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Implementation of a Peer Support Program to Increase Resilience in Nurse Managers in Acute Care Hospitals: A Pilot Study

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Dedication

Resilience is all about being able to overcome the unexpected. The goal of resilience isn't just to survive, but to thrive.

Jamais Cascio (Author)

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I would like to share my gratitude for all those who supported me through this amazing journey.

To my family (Jaime, Arlene, James, Jacob, Dahlia, and Socorrito) for your love and unwavering support

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And to my friends and colleagues who reminded me *"you got this"*

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Abstract

Background: Nurse managers are at risk for experiencing stress and burnout. The peer support program was implemented to increase resilience among nurse managers.

Methods: A one-group pretest and posttest design was employed to examine the impact of peer support on nurse manager resilience. The nurse managers participated in bi-weekly 30-minute peer sessions over 12 weeks. The Connor-Davidson Resilience Scale was utilized prior to and following the intervention along with demographic and satisfaction surveys.

Results: There were six nurse managers who participated in the peer support program; however, only four completed both the pre- and post-survey. The peer support program intervention did not yield a significant result in increasing resilience levels among nurse managers ($p = 0.832$).

Conclusion: Although the peer support intervention did not yield significant results, it shows promise as a needed intervention to address resilience in the nursing manager workforce. Based on the prevalence of stress and burnout among nurse managers, there is a continued need to utilize resilience as a mechanism to provide support. Further research would benefit with a larger sample size, a structured peer session format, and a controlled educational environment.

Keywords: burnout, mental health, resilience, peer support program, nursing, nurse manager

Contents

Background

Burnout is a phenomenon that can be experienced at the personal and professional level and across a multitude of occupations. The term 'burnout' was originally used to describe a continued and sustained state of crisis as a response to stressors from work, which includes three dimensions: exhaustion, cynicism, and inefficacy (Maslach et al., 2001). The term has since become more relevant and it has even been included by the World Health Organization (WHO) in the most recent Revision of the International Classifications of Diseases (ICD 11) as an occupational phenomenon resulting from workplace stress that has not been successfully managed (World Health Organization, 2019).

Research into the concept of burnout in nursing has shown a central contributing factor is job stress. Jamal and Baba (2000) described the concept of job stress as a poor fit between the individual's current situational capability and the excessive demands placed on them. In the nursing profession, there are endless expectations that are part of the role, including being an expert clinician, a compassionate caregiver, a skilled communicator, and a knowledgeable patient advocate. The inability to fulfill any of these expectations would contribute towards feelings of inefficacy and low personal accomplishment. For both nurses and nurse managers, a significant and positive correlation exists between job stress and overall burnout along with the dimensions of emotional exhaustion, lack of accomplishment, and depersonalization (Jamal & Baba, 2000).

In service professions, such as nursing, burnout is recognized as an occupational risk because of the inherent need to establish emotional and personal connections (Karsavuran & Kaya, 2017). The nature of nursing care necessitates forming a close relationship with the patient, helping them through not only their physical health needs but also with the emotional

and psychosocial. This work is both physically and emotionally taxing, especially if the patient has an acute diagnosis or a challenging prognosis. It has been long understood that for those professionals who help others, the chronic stress of their roles can be emotionally draining and poses the risk of burnout (Maslach & Jackson, 1981).

The prevalence of burnout had been reported as high as 54% as identified in 21 studies conducted in the United States and other countries (Zhang & Han et al., 2018). Since then, the COVID-19 pandemic has occurred which further exacerbated the phenomenon. Subsequent studies corroborate those findings with burnout rates in nursing ranging from 42% (Bakhamis et al., 2019) up to 60% (Montgomery & Azuero, 2021). A physically and emotionally demanding profession such as nursing is greatly predisposed for burnout.

Consequences of Burnout in Nursing

The impact of burnout can be seen in the quality of patient care, the nurses' physical and emotional health, and a hospital's organizational stability. According to Montgomery and Azuero (2021), there is a relationship between the levels of burnout in nursing and the patient safety grade given to a hospital as measured by the Hospital Survey on Patient Safety culture, developed by the Agency for Healthcare Research and Quality (AHRQ). Karsuvuran and Kaya's (2017) study found a positive association with burnout levels of nurses and rates of infection. Preventable deaths have been estimated to be between 210,000 to 440,000 per year with associated costs up to $37.6 billion for medical errors attributed to a negative work environment due to stress and burnout among nurses (Huddleston & Gray, 2016).

The costs to the nurse personally include negative effects to both their physical well-being and mental health. Henderson (2015) noted that burnout may cause those in the nursing profession to be more likely to develop hypertension, ulcers, migraines, diabetes, sleep

disturbances, anxiety, and depression. The role of burnout was also seen in the decline of health-related quality of life for nurses in a study conducted by Zhang & Loerbroks et al. (2018) in the areas of both physical and mental functioning when burnout levels were high. Additionally, those physical side effects include a higher risk of metabolic syndrome and an increased association with glycated hemoglobin (Hba1c) in nurses who had burnout (Tsou et al., 2021). The effects of burnout are also documented in the mental health experience of nurses. In nurses where moderate burnout was present, Guttormson et al. (2022) reported 31% of nurses met criteria for moderate to severe anxiety, and 44.6% met criteria for moderate to severe depression. Included in the same study, 46.7% nurses were at risk of developing post-traumatic stress disorder (PTSD). Collectively, these studies indicate burnout has a negative effect on the health of nurses.

Another consequence of burnout is nurse turnover, which has the potential to amplify existing nursing staffing shortages (Bakhamis et al., 2019). At the beginning of the current decade, it was projected that an additional 276,000 nurses will be needed by the year 2030 to keep pace with job growth demands and to replace those who are leaving the workforce (U.S. Bureau of Labor Statistics, 2021). In the United States, there are estimates that 70,000 nurses from the baby boomer generation will retire each year, adding to the deficit of qualified nursing professionals (Keith et al., 2021). The loss of nurses due to burnout carries real economic impact as it is estimated that replacing a nurse can cost up to $145,000 for an organization to train new staff (Huddleston & Gray, 2016). As mentioned previously, the consequences of burnout in nursing can take many forms, including staff turnover, poor work performance, and threats to patient safety (Bakhamis et al., 2019).

Burnout in Nurse Managers

Burnout is an occupational hazard not only for the direct patient-care level nurses but also those in nursing management. A nurse manager (NM) has the same level of commitment to safe patient care as staff nurses with the additional responsibilities that come with the leadership role. NMs are responsible for daily operations, including scheduling the department with appropriate personnel, mentoring staff, and monitoring budgets. In fact, the NM has often been described as the glue that holds together the well-being and operational aspects of a department (Gray, 2012). It is imperative that the NMs be effective in their role as they are key to ensuring patient safety, meeting organizational goals, and engaging the nurse workforce. Shirey et al. (2010) observed factors that increase stress for NMs are high levels of responsibility related to the role, insufficient time to complete tasks, competing priorities, and multiple interruptions. Stress and burnout along with career change, promotion, and retirement are noted to be among the top reasons NMs have intentions to leave their role (Hewko et al., 2015). Studies have suggested that most NMs plan to leave their job in the next 2-5 years for reasons including burnout, not because they are ready to retire (Keith et al., 2021). Efforts from hospital leadership should be focused on not losing additional NMs to preventable issues such as burnout as these roles are difficult to replace due to the time and dedication needed to learn the various aspects of management.

Resilience to Decrease Burnout

Resilience has been studied as a counterbalance to burnout and its negative effects. Resilience is described by the American Psychological Association as the process of adapting well to significant sources of stress and characterized as a pattern of behaviors that can be learned (Cline, 2015). According to Yu et al. (2019), resilience has been demonstrated to have positive and supportive properties against stress, such as a reduction of emotional exhaustion,

increased work engagement, and enhancing the nurse's ability to function when presented with challenges at work. The role of resilience to balance burnout has also been demonstrated outside of nursing with resident physicians and child protection workers, two other emotionally demanding jobs (Nituica et al., 2021). High levels of resilience were associated with a lower risk for burnout among physician residents and as a direct predictor for two aspects of burnout (emotional exhaustion and personal accomplishment) in child protection workers (McFadden et al., 2018; Nituica et al., 2021).

Having resilient NMs benefits organizations. As noted by Cline (2015), the organizational indicators of resilient NMs are improved nurse retention, patient safety, and quality outcomes. Among NMs, resilience has also been found to be strongly associated with greater job satisfaction, as well as less turnover, and intention to leave (Hewko, 2015; Hudgins, 2016) and as a mitigating factor to decrease stress (Rosa-Besa et al., 2021). Resilience has been studied in the staff nurse population in relation to burnout, compassion fatigue, turnover as a mechanism to address the stressful components in the nursing role (Andersen et al., 2021). Similar to NMs, resilience can have positive effects for staff nurses, such as increasing overall well-being, quality of life, and job satisfaction (Andersen et al., 2021). Beyond nursing, resilience has been studied in relation to well-being in diverse populations from university employees by Burton et al. (2010) to combat veterans by Jeppsen et al. (2019) which reveals the broad scope of this issue. Evidence suggests that resilience has the potential to defuse the negative effects of stress in nursing management. Organizations therefore have the opportunity and responsibility to provide effective interventions to meet the needs of their workforce.

Strategies to Increase Resilience

The need to increase resilience has been previously established however there is not a single method to achieve this goal. A meta-analysis review conducted by Liu et al. (2020) showed that resilience can be promoted through multiple intervention approaches including evidence-based and social support, such as education and skills training, with significant positive results. Richardson and Waite (2002) presented resilience education as a strategy to develop and nurture resilience. In their groundbreaking article, they implemented a teaching program structured to support development in areas such as discovery of innate resilience, understanding the mind and body connection, developing personal skills, building constructive relationships, and resilient relationships. Participants that were engaged in those activities were positioned to increase resilience by setting a foundation that influenced both personal and environmental factors. The findings from the study noted there was statistically significant improvement in the scores for those who participated in the resilience training (n = 123) in the following areas: resilience and resilient integration, self-esteem, internal locus of control, purpose of life scale, and interpersonal relationships (Richardson & Waite, 2002). The intervention used in this study was based primarily on gaining knowledge related to resilience; however, it also demonstrated how to create a training program where those skills could be developed.

In a study by Burton et al. (2010), the researchers developed a resilience training program to promote resilience and well-being in university employees based on targeting five core resilience protective factors previously identified from empirical literature: (1) positive emotions, (2) cognitive flexibility, (3) life meaning, (4) social support, and (5) active coping strategies. The program contained a multi-faceted intervention approach including physical activity; structured learning and practice activities; and skills training for relaxation and building social support (Burton et al., 2010). Statistically significant improvement was noted post-intervention in areas

that measured psychosocial and physical well-being: mastery, positive emotions, personal growth mindfulness, acceptance, stress, self-acceptance, valued living, autonomy, and total cholesterol. However, no significant improvement was noted in social support (Burton et al., 2010). Burton et al. (2010) suggested that the scale utilized to measure social support (availability of sources) was not sensitive enough to detect changes. This study provides insight on the need to have measurement scales which are appropriate in order to determine the effectiveness of the intervention for the outcome of interest.

Another recent study with a focus on training to increase resilience was conducted by Rosa-Besa et al. (2021). The nurse managers attended a 6-hour educational program aimed at promoting competencies of professional resilience with topics such as defining resilience, building support for resilience, building resilient relationships, and reframing how situations are viewed. The results indicated a statistically significant increase in the participants' resilience scores from baseline to post-intervention (Rosa-Besa et al., 2021). Although there was a significant increase in resilience scores, the results were obtained immediately after the intervention, which makes it difficult to predict the long-term effect of this training. Once the NMs can utilize the gained knowledge in their work settings, there is an opportunity to measure resilience in the future to determine whether the results continue on a long-term basis.

Training as a method to increase resilience was also described in a different study with a population of new nurses. Chesak et al. (2015) developed a resilience training program during nursing orientation, which included an initial 90-minute session that described resiliency models, provided bi-weekly handouts on topics, and conducted a follow-up session after 4 weeks for the control group. Results from this study showed an increase in resilience for the participants, but it was not statistically significant (Chesak et al., 2015). While statistically significant results were

not achieved, the authors pointed out the merit of such a program because stress, mindfulness, anxiety, and resilience moved in a positive direction for participants and a negative direction for the control group (Chesak et al, 2015). A limiting factor identified by the authors is the impact of the participant's time constraints which should be considered in any study. The inability to fully participate in any intervention due to competing priorities can impact the outcome. The modest improvement in resilience may indicate that education regarding resilience may not be enough but rather that active interventions, such as setting up peer support programs, may be more beneficial.

Training as an intervention to support resilience has been researched in various populations, such as adults (Richardson & Waite, 2002), nurse leaders (Rosa-Besa et al., 2021), university employees (Burton et al., 2010), and nursing students (Chesak et al., 2015) with varied outcomes. The studies by Richardson and Waite (2002) and Rosa-Besa et al. (2021) both showed significant improvement in the measurement for resilience, yet their intervention strategies and training components were markedly different in the length and intensity. Richardson and Waite (2002) provided 5 day-long sessions spaced out over a five-week period while Rosa-Besa et al. (2021) had a single 6-hour educational session. Burton et al. (2010) had multiple interventions that were conducted for 11 sessions, each lasting 2-hours, over 13 weeks, yet only some reached statistical significance for outcomes that increased resilience. Results did not reach statistical significance in the study by Chesak et al. (2015), which was a 4-week long intervention for nursing students. It is worth noting the length of the training programs did not appear to be a contributing factor for increasing resilience.

Aside from training, there are additional methods that have been described to increase resilience in nursing. In a qualitative descriptive study conducted by Wei et al. (2019), the

authors highlight the following as strategies shared by nurse leaders to promote resilience in nursing: facilitating social connections, promoting positivity, capitalizing on strengths, encouraging self-care, nurturing personal and professional growth, fostering mindfulness, and conveying altruism. There is some crossover in support themes described by other researchers such as Udod et al. (2021) and Cline (2015). Udod et al. (2021) describe coping strategies utilized by NMs to increase resilience including putting out fires, cognitive reframing, serving others, and receiving support. Cline (2015) agrees that strategies such as building positive and nurturing relationships, maintaining positivity, developing emotional insight, achieving life balance, and becoming more reflective are key to developing personal resilience for nurse managers.

While providing purposeful training regarding resilience was proven an effective strategy in two of the studies (Richardson & Waite, 2002; Rosa-Besa, 2021), it is possible that an education approach may not be enough to increase resilience. Evidence in the studies done by Cline (2015), Udod et al. (2021), and Wei et al. (2019) suggests that creating interventions based on fostering relationships and support systems can be an effective strategy to increase resilience. Integrating social support structures along with an educational component may be a synergistic element to that of education alone.

Peer Support Interventions

A common thread in the following studies indicates peer support to be a viable strategy to increase resilience in nursing (Chesak et al., 2020; Paliadelis et al., 2007). Establishing a framework of support to increase resiliency has the potential to keep NMs engaged in their work and decrease the risk of burnout. A more recent study conducted by Chesak et al. (2020) was a randomized control trial study that set out to determine the feasibility of setting up a peer support

program for nurse leaders who were mothers. The intervention was weekly 1-hour facilitated discussions over 12 weeks on topics such as minimizing rumination, assertiveness and mentorship at work, feelings of shame and self-doubt, limit setting with children, and dealing with their pain. There was a statistically significant reduction in depression and perceived stress with an increase in self-compassion in the intervention group compared to the control group (Chesak et al., 2020). The strengths noted in this study include developing a support structure with peers who have similar challenges, allowing time for participation in the peer support program during work hours, and measuring results 3 months after the intervention. These time constraints for the individual sessions and the duration of the program need to be considered when creating an intervention for the participants.

A qualitative study by Paliadelis et al. (2007) identified two themes reported by NMs as related to support at work: (1) lack of formal support and (2) caring for each other. In lieu of formal support, the NMs in the study established practices such as relying on each other for educational support and emotional support, being able to ask questions without the fear of being ridiculed, and having a resource person when “things get tough” to fill the gap. A NM could obtain support from others in “their own ranks” despite the lack of formalized programs in an organization (Paliadelis et al., 2007). The distinct value of peer interactions is the ability to discuss certain topics with other NMs that are not possible with staff nurses or those above in the organization’s hierarchy (Paliadelis et al., 2007). The lack of formal organizational support described by the participants could be interpreted as not being valued, a lack of being cared for, and a lack of respect for their role. Other concerning accounts shared by the NMs were the need for self-directed activities like reading management books, learning to be a manager based on trial and error, and the lack of support structures for those transitioning into the role. There

exists a need for formal organizational structures to support professional development and to provide networks to allow NMs to connect with each other.

Peer support programs that aimed to improve resilience and well-being have been researched outside of nursing. Although relatively few studies have examined peer support interventions to increase resilience in nursing, Moir et al. (2016) conducted a study with the intervention of establishing a peer support program and mindfulness training among 2nd and 3rd year medical students. The program provided a support framework in the context of face-to-face peer support, external social events, and participation in a mindfulness program. The results of the program however did not show statistically significant improvements for participants in the categories of depression scores, anxiety, or resilience post intervention (Moir et al., 2016). While the feasibility of the study was supported, the authors noted several opportunities that should be kept in mind, such as the risk of contamination between the control and intervention groups. Additionally, interventions such as external social events may lack the structure and oversight needed to ensure appropriate engagement which can ultimately affect the desired outcomes.

Beyond resilience, peer support interventions have been used for other outcomes such as compassion fatigue and compassion satisfaction. Wahl et al. (2018) implemented a support network to address compassion fatigue issues among hospital nurses (n = 20) through the following interventions: online education on compassion fatigue, development of a three-tiered peer support network, and a 2-hour in-person resilience workshop. Scores in only one subscale of compassion satisfaction increased significantly post-intervention with no significant improvement noted for compassion fatigue. Although the results did not demonstrate overall improvement in the areas of compassion fatigue and compassion satisfaction, the researchers contend there is value in the learned communication skills and self-care strategies acquired

through the peer support network that can support nurses when faced with challenging situations (Wahl et al., 2018).

In summary, peer support as a strategy to increase resilience has been studied in healthcare populations, such as nurses (Chesak et al., 2020) and medical students (Moir et al., 2016) with mixed results. While Chesak et al. (2020) found that peer support interventions significantly increased resilience among nurse leaders who were mothers, Wahl et al. (2018) did not observe any significant impact of peer support on compassion fatigue or compassion satisfaction in a study among hospital nurses. The study conducted by Moir et al. (2016) also did not find a significant impact of a peer support intervention in depression, anxiety, or resilience in medical students. In the 2020 study by Chesak et al., the intervention approach set aside time to participate in the peer support program since it was mentioned in their previous study from 2015 (Chesak et al., 2015) that dedicated time could have been a contributing factor to increasing resilience. The studies by Moir et al. (2016) and Wahl et al. (2018) did not explicitly state that time was carved out for participation in the peer support activities, which may be a contributing factor for realizing significant results.

The promise of peer support as an effective intervention has received mixed reviews in the literature. A comprehensive meta-analysis review conducted by Liu et al. (2020) reports that interventions that are social, support-based approaches have yielded meaningful effects in the healthcare setting, which would be supportive of peer support programs. However, researchers including Liu et al. (2020) warn that due to the multidimensional nature of resilience, there may be other confounding factors that could be responsible for the improvements and not the intervention itself (Liu et al., 2020; Richardson & Waite, 2002). Additionally, the efficacy of these improvements based on only pre- and post-intervention effects do not consider the

longevity of the results (Liu et al., 2020). The role of peer support interventions demonstrate promise, but future research must consider that there are other contributing factors as mentioned in above studies.

While peer support programs are discussed as an effective strategy to increase resilience (Dyess et al., 2015; Hudgins, 2015; Wei et al., 2019), the literature regarding implementation of such programs did not focus on the NM population as a whole. Only one study was found which connected NMs, peer support, and resilience (Chesak et al., 2020), but their target demographic was NMs who were specifically mothers. Taken together, evidence that formal training programs and peer support in other settings both increase resilience suggests that there is an opportunity to increase resilience for NMs by establishing a peer support program.

There is currently no organizational structure that promotes interactions among all the NMs at the three hospitals in the Santa Clara Valley Medical Center system. Although informal relationships may exist by the nature of being employed in the same organization, it is unknown to what extent communication and connections occur within or outside of the NM's own hospital. The opportunity may also exist for NMs to develop relationships outside the specialty area in which they practice which may expose them to new ideas and knowledge outside of those who they are used to working with.

Practice Gap and Project Purpose

In a hospital setting, there are high levels of stress and pressure to meet organizational goals for the NMs due to the requirements of the role. However, in the organization where the project will be conducted, there is no formal support system currently in place to address resilience. The purpose of this DNP study is to measure the effectiveness of a peer-support

program for NMs for increasing resilience over a 3-month period at the three hospitals in the County of Santa Clara Health and Hospital system.

Resilience and Resilience Theoretical Framework

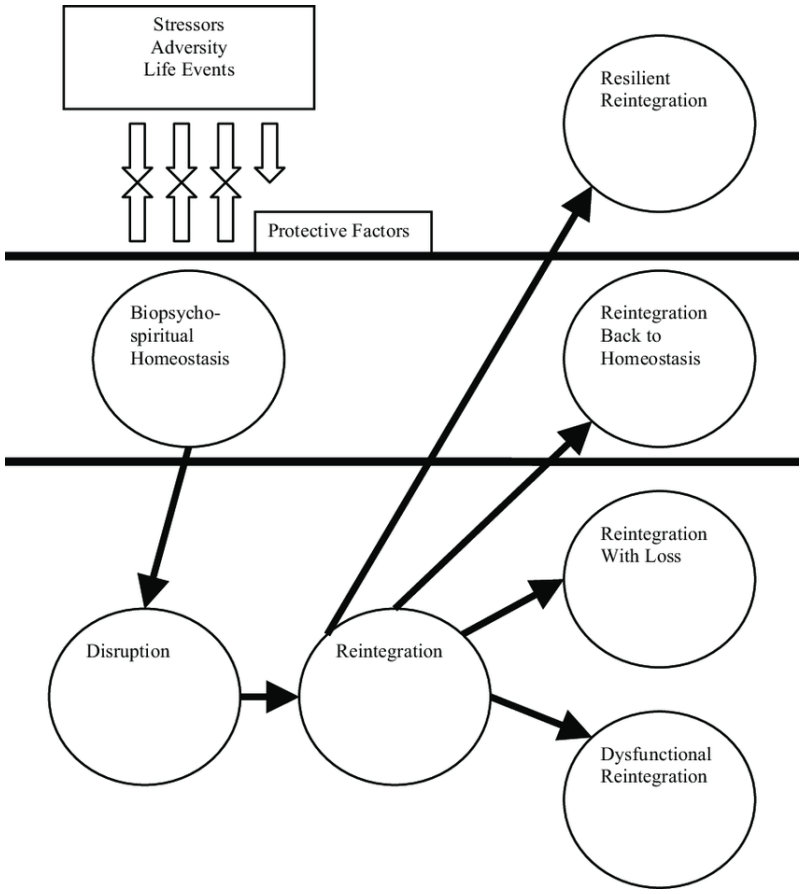
The meta-theory of resilience and resiliency (MRR) offers a conceptual model for understanding the challenge of building resilience in NMs and provides the framework for this DNP project to establish the intervention of a peer support program. The work done by researchers across multiple disciplines laid the foundation to the resiliency theory (Garmezy 1991; Garmezy et al., 1984; Rutter, 1985; Werner & Smith, 1992). MRR emerged from those initial phenomenological studies of traits of those who survived high risk situations. These researchers identified that in at-risk youth, there were certain factors that contributed to their success despite personal, social, and economic disadvantages. Werner (1997) identified traits such as good communication skills, practical problem-solving skills, autonomy, and good self-esteem that helped children be successful. Additionally, extrinsic factors identified by Werner (1997) in the study included having a caregiving environment inside and outside the family also helped the children thrive despite risk factors. The study findings by Garmezy (1991) and Garmezy et al. (1984) also supported that personality disposition, a supportive family structure, and an external support system all contributed towards thriving despite adversity. British psychiatrist Michael Rutter's research (1985) of inner-city kids in London reinforces the theory that the ability to overcome risk factors is supported by both personal and environmental factors. Werner (1997) proposed that these protective buffers make more of an impact on a person's life than do the risk factors or stressors.

The MRR can be explained through the interactions between the different constructs of the resilience and resiliency model. A person experiencing a disruption will move through the

different stages: biopsychospiritual homeostasis, disruption, the reintegration decision point, and positive or negative reintegration in a linear progression as depicted in Figure 1.

Figure 1

The Resiliency Model (Richardson, 2002)



The stressors in the Resilience model represent life events, which can be either positive or negative. The protective factors include personal characteristics, personality traits, or environmental situations that provide support during adversity. A disruption is a change that can either be planned or unplanned, but a key tenet is that the baseline status has shifted.The interaction between the stressors and the protective factors regulates whether a disruption occurs and the effect on the person's ability to perceive, cope, and process the disruption (Richardson, 2002). The biopsychospiritual homeostasis represents the person's current baseline status of

physical, mental, or spiritual well-being. The next stage of the model is reintegration, described as the decision point of choosing how to understand and make meaning of the disruption (Richardson, 2002). The person's outlook and ability to process this stressor will determine which of the four possible reintegration outcomes will be achieved.

There are four possible results to this process on a scale of most desired outcome, shown in Figure 1 as well. Ideally, resilient reintegration occurs where the resulting outcomes are personal growth, gained knowledge, and increased self-understanding (Richardson, 2002). The person finds themselves in an improved position compared to before the change because that knowledge can further increase resilience and serve as an additive protective factor. The second result can be reintegration with homeostasis where the person remains in the same place as before. While this integration is considered a safe outcome because of the familiarity, there is no growth actualized, and in Richardson's opinion it may not be ideal long term (Richardson, 2002). The third possible outcome is reintegration with loss, which is represented below the baseline. This type of reintegration is characterized by burnout and a loss of hope because of the inability to cope (Richardson, 2002). The last and least desirable outcome is dysfunctional reintegration where a person may turn to maladaptive behaviors because they are incapable of effectively managing the stressor.

The intervention will be based on promoting those protective factors mentioned in the MRR model and can be used as a tool to assist the NM in the resilience process (Udod, 2021). The MMR provides a framework to understand the journey of NMs as they adjust when a new stress is placed on them when making a choice on how to handle that stress and ultimately what the final outcome is of that experience. The MRR supports a comprehensive understanding of the

multiple facets of resilience as a personal quality to support the NMs, a process to deal with adversity, and a strategy to obtain positive reintegration.

It has been previously established that stress is an inevitable aspect of the role of the NM. Richardson (2002) asserts that resilience will help the NM do more than just bounce back but also gain growth and knowledge when facing disruptions and stressors. An anticipated outcome of this intervention will be for NMs to learn how to utilize environmental factors, such as peer support, to moderate the harmful effects of job stress (Richardson, 2002). With this peer support resource, the NMs ability to choose how they handle the stress will ultimately direct the type of integration they achieve. Achieving resilient reintegration is not only a desirable outcome but can also serve to increase protective barriers. Resilience has previously been cited as a protective factor for the NM's emotional and physical health and will allow for NMs to have the tools to better cope with future stressors (Cline, 2015: Richardson, 2002). In conclusion, the different stages of the MRR will help guide the project successfully.

Methods

Design

The researcher employed a one-group pre-test and post-test design to examine the impact of peer support on NM resilience.

Setting

The research project was implemented in the Santa Clara Valley Healthcare system in San Jose, California. The specific locations were the three acute care hospitals which included Santa Clara Valley Medical Center (VMC), O'Connor Hospital (OCH), and St. Louise Regional Hospital (SLRH). The three hospitals are operated by the County of Santa Clara under a consolidated license. As historical background, OCH and SLRH were part of another hospital

system prior to being acquired by the County of Santa Clara in 2019. The three hospitals vary in size with VMC being the largest with 574 beds, OCH with 358 beds, and St. Louise Regional is the smallest with 93 beds. The hospitals have distinct operational differences including levels of care, number of beds, locations, and services provided. The three hospitals provide services to residents in Santa Clara County.

Participants

The research participants were recruited from the three acute care hospitals in the healthcare system. Only those who had the title of NM in a clinical care department within the hospitals were invited to participate in the research study. Participants needed to be actively working and not on leave during their participation in the research study. There was no exclusion criteria for the number of years worked as a NM.

Data

There were three tools utilized to collect data in the research study. The first tool was a researcher constructed demographic questionnaire (See Appendix A). The purpose of the demographic questionnaire was to gather data: age of the participants, number of years in nursing management, current work site location, and past practice of engaging with peers. This information was collected one time prior to the intervention electronically.

The Connor-Davidson Resilience Scale (CD-RISC) tool was used to measure resilience in the NMs in the study. The scale is comprised of 25 items, and there are five factors identified as constructs of the scale: (1) personal competence, high standards, and tenacity; (2) trust in one's instincts, tolerance of negative effects, and stress as a strengthening effect; (3) positively accepting change and possessing secure relationships; (4) control; (5) spiritual influences (Connor & Davidson, 2003). Each item is self-rated on a 5-point scale with the following

responses: (0) not true at all, (1) rarely true, (2) sometimes true, (3) often true, (4) true nearly all of the time (Connor & Davidson, 2003). The scores can range from 0 to 100 with a higher score being indicative of greater resilience (Connor & Davidson, 2003).

In the original study conducted by Connor and Davidson (2003), the CD-RISC has good internal consistency (Cronbach's a = 0.89) and test–retest reliability (intraclass correlation coefficient = 0.87). The 25-item CD-RISC has been validated (Jung et al., 2012) and revised (Faria Anjos et al., 2019) in subsequent studies. The CD-RISC tool has been adequately tested and validated internationally (Davidson, 2018). The authors Connor and Davidson (2018) note there are many versions of the CD-RISC scale but only the 25-item (CD-RISC 25), 10-item (CD-RISC 10), and 2-item (CD-RISC 2) are authorized for used (Davidson, 2018). The 25-item CD-RISC has not been tested in the NM population. Payment for use of the CD-RISC scale has been made and permission to use this tool has been obtained by the authors. The CD-RISC scale was sent to the participants electronically.

The third tool utilized was a researcher-generated satisfaction tool. The questionnaire used rated the participant's experience with the intervention (See Appendix B). The questions were rated on a 5-point Likert scale with higher scores indicating higher satisfaction and a free text option. The satisfaction questionnaire was sent to the participants after the study was complete electronically.

Procedures

The first step of this study was to inform and engage those individuals in the organization. There were multiple stakeholders involved with implementing the peer support project, including the nurse executives, the NMs, and the researcher. The nurse executives at each hospital were vital in supporting their NMs to participate in the study. A preliminary

meeting was held with the nurse executives prior to the start of the project to obtain support. During the meeting, the intent of the project was shared as well as the potential impact for the NMs. A description of the nurse executive's role in the study was provided to ensure they understood their role in the project plan. The support from the nurse executives involved acknowledging the importance of decreasing burnout, enhancing resilience, and allowing time for the NMs to hold meetings in the peer support program. The Chief Nursing Officer (CNO) of the system provided a setting for the NMs to participate by scheduling a meeting to discuss wellness within the group.

Secondly, the NMs were invited to participate in an informational meeting via the organization's email system. This was followed by the third step, which was facilitating the meeting session which lasted for one hour and was held virtually via the Microsoft Teams to allow for ease of participation across the three-hospital system. Originally, the intended format was an in-person meeting however that was unable to occur due to events outside the control of this project. During the meeting, a PowerPoint presentation was provided by the researcher on the topics of NM burnout and resilience. An overview of available resources regarding resilience and well-being offered in the organization was shared as part of the presentation. In the fourth step, the NMs were invited to participate in the peer support program project. As a follow up, an email was generated by the researcher from Qualtrics and sent via the organization email to all NMs to invite them to participate in the project. The email contained the following: an invitation from the researcher to participate in the project with a link to an online survey which included the following: a statement of consent, a demographic survey, and the resilience scale provided to those who expressed interest in participating.

Once the NMs self-selected to participate in the project, the fifth step was assigning partners for the peer support program. Each NM then selected a unique identification using the last 4 digits of their cell phone number to match their pre- and post-survey responses. The NMs were then assigned a partner by using Microsoft Excel's random pair generator function. The information regarding the NM ID and paired participants were kept by the researcher in a password protected file and computer. The assigned pairing lasted for the duration of the 3-month program.

The sixth step was to introduce the project to each set of NM partners. An email was sent by the researcher to each pair as an introduction with details of the program description. The researcher's contact information was provided for any additional questions the participants may have had. The participants were recommended to hold the 30-minute peer discussions during their lunch hour to make them more social in nature and not an additional work function. However, each pair may have decided what worked best for their schedule, including holding the meeting in-person or via Teams. The sessions were intended to be participatory and supportive. The first session only included an introduction between the participants to learn more about their organizational experience, professional background, and any personal information that they felt comfortable sharing in addition to the structured questions. The format of each session consisted of each participant sharing the following questions: (1) What went well this week? (2) What did not go well this week? (3) What did I learn from these experiences for future use? Each participant was to take turns answering the questions and listening to their partner. The meetings were to take place for 30 minutes every two weeks for a total of six sessions. There were no minimum number of meetings to attend to be part of the peer support program study. The time frame for the peer support intervention was three months (See Appendix C).

Each participant was provided a journal for their own personal use to make notes of (1) what they learned from their partner, (2) how they could use that information for their own practice, and (3) what they felt they offered to their partner. A card with these guidelines was inserted into every participant's journal. The content of the journal's self-reflection activities was not collected and meant for the participants' own use.

Data Collection

There were two data collection points in this project. Prior to the intervention, the study participants were provided a demographic questionnaire and the CD-RISC resilience questionnaire by Qualtrics. No data was collected during the intervention period. A week after the intervention ended, the study participants were provided a satisfaction questionnaire and the CD-RISC resilience questionnaire using Qualtrics. The survey participants were asked to return the questionnaires back to the researcher within one week. A follow-up email was sent 2 weeks after the initial survey was sent to thank the participants and as a reminder for anyone who may have not turned in the questionnaires.

Analysis

The evaluation of the intervention was performed on the data collected from the 3-month intervention period. The effects of the peer support program were determined by comparing the pre- and post-intervention resilience scores. A paired t-test was used to analyze the resilience scores of the NM participants pre- and post-intervention. Statistical significance would be determined by using an α of 0.05. Descriptive statistics were reported for all variables collected from the demographic survey and satisfaction survey. Qualtrics software was used to collect data from the surveys and Intellectus software was used for data analysis. Only the aggregate data of the resilience scores and demographic information was reported.

IRB

This project received program approval using the San Jose State University IRB exclusion worksheet and was determined to not meet the requirements for human subjects review.

Risks

There were limited risks associated with this intervention. There was potential for participants to feel discomfort in sharing information with a peer that they are not familiar with. Additionally, the participants may have felt a sense of pressure to participate in the study due to the reporting relationships of managers. These risks were mitigated by explaining that participation was optional, and their choice would not affect their current role. An informational brochure was provided regarding the Employee Assistance Program (EAP) available for participants to utilize if they experienced distress (Appendix D).

Benefits

There were no direct benefits to participants. However, they may have benefited by having increased knowledge regarding resources, establishing personal connections within their peer group, and increasing resilience to assist them in meeting the NM role expectations.

Costs

There will be no costs to the participants in the project. There will be a cost for purchasing the journals for each participant that will be paid for by the researcher. The estimated cost is $400 with a potential of 40 participants in the study.

Payments

There will be no payments for subjects who participate in the study.

Confidentiality

The subject's participation will be confidential and will only be shared with the partner who they will be working with. The data gathered for the project will be stored in a computer with a password protected file known only to the researcher. A unique 4-digit identification number will be used for each participant to match the survey results. No subjects will be identified by name when reporting any of the data. The data will be kept by the researcher in a locked box for one year then destroyed by shredding the documents.

Results

There were six NMs who reached out to participate in the peer support program. Five of the six NMs completed the initial demographic survey and pre-intervention CD-RISC survey. Only 4 of the participants completed the satisfaction survey and post-intervention CD-RISC survey.

Manager Demographics

Most of the participants identified as Asian or White, each with an observed frequency of 2 (40.00%), and most were female (n = 4, 80.00%). As well, the highest level of education completed was a Masters (n = 3, 60.00%), and the majority worked as NMs at OCH (n = 3, 60.00%). Frequencies and percentages are presented in Table 1.

Table 1

Frequency Table for Nominal Variables

Variable	*n*	*%*
Race/Ethnicity		
Asian	2	40.00
Latino	1	20.00
White	2	40.00
Missing	0	0.00
Sex		
Male	1	20.00
Female	4	80.00

Missing	0	0.00
Highest level of education completed		
Bachelors	2	40.00
Masters	3	60.00
Missing	0	0.00
Which hospital do you currently work at?		
VMC	2	40.00
OCH	3	60.00
Missing	0	0.00

Note. Due to rounding errors, percentages may not equal 100%.

The participants had an average age of 52.40 years. They had been a nurse an average of 25.40 years and specifically as nurse managers for 13.20 years. The mean values for age, years as a nurse, and years as a nurse manager were within a normal distribution for both Skewness and Kurtosis. The summary statistics can be found in Table 2.

Table 2

Summary Statistics Table for Interval and Ratio Variables

Variable	*M*	*SD*	*n*	SE_M	Min	Max	Skewness	Kurtosis
Age	52.40	12.22	5	5.46	40.00	69.00	0.30	-1.39
Years as a nurse	25.40	14.12	5	6.31	12.00	45.00	0.38	-1.36
Years as a nurse manager	13.20	11.69	5	5.23	4.00	30.00	0.61	-1.37

Note. '-' indicates the statistic is undefined due to constant data or an insufficient sample size.

The most frequent response provided by the NMs regarding *How often do you reach out to peers for support outside of your own hospital* was ‘Sometimes’ (n=3, 60%). The most frequently observed category of *How often do you reach out to peers outside your own hospital* was also Sometimes (*n* = 3, 60%). Frequencies and percentages are presented in Table 3.

Table 3

Frequency Table for Nominal Variables

Variable	*n*	*%*
How often do you reach out to peers for support outside your own hospital?		
Sometimes	3	60.00
Never	1	20.00
Rarely	1	20.00

Missing	0	0.00
How often do you reach out to peers for support within your own hospital?		
Rarely	2	40.00
Sometimes	3	60.00
Missing	0	0.00

Note. Due to rounding errors, percentages may not equal 100%.

Peer Support Intervention

A two-tailed paired samples *t*-test was conducted to examine whether the mean difference of pre-intervention and post-intervention was significantly different from zero.

A Shapiro-Wilk test was conducted to determine whether the differences in pre-intervention and post-intervention could have been produced by a normal distribution (Razali & Wah, 2011). The results of the Shapiro-Wilk test were not significant based on an alpha value of .05, $W = 0.93$, $p = .577$. This result suggests the possibility that the differences in pre-intervention and post-intervention were produced by a normal distribution cannot be ruled out, indicating the normality assumption is met.

The result of the two-tailed paired samples *t*-test was not significant based on an alpha value of .05, $t(3) = -0.23$, $p = .832$, indicating the resilience scores could not be attributed to the peer support intervention. The results are presented in Table 4, and a bar plot of the means is presented in Figure 1.

Table 4

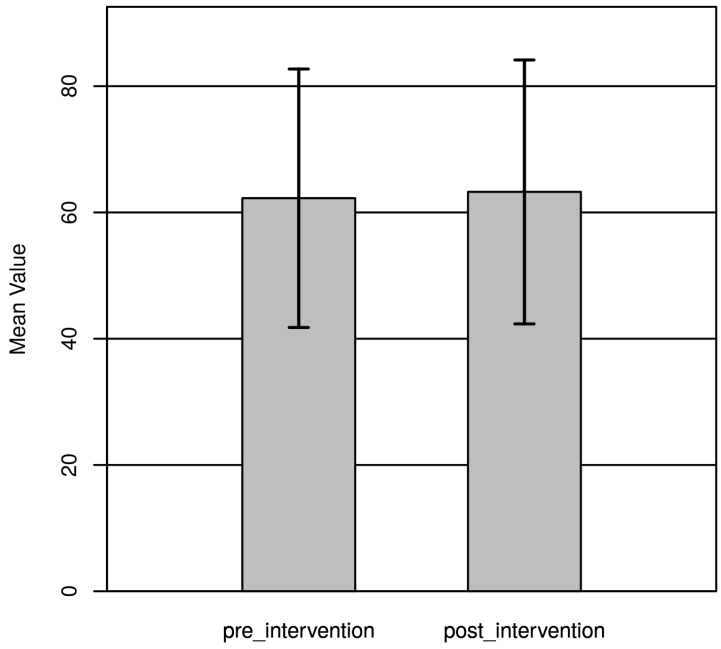
Two-Tailed Paired Samples t-Test for the Difference Between Pre-intervention and Post-intervention

Pre-intervention		Post-intervention				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
62.25	20.89	63.25	21.33	-0.23	.832	0.12

Note. N = 4. Degrees of Freedom for the *t*-statistic = 3. *d* represents Cohen's *d.*

Figure 1

The Means of Pre-intervention and Post-intervention with 95.00% CI Error Bars



Manager Satisfaction

The most frequently stated responses to the question *Do you feel you have an increased knowledge of resources available to you as a nurse manager* were Neutral (*n* = 2, 40.00%) and Strongly Agree (*n* = 2, 40.00%). For the question *Do you feel you have an established a workplace connection with your peer* were Agree (*n* = 2, 40.00%) and Strongly Agree (*n* = 2, 40.00%). The most frequently observed category of *Did you gain learnings you're your peer that you did not know before* was Agree (*n* = 2, 40.00%). Participants responded to the question *How likely are you to use those learnings in your own leadership practice* as Likely (*n* = 2, 40.00%). Lastly, at the end of the intervention, participants responded with Very Likely (*n* = 3, 60.00%) to recommending this peer support practice to their colleagues. Frequencies and percentages are presented in Table 6.

Table 6

Frequency Table for Nominal Variables

Variable	*n*	*%*
Do you feel you have an increased knowledge of resources available to you as a nurse manager?		
Neutral	2	40.00
Strongly Agree	2	40.00
Missing	1	20.00
Do you feel you established a workplace connection with your peer?		
Agree	2	40.00
Strongly Agree	2	40.00
Missing	1	20.00
Did you gain learnings from your peer that you did not know before?		
Neutral	1	20.00
Agree	2	40.00
Strongly Agree	1	20.00
Missing	1	20.00
How likely are you to use those learnings in your own leadership practice?		
Neutral	1	20.00
Likely	2	40.00
Very Likely	1	20.00
Missing	1	20.00
How likely are you to recommend this peer support practice to your colleagues?		
Likely	1	20.00
Very Likely	3	60.00
Missing	1	20.00

Note. Due to rounding errors, percentages may not equal 100%.

Discussion

The purpose of the study was to identify if a peer support program among NMs would increase their levels of resilience. In a previous study, resilience among nurse managers had increased after education on building support, building resilient relationships, and reframing how situations are viewed (Rosa-Besa et al., 2021). Although education was provided to the NMs in this project, along with a participatory activity, the NMs did not report a higher level of resilience after the intervention. The most significant difference was that Rosa-Besa et al. (2021) study had a 6-hour training compared to this project's one-hour informational session. Wei et al.

(2019) had previously identified strategies to promote resilience, such as facilitating social connections, promoting positivity, and nurturing professional growth, which were incorporated into this project's NM peer support program. Additionally, other approaches to increase resilience, such as cognitive reframing, receiving support, nurturing relationships, and becoming more reflective as described in other studies, were also present in the intervention (Cline, 2015; Udod et al., 2021). The NM manager peer support program incorporated those strategies in the peer support program design however the intervention did not yield a significant positive result.

The peer support program in this project was structured to not add on additional time to the NM's workday by proposing the meetings take place during the lunch hour or a time of their choosing. The study by Chesak et al. (2020) had a similar framework, but they allowed time for participation during work hours. For this project, NM meetings could have been more formal and structured to ensure the peer session was in place of regular duties and not in addition. The self-directed time allocation may have been a contributing factor as was seen in the studies by Moir et al. (2016) and Wahl et al. (2018) where it was not explicitly stated whether time was allocated for the activities. In this project, it is also unknown when the meetings were conducted by the participants or if the sessions were done in-person or via TEAMS. These factors may have contributed to the overall participation and engagement of the NMs.

There were also challenges with the implementation of the NM peer support program. One day prior to the scheduled in-person education for the NM resilience training, there was a power outage in the largest facility resulting in all leadership being pulled into emergency operations for several days. On the rescheduled date, there was a regulatory visit which necessitated intense focus from the NM group for over a week and a half. When trying to reschedule the in-person training, it was not feasible to do so because of the NMs other job

requirements and the delay in the next available date. It was therefore necessary to conduct an online TEAMS meeting as an alternative. Notably, during the TEAMS meeting, the majority of the NMs had the cameras turned off and engagement was limited. The online meeting format affected the level of participation. Receiving education regarding resilience was an important aspect of previous studies (Richardson & Waite, 2002; Rosa-Besa et al., 2021), and the teaching environment negatively affected this project's ability to provide necessary engagement with the education that would have benefited the peer support program.

Although the resulting data did not demonstrate a change in resilience levels from the CD-RISC score from the intervention, there were comments provided by the participants regarding the NM peer support program which were encouraging (see Table 7). The NM comments describe the positive aspects of connecting with others in the organization and being able to provide support and mentoring to each other. Paliadelis et al. (2007) had previously expressed the need of creating such a support network of peers who had a unique understanding of their own needs, and that study promoted the development of an effective support mechanism in the workplace. This project, though with limited participation, succeeded in doing that. The majority of the NMs would recommend the peer support program to their colleagues. The NM feedback was aligned with the original intent to develop a framework for peer relationships and support for the role.

Table 7

Nurse Manager Comments

Nurse Manager Comments
Great program to connect with other peer leaders and help with resilience and peer support
Managers are very alone and do not have a support system. They have so much responsibility and demands from below and above and such little support or connection with other like peers

or counterparts
This was a great way to share experiences and frustrations as well as wins to help each other with coping mechanisms
Good avenue to share ideas, offer suggestions
Nice to speak with someone who is engaged and an active listener
It felt good to know that I am not alone in feeling the way I do at times, and it strengthened my resolve that I need to just know it can be part of the job and to continue to strive forward and know I am doing a good job
I know I have made a friend and peer connection with this counterpart at another facility with very similar job and circumstances
I feel I helped the other manager, and they also helped me
I was able to mentor and comfort if you will and encourage the other person
We will always be able to be a resource to each other

Given the prevalence of poor mental health, such as stress, depression, and anxiety in the NM workforce, this positive commentary shows that building individual resilience among NMs can support them develop skills to deal with work-related stress.

Limitations

A limitation of this project was the small sample size of NMs who participated and completed the surveys. In reviewing the results, a data point that was not captured was the number of sessions the participants conducted. This may have provided additional insight regarding engagement and intervention effect. Due to external circumstances, there was a need to alter the planned education from in-person to an online format to meet the project timeline. Therefore, if the project were to be replicated, doing the education format as originally designed may allow for a deeper understanding and excitement regarding the peer support program.

Conclusion

Nursing managers (NMs) are at risk for high levels of stress and burnout due to the job expectations of their role, and resilience is a tool that can support them. As shown in survey research from Harris Poll regarding peer support programs and resilience training, 76% of employees perceived resilience training as valuable (American Heart Association, 2016). This project sought to implement a peer support program that focused on increasing resilience levels among NMs; however, the reduced sample size, less than optimal educational environment, and work-related competing priorities affected the outcomes. Although the resilience score data from this project did not demonstrate statistically significant results, the NMs who participated shared a positive experience. Their comments reflected factors that support resilience, such as the social and professional connection with their peers as well as the resources gained from establishing those relationships. Therefore, the development of the NM peer support program has promise for future use.

Resiliency among caregivers in healthcare continues to be a top concern, and a peer support program can assist with that need. Organizations can implement the peer support program without high levels of resources and can replicate it with different groups outside of NMs. A peer support program can be instituted not only among existing employees but also as part of new hire orientation and ongoing training. Further research should consider sample size, format for the peer support sessions, and the educational environment. Many organizations must be aware of the opportunity they have to ameliorate the stress and burnout among nurse managers, and they should utilize peer support programs and resilience training as an intervention.

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Appendix A

Nurse Manager Demographic Questionnaire

Q0 By completing this survey you are providing consent to participate in a DNP project about nurse manager resilience.

- o Yes, I understand and agree (1)

Q1 What is your age?

_____

Q2 What is your sex?

- o Male (1)
- o Female (2)
- o Non-binary / third gender (3)
- o Prefer not to say (4)

Q3 What is your race/ethnicity?

- o Asian (1)
- o Black (2)
- o Latino (3)
- o White (4)
- o Other (5)
- o Decline to answer (6)

Q4 How many years have you been a nurse?

_____

Q5 How many years have you been in nursing management?

_____

Q6 Which hospital do you currently work at?

- o VMC (1)
- o OCH (2)
- o SLRH (3)
- o Decline to answer (4)

Q7 What is the highest level of education completed?

- o Associate Degree (1)
- o Bachelors Degree (2)
- o Masters Degree (3)
- o Doctoral Degree (4)
- o Post Doctoral Degree (5)
- o Decline to answer (6)

Q8 How often do you reach out to peers for support within your own hospital?

- o Never (1)
- o Rarely (2)
- o Sometimes (3)
- o Most of the time (4)
- o Always (5)

Q9 How often do you reach out to peers for support outside your own hospital?

- o Never (1)
- o Rarely (2)
- o Sometimes (3)
- o Most of the time (4)
- o Always (5)

Appendix B

Nurse Manager Satisfaction Questionnaire

Q1 Do you feel you have an increased knowledge of resources available to you as a nurse manager?

- o Strongly disagree (1)
- o Disagree (2)
- o Neutral (3)
- o Agree (4)
- o Strongly agree (5)

Q2 Do you feel an established workplace connection with your peer?

- o Strongly disagree (1)
- o Disagree (2)
- o Neutral (3)
- o Agree (4)
- o Strongly agree (5)

Q3 Did you gain learnings from your peer that you did not know before?

- o Strongly disagree (1)
- o Disagree (2)
- o Neutral (3)
- o Agree (4)
- o Strongly agree (5)

Q4 How likely are you to use those learnings in your own leadership practice?

- o Very unlikely (1)
- o Unlikely (2)
- o Neutral, don't know (3)
- o Likely (4)
- o Very likely (5)

Q5 How likely would you recommend this peer support practice to your colleagues?

- o Very unlikely (1)
- o Unlikely (2)
- o Neutral (3)
- o Likely (4)
- o Very likely (5)

Q6 Please provide any additional feedback regarding your experience in the peer support program:

_____

Appendix C

Project Timeline

		2022							2023				
Nurse Manager Resilience Project	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Contact primary advisor for review													
Proposal defense													
Start IRB application process													
IRB approval													
Resilience inservice													
Send survey invitations													
Email peer assignment and directions													
Peer support intervention													
Send post-intervention survey													
Send post-survey reminder													
Post-intervention data collection													
Analyze data results													
Writing													

Appendix D

Employee Assistance Program Brochure

Appendix E

CITI PROGRAM

Completion Date 03-Feb-2022
Expiration Date 02-Feb-2027
Record ID 47195613

This is to certify that:

Juana Castillo

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Students conducting no more than minimal risk research
(Curriculum Group)
Students - Class projects
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

San Jose State University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w8e09f77d-7def-4650-85e9-677109b8d615-47195613