefore, educating nurse leader on the problem statement and purpose of the study is vital to the project. Key components of education focused on scheduling time in the resiliency room and ensuring they can receive support to attend three to five times per week. Leaders kept track of time spent in the resiliency room to collect data on time spent in the resiliency room, to correlate with decrease burnout. After educating nurse leaders, the leaders scheduled their time in the resiliency room. If they were not able to pick a time that works for them, they were instructed to notify DNP student, so she could bring the resiliency cart to them. The DNP student reached out to nurse leaders weekly to ensure they had scheduled time in the resiliency room or a cart was taken to their office.

Logic Model

"A logic model is a systematic and visual way to present and share your understanding of the relationships among the resources you have to operate your program, the activities you plan, and the changes or results you hope to achieve" (Zaccagnini & Pechacek, 2021, p. 378). The logic model (Table 3) depicted a visual representation of the project. Resources and inputs in this model include all necessary parts for this project. This includes nursing leadership support, executive leadership support, email list for nursing leaders, survey tool, DNP student presenting to nurse leaders and occupational fatigue. To address problems, the following activities were included: recruit nurse leaders, familiarize nurse leaders with the survey, familiarize nurse

leaders with resiliency room/cart and educate nurse leaders regarding DNP project. Once interventions were put into place, the short-term goals were to improve resiliency in nurse leaders, improve productivity in nurse leaders and decrease occupational fatigue. Long term goals include decreasing nurse leader turnover rates over four to six years. Overall impact of the project includes decrease in nurse leader turnover rates, increased nurse leader engagement and increased nurse leader productivity over the next seven to ten years.

Table 3

Logic Model

Resources/Inputs	**Activities**	**Outputs**	**Short & Long-Term Outcomes**	**Impact**
In order to accomplish the Set of activities we will need the following:	*In order to address our problem or asset we will accomplish the following activities:*	*We expect that once accomplished these activities will produce the following evidence of service delivery:*	*We expect that if accomplished these activities will lead to the following changes in 1-3 then 4-6 years:*	*We expect that if accomplished these activities will lead to the following changes in 7-10 years:*
• Nursing leadership support • Executive leadership support • Email list for nursing leadership • Survey Tool • DNP student to present at nursing leadership team • Occupational Fatigue	• Recruit nurse leaders • Familiarize nurse leaders with survey • Familiarize nurse leaders with resiliency room logistics • Educate nurse leaders on DNP project	• Use of resiliency room • Use of resiliency cart	• Improved resiliency • Improved productivity in nurse leadership	• Decreased Occupational Fatigue • Decrease nurse leader turnover rats • Increased nurse leader engagement • Increased nurse leader productivity

Methodology & Evaluation Plan

Project Design

This DNP quality improvement project is a quasi-experimental, pre- and post-implementation design. A convenience sample of nurse leaders occurred and because all nurse leaders were included, no control group was chosen. A practical method of assessing the impact of the intervention using a pre-post-implementation design (Terry, 2018). An independent variable for this study is implementation of protected time away in the resiliency room. The dependent variables for this project are decreased stress/burnout/occupational fatigue and nurse leader satisfaction. Identified potential extraneous variables are age of nurse leader, number of years as a leader, number of years in their current role, number of years at this hospital, level of leadership (executive or front line) and service line leadership, which includes span of control. To account for extraneous variables, demographic information will be included as part of the survey. This will help in determining if any extraneous variables impact nurse leader resiliency or burnout.

Population and Sampling

The target population for this project included all nurse leaders who work in an acute care, inpatient setting. According to Armstrong et al., 2021, nurse leaders who are engaged, invest more of themselves into their role, conduct their work with energy, are committed to their work with eagerness, and feel a profound alignment to their employer. “Nurse leaders typically have a broad span of control and most difficult responsibilities in healthcare” (Armstrong et al., 2021, p. 360). The survey was sent, via email, to all nineteen inpatient nurse leaders within the organization. Inclusion criteria consists of all inpatient nurse leaders within the project site.

Exclusion criteria for this project include any inpatient nurse leader that was leaving prior to intervention and nurse leaders retiring at any time during the project.

A power analysis was conducted using 0.8 which resulted in a sample size of 11 and a 0.9 which resulted in a sample size of 22. If the sample size yields less than 22, the 0.8 power analysis will be used. However, if 22 or more inpatient nurse leaders respond, the 0.9 power analysis would be used. Enrollment is voluntary and subjects can withdraw at any time. Inpatient nurse leaders were given a pre-intervention survey and a post-intervention survey using the OFERS survey, which was sent out electronically. Intervention sequencing will conclude as follows:

1. Step 1- Collect pre-intervention baseline data collected by the OFERS survey
2. Step 2- Educate nurse leaders on use of resiliency room/cart
3. Step 3- Provide intervention (4-6 weeks)
4. Step 4- Correlate post-intervention data collected by OFERS survey
5. Step 5- Analyze data

Project Setting

Sky Ridge Medical Center was the projection site for this DNP project. It is a 250-bed hospital located in Lone Tree, Colorado. Sky Ridge Medical Center is a for-profit organization that is located just west of I-25 and south of Lincoln Avenue.

Protection of Human Subjects

Federal regulations require any research using human subjects to be subjected to an institutional review board (IRB) process (Zaccagnini & Pechacek, 2021). This is a committee responsible for protecting human rights and safety (Zaccagnini & Pechacek, 2021). The project went before the project site's IRB; however, it was approved without having to complete the full

IRB process. It was also submitted to Regis University's IRB process and approved as a non-research project.

Confidentiality agreements were obtained from DNP student and subjects participating in the study. Risks of the project is a potential for slight discomfort or anxiety initially with changing one's routine to include regular use of resiliency room. Benefits outweigh the risks and improve the nurse leaders' ability to cope. Letter of intent and site approval letter was signed by the CNO on June 1st, 2022.

Instrument Validity and Reliability

The Occupational Fatigue Exhaustion Recovery Survey (OFERS) was used. The tool was chosen from a large portion of the SROL articles using the OFERS survey for their studies. The OFER scale possess robust, gender-bias free psychometric characteristics (Winwood et al., 2005). The OFERs tool has three subscale that help identify and distinguish between chronic work-related fatigue traits, acute end-of-shift states and effective fatigue recovery between shifts (Winwood et al., 2005). From several articles in the SROL, research has validated that the OFER scale is reliable and has yielded valid results. Statistical analysis published information validates the OFERs survey with Cronbach alpha of 0.83 and 0.89 (Di Fabio, et al., 2021). The survey uses a 20 question, Likert scale, which will be interval level data. Analysis of the project is from Likert data and conducted through statistical calculations that was based on descriptive and inferential statistics. These tests were calculated using the SPSS system software through Regis University.

Data Collection and Treatment Procedure

The study conducted the frequency distributions, parametric correlations, and reliability analysis on pre- and post- OFERs survey. The frequency distribution test evaluated the

statistical significance of the difference in paired pre- and post- OFERs survey aggregate survey scores. The study used frequency distributions to analyze demographic data, including role, years as a leader and years as a leader within HCA. The parametric correlations test helped validate the OFERs survey scale. This project used Pearson correlations tests and paired 2-tailed testing to determine reliability and correlations within the study.

The study is a quality improvement initiative, quasi-experimental, pre-post- implementation design. The Occupational Fatigue Exhaustion Recovery scale (OFERs) survey was the tool used for the pre-intervention and post-intervention survey. This is a quantitative study due to the DNP student collecting and analyzing numeric data. This study applied measurable variables and presented findings through the use of tables and charts. Since it was a pre-survey and post-survey intervention, the study used repeated data collection measurement.

The data was collected via a nonrandomized, convenience sample of inpatient nurse leaders. Pre-post-implementation design is the practical method of assessing the impact of the intervention (Terry, 2018). Normally, nominal data would be utilized, however using the pre-post survey Likert scale raises it to interval level data. The sample size was too small to utilize ratio level data with the demographic of sample participants.

The study conducted the frequency distributions, parametric correlations, and reliability analysis on pre- and post- OFERs survey. The frequency distribution test evaluated the statistical significance of the difference in paired pre- and post- OFERs survey aggregate survey scores. The study used frequency distributions to analyze demographic data, including role, years as a leader and years as a leader within HCA. The parametric correlations test helped validate the OFERs survey scale. This project used Pearson correlations tests and paired 2-tailed testing to determine reliability and correlations within the study (Table 6 and 7).

The Cronbach's Alpha t-test was run and concluded the reliability analysis to evaluate the internal consistency of the survey (Table 8). The results showed a positive reliability score of .565, which concludes the test to be a moderate reliability. Results of moderate reliability score was due to the smaller sample size.

Budget and Required Resources

Creation of the resiliency room and cart were donations received from the physician group, therefore there is low cost associated with this project. Personal time is provided for nursing leaders as part of their state and federal regulated break time. Survey monkey is a standard survey tool at the project site, therefore no additional cost noted.

Table 4

Budget

Resource Items (personal time, & Equipment) and cost	Provided by Site	Anticipated Cost for DNP Project and PI	Cost to Replicate at Another Site
Personal Time	SRMC	$0	$1,200
Resiliency Room	SRMC	No Charge	$1,500-$3,000
Resiliency Cart	SRMC	No Charge	$350
Email Survey	SRMC	No Charge	$0
Total Cost	$0	$0	$3,050-$4,550

Project Findings and Results

The study calculated the effect size, however due to the smaller sample size the interpretation process relied on the p-value approach to determine statistical significance. The study was interested in determining the effect of the usage of the resiliency/recharge room and or cart on inpatient nurse leaders' ability to recharge and decrease burnout. The size of the effect did not correlate with the study; therefore, it was not used.

The study used numerical values to code and prepare the data for analysis in SPSS version 26. For example, the Likert scale survey asked (I use a lot of my spare time recovering from work) the responses were coded: 5 Always, 4 Very often 3 Sometimes, 2 Not very often and 1 Never. This was the same for gathering demographic data (How many years have you been in leadership) 1. 0-1 years 2. 2-5 y ears 3. 6-9 years 4. 10-13 years 5. 14+ years. All of the information in the survey was coded using numerical values. As established, the study conducted the paired sample t-test to evaluate the statistical significance of the difference in paired pre- and post- OFERs aggregated survey scores.

The frequency distributions showed that nurse managers/supervisors had the highest participation rate (35%), followed by nursing directors (30%), then executive/senior leaders (30%) and lastly the other nursing leaders were the lowest to take the survey (5%) (see appendices C). The demographics of the nursing leaders are as follows: 0-1 years (30%), 2-5 years (18%), 6-9 years (35%), 10-13 years (12%) and 14+ years (5%) (see appendices B).

Results of the pre and post survey information are statistically significant with a <.001 correlation. The intervention of utilization of the resiliency room and cart at least one time per week, worked in helping decrease nurse leader burnout. For example, the mean score of question 7 (I often feel exhausted at work) decreased from an average of 3.706 to 2.12. The lower the score, the less exhausted/fatigued a participant scored. This is the direction that needed to indicate that the intervention was successful. All questions were equalized, so that the lower the number resulted in a positive impact post intervention.

Table 5

Reliability Statistics

Cronbach's Alpha	N of Items
.565	20

Table 6

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	preqagg	3.39	340	1.032	.056
	postqagg	2.86	340	.813	.044

Table 7

Paired Samples Correlations

		N	Correlation	Significance One-Sided p	Significance Two-Sided p
Pair 1	preqagg & postqagg	340	.008	.441	.881

In comparing the pre-survey and post-survey aggregated scores, the result was statistically significant ($t=7.584$, $p<.001$). The Cronbach's Alpha was run at a 95% confidence interval level and yielded a .565 moderate reliability score. The mean score for the pre-survey was 3.39 and the post-survey mean score was 2.86. The significant drop in the mean scores yielded that this study resulted in a positive impact. The test results concluded that frequent use of the resiliency room and or cart can positively impact the nurse leader and ultimately decrease burnout.

The test results answered the question, does scheduling time in the resiliency room and/or use of resiliency cart, increase nurse leaders' time away from work demands, and decrease nurse leader burn out? Scheduling time to utilize the resiliency room and or cart, does positively impact the nurse leader's ability to decrease burnout rate.

Limitations, Recommendations, and Implications for Change

The analysis highlights the efficacy of scheduled time in the resiliency room and or cart improves nurse leader's ability to recharge and decrease burnout. The biggest limitation to this quality improvement project was the sample size. The inpatient nurse leader sample size was 19 and 17 participated in the study. Recommendations would be to increase the sample size, so that the data can be broken out into roles and years of experience in leadership while maintaining confidentiality. Another recommendation is to lengthen the study by another six weeks to see if that would have a larger impact on the project. Lastly, revisiting the study in six months to determine if the inpatient nurse leaders have sustained the scheduled use of the resiliency room. The use of the resiliency/recharge room and or cart has a positive impact on decreasing burnout in nurse leaders. Implications for change are continued focus on resiliency practices, improve nursing leader retention and spreading resiliency practices to more roles.

Scheduled time in the resiliency room and or cart had a positive impact on in patient nurse leaders at Sky Ridge Medical Center. The success of this project helps to implement more changes to other leaders and staff within the hospital. Comments made by inpatient nurse leaders that were part of this project were as follows: "I realized by this exercise that it helps me clear my head and get into a much better space for my team". "This work has helped me realize that we need to take breaks. It's okay to say no and to get a lunch. The days I do the

best are ones where I get a lunch break or I sit in the massage chair in the recharge room." "I tended to have the best days when I visited the massage chair in the room because I didn't think about work and it helps me refocus my mind". "I have been a leader for 10 years and never realized that taking 15 minutes to clear my mind, would will me a much better day"!

Nurse leaders are often faced with complex decisions and multi-tasking priorities. Scheduling time to visit the recharge room and or cart offers personal time to recharge and refocus, which ultimately decreases fatigue, exhaustion and burnout.

Conclusion

This paper discussed the quality improvement project for this DNP student and the scheduling of resiliency/recharge time for inpatient nurse leaders at Sky Ridge Medical Center. The PICO question, "does visiting the resiliency room allow nurse leaders time to step away from work demands, decrease nurse leader burn out"? The answer based on this quality improvement project is yes. The protected time away from work in the resiliency/recharge room, decreased burnout rates as evidence by the data analysis. The details have been discussed and were provided in this paper in the problem recognition, review of evidence, project plan and evaluation, project findings and results, project limitations, recommendations, and implications for change. Scheduling time in the resiliency/recharge room made a positive impact on the inpatient nurse leaders.

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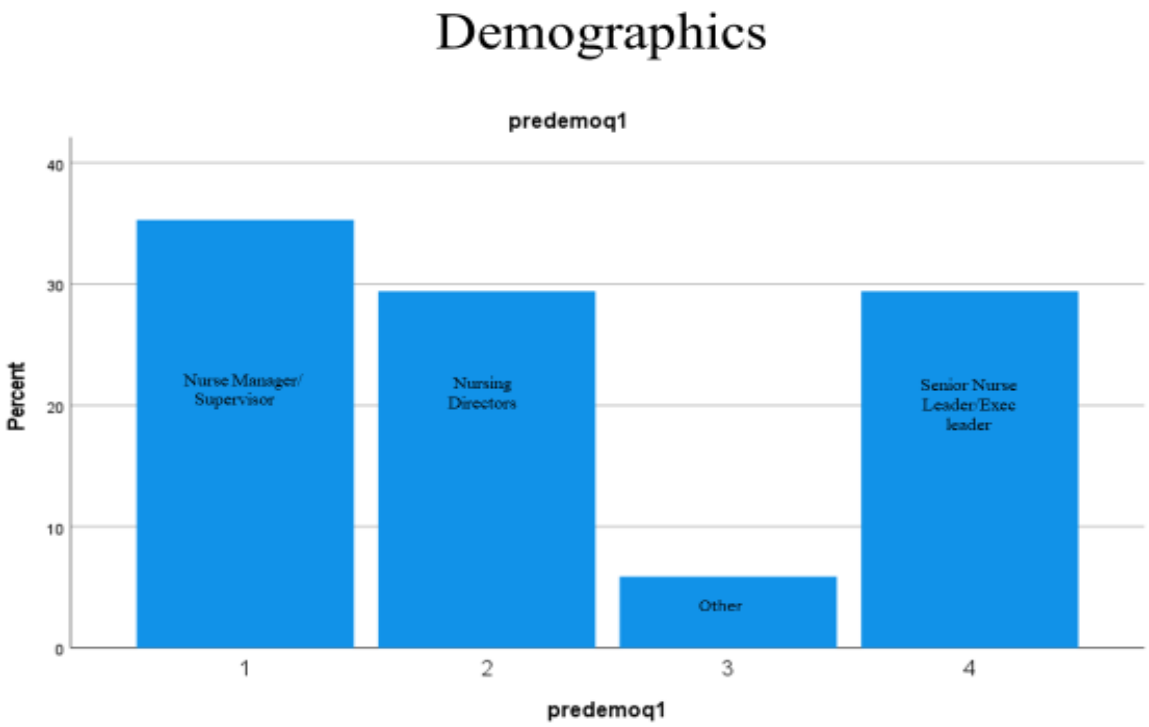
Appendices A

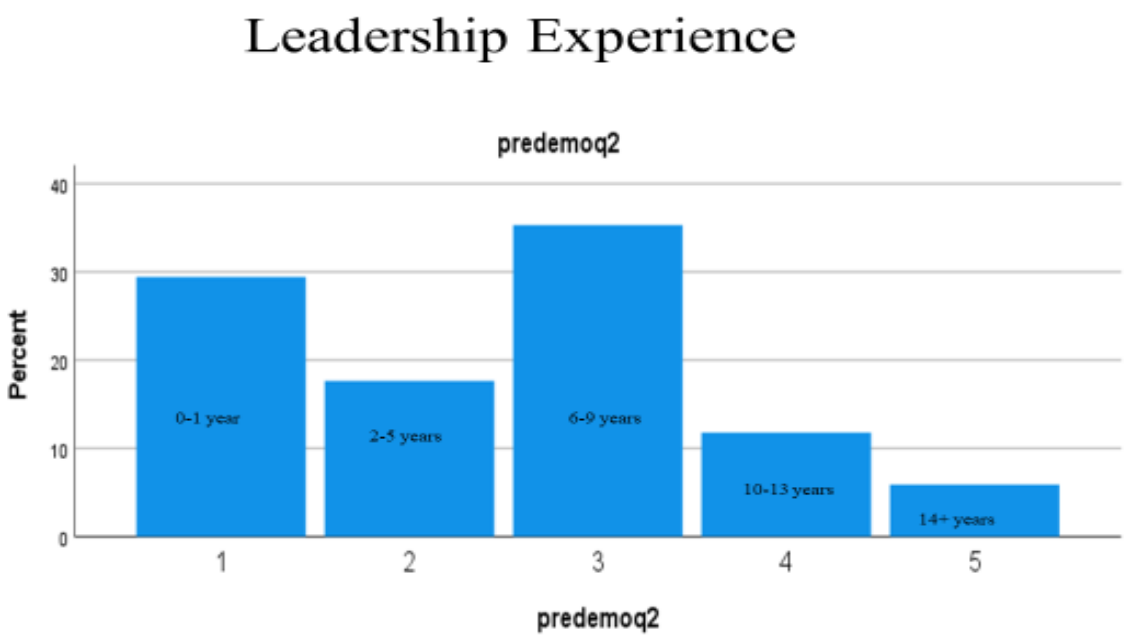
Project Timeframe

- 11/20/21: PICO identified
- 12/20/21: SROL completed
- 12/20/21: Lit review write-up using themes to support PICO completed
- 06/01/22: Site approval letter signed
- 06/23/22: Defend proposal
- 06/30/22: Write project proposal
- 08/15/22: Submit to Regis IRB/Research Council
- 08/22/22: IRB/Research Council approval (s)
- 09/01/22: Project starts: Recruitment with information letter
- 11/08/22: Intervention
- 12/31/22: Complete data collection
- 01/08/23: Analyze data (quant and/or qual)
- 02/28/23: Write up final project
- 04/13/23: Defend final project
- 04/26/23: Upload final approved written project to library

Appendices B

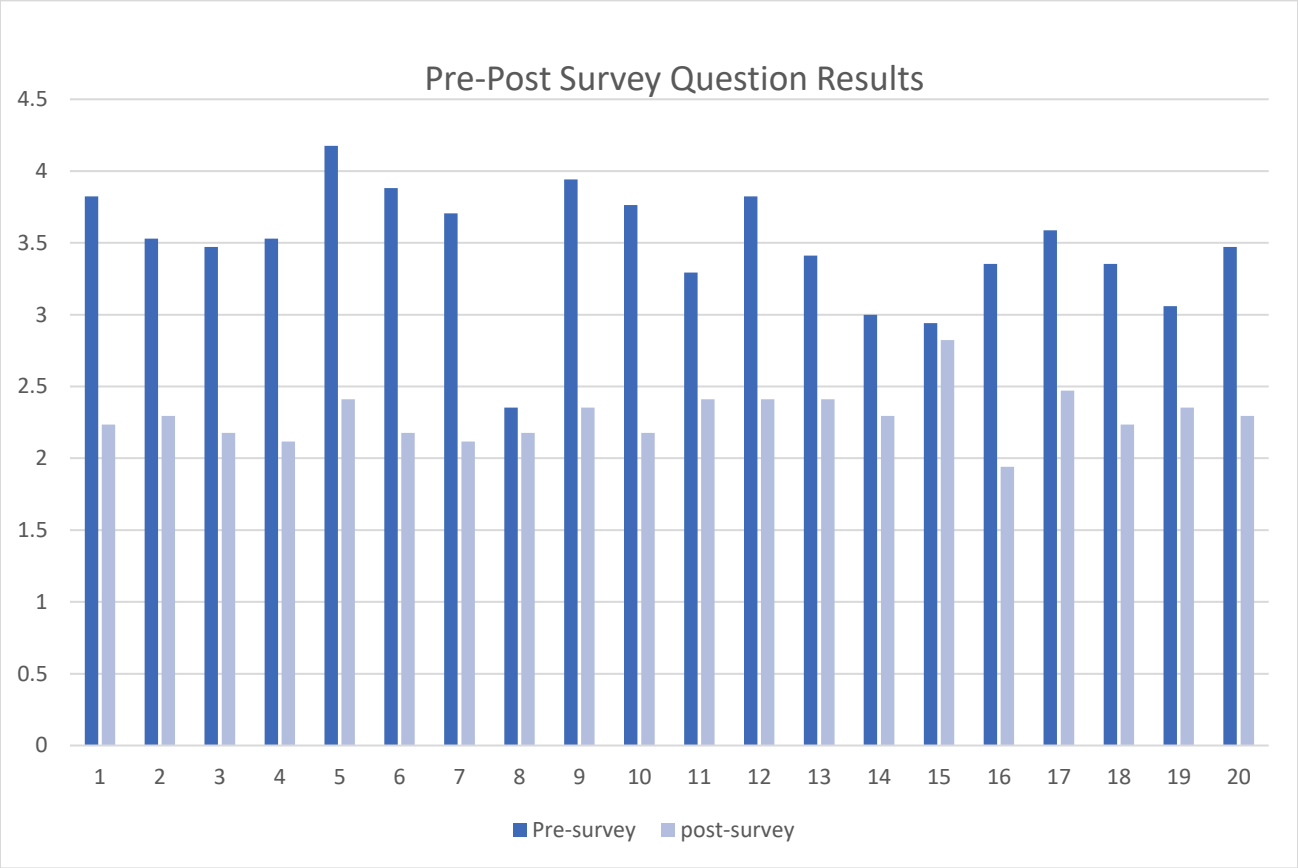


Appendices C



Appendices D

OFERs Difference



Appendices E

Systematic Review of Literature

Systematic Methods Used to Search Evidence	
Key Search Terms/Phrases	Nurse leader burnout, nurse leader fatigue, nurse leader resiliency, resiliency rooms and resiliency carts
Databases	EBSCOhost, CINAHL, Medline
Inclusion Criteria (date limits, language, age, gender, study design, population, outcomes, etc.)	Nurse leaders, validity, reliability, qualitative or quantitative study design, statistical analysis, documented strengths and limitations of the study.
Exclusion Criteria (see above; irrelevant terms)	Exclusion criteria limited reliability or validity testing
Number of Articles Reviewed/Final Number of Resource Documents	28,732 Nurse leader fatigue 8,752 Nurse leader fatigue and burnout 3,491 Nurse leader fatigue, burnout and retention 52 Nurse leader fatigue, burnout, retention and resiliency rooms 44 Articles to use the inclusion and exclusion criteria

Appendices F

Scope of Evidence Summary

Levels of Evidence	Number of Articles	Authors and Dates
I Systematic review & metanalysis of RCT; clinical guidelines based on systematic reviews or meta-analyses	6	(Wei et al., 2020) (Jose Membrive-Jimenez, et al., 2020) (Prestia, 2021) (Clavo-Hall et al., 2018) (Bogue & Carter, 2019) (Kelly & Adam, 2018)
II One or more RCT	2	(Chesak et al., 2020) (Spiva et al., 2021)
III Controlled Trial without Randomization	1	(Koprowski et al., 2021)
III Case-control or Cohort Study	4	(Jamal & Baba, 2020) (Magbity et al., 2020) (Seichter, 2018) (Chester County Hospital, 2021)
IV Systematic review of descriptive or qualitative studies	21	(Hill et al., 2020) (Kennedy & Eldredge, 2021) (Kelley et al., 2018)(Steege et al., 2017) (Remegio et al., 2021) (Coicou, 2021) (Chukwuemeka Mefoh et al., 2019) (Semerci et al., 2021) (Armstrong et al., 2021) (Nagle et al., 2021) (DiBello, 2020) (States News, 2021) (Raso et al., 2021) (Robinson et al., 2018) (Haizlip et al., 2020) (Sherman R., 2018) (Prochnow et al., 2021) (Adams et al., 2019) (Bonamer & Awquino-Russell, 2019) (Brown et al., 2018) (Pagador et al., 2022)
VI Single descriptive or qualitative study	8	(Kelly et al., 2019) (Shortz et al., 2019) (Selig, 2020) (Blok et al., 2021) (Sisk et al., 2021) (Mudallal et al., 2017) (Di Fabio et al., 2021) (Whittington et al., 2020)
VII Expert opinion	2	(Hughes-Warden et al., 2021) (Ross et al., 2021)

Appendices G

OFERs Survey

1. “I use a lot of my spare time recovering from work”?

5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

2. “I often feel at the end of my rope with my work”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

3. “I often dread waking up to another day of my work”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

4. “I often wonder how long I can keep going at my work”
5Always
4Very often
3sometimes
2Not very often
1Never

5.“I feel most of the time I’m living to work”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

6. “My head feels dull/heavy a lot of the time”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

7. “I often feel exhausted at work”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

8. “Too much is expected of me at my work”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

9. “My working life takes all my energy from me”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

10. “I feel exhausted all the time”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

11. “I usually have lots of energy to give my family or friends”
1 Always
2 Very often
3 sometimes
4 Not very often
5 Never

12. “I wish I had more ‘get up and go’ generally”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

13. “I have energy for my hobbies/relaxing activities in my spare time”
1 Always
2 Very often
3 sometimes
4 Not very often
5 Never

14. “I have plenty of reserve energy when I need it”
1 Always
2 Very often
3 sometimes
4 Not very often
5 Never

15. “I can’t recover my energy completely between work shifts”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

16. “I fully rested at the start of each work day/shift”
1 Always
2 Very often
3 sometimes
4 Not very often
5 Never

17. “Worrying about work issues makes it hard to relax at home”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

18. “I usually recover my energy within a few hours of getting home from work”
1 Always
2 Very often
3 sometimes
4 Not very often
5 Never

19. “I usually feel fully relaxed by the time I go to bed”
1Always
2Very often
3sometimes
4Not very often
5Never

20. “I don’t get enough time between work shifts to recovery my energy fully”
5 Always
4 Very often
3 sometimes
2 Not very often
1 Never

21. Comments
Open for comments

Winwood, P.C., Winefield, A. H., Dawson, D., and Lushington, K., (2020). The occupational Fatigue exhaustion/recovery scale. Journal Ocupational Environmental Medicine.47(6). P 594-606. http://doi: 10.1097/01.jom.0000161740.71049.c4

Appendices H

Budget Analysis

Resource Item (Personnel, Time, & Equipment) and Cost	Provided by Site	Anticipated Cost for DNP Project for PI	Cost to Replicate at Another Site
Personal time	SRMC	$0	$1200
Resiliency room	SRMC	No charge	$1500-3000
Resiliency cart	SRMC	No charge	$500
Email Survey	SRMC	No charge	No charge
Total Cost	$0	$0	$3200-$4700

Appendices I

Letter of Agreement
07/26/2022

To Regis University Institutional Review Board (IRB):

I am familiar with Shannon Martinez's quality improvement project entitled Leader Burnout: A Pre-Survey/Post-Survey Research Design. I understand Sky Ridge Medical Center's involvement allowing nurse leaders to voluntarily participate in the study which includes taking the Occupational Fatigue Exhaustion Recovery survey (OFERs) and take the time to visit the resiliency room, providing archival data and participating in the study.
I understand that this quality improvement project will be carried out following sound ethical principles and provides confidentiality of project data, as described in the proposal.
Therefore, as a representative of Sky Ridge medical Center, I agree that Shannon Martinez's quality improvement project may be conducted at our agency/institution.
Sincerely,

Sky Ridge Medical Center

Appendices J

REGIS UNIVERSITY

REGIS.EDU

Institutional Review Board

DATE:	August 9, 2022
TO:	Shannon Martinez
FROM:	Regis University Human Subjects IRB
PROJECT TITLE	[1939269-1] Nurse Leader Burnout: A Pre-Survey/Post-Survey Design Quality Improvement Project
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF NOT RESEARCH
DECISION DATE:	August 9, 2022

Thank you for your submission of New Project materials for this project. The Regis University Human Subjects IRB has determined this project does not meet the definition of human subject research under the purview of the IRB according to federal regulations.

The project may proceed as written.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact the Institutional Review Board at irb@regis.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Regis University Human Subjects IRB's records.

Appendices K

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

COMPLETION REPORT - PART 1 OF 2
COURSEWORK REQUIREMENTS*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Shannon Martinez (ID: 10971208)
- **Institution Affiliation:** Regis University (ID: 745)
- **Institution Email:** Marti891@regis.edu
- **Institution Unit:** Doctoral

- **Curriculum Group:** Human Research
- **Course Learner Group:** Social Behavioral Research Investigators
- **Stage:** Stage 1 - Basic Course

- **Record ID:** 47453778
- **Completion Date:** 19-Feb-2022
- **Expiration Date:** 18-Feb-2025
- **Minimum Passing:** 80
- **Reported Score*:** 98

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Unanticipated Problems and Reporting Requirements in Social and Behavioral Research (ID: 14928)	15-Feb-2022	4/5 (80%)
Populations in Research Requiring Additional Considerations and/or Protections (ID: 16680)	15-Feb-2022	5/5 (100%)
Conflicts of Interest in Human Subjects Research (ID: 17464)	16-Feb-2022	5/5 (100%)
History and Ethical Principles - SBE (ID: 490)	18-Feb-2022	5/5 (100%)
The Federal Regulations - SBE (ID: 502)	18-Feb-2022	5/5 (100%)
Assessing Risk - SBE (ID: 503)	18-Feb-2022	5/5 (100%)
Informed Consent - SBE (ID: 504)	18-Feb-2022	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	19-Feb-2022	5/5 (100%)
Defining Research with Human Subjects - SBE (ID: 491)	19-Feb-2022	5/5 (100%)
Students in Research (ID: 1321)	19-Feb-2022	5/5 (100%)
Internet-Based Research - SBE (ID: 510)	19-Feb-2022	5/5 (100%)

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

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COMPLETION REPORT - PART 2 OF 2
COURSEWORK TRANSCRIPT**

** NOTE: Scores on this Transcript Report reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

- **Name:** Shannon Martinez (ID: 10971208)
- **Institution Affiliation:** Regis University (ID: 745)
- **Institution Email:** Marti891@regis.edu
- **Institution Unit:** Doctoral

- **Curriculum Group:** Human Research
- **Course Learner Group:** Social Behavioral Research Investigators
- **Stage:** Stage 1 - Basic Course

- **Record ID:** 47453778
- **Report Date:** 19-Feb-2022
- **Current Score**:** 98

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES	MOST RECENT	SCORE
Students in Research (ID: 1321)	19-Feb-2022	5/5 (100%)
Defining Research with Human Subjects - SBE (ID: 491)	19-Feb-2022	5/5 (100%)
The Federal Regulations - SBE (ID: 502)	18-Feb-2022	5/5 (100%)
Assessing Risk - SBE (ID: 503)	18-Feb-2022	5/5 (100%)
Informed Consent - SBE (ID: 504)	18-Feb-2022	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	19-Feb-2022	5/5 (100%)
Internet-Based Research - SBE (ID: 510)	19-Feb-2022	5/5 (100%)
Unanticipated Problems and Reporting Requirements in Social and Behavioral Research (ID: 14928)	15-Feb-2022	4/5 (80%)
History and Ethical Principles - SBE (ID: 490)	18-Feb-2022	5/5 (100%)
Populations in Research Requiring Additional Considerations and/or Protections (ID: 16680)	15-Feb-2022	5/5 (100%)
Conflicts of Interest in Human Subjects Research (ID: 17464)	16-Feb-2022	5/5 (100%)

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