

PROMOTING STAFF RESILIENCE THROUGH DISTRESS DEFUSING VIA CODE

LAVENDER

by

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Abstract

Many organizations lack psychological first aid for staff members. The purpose of this pilot project was to implement a Code Lavender program which would provide distress defusings for trauma-intensive care unit staff following critical incidents in the workplace; the pilot project's goal was to determine the workplace resilience, compassion satisfaction, burnout, and secondary traumatic stress pre and post implementation of the Code Lavender program. The pilot project took place over eight weeks. A pre-survey and post-survey, each with two parts, were administered. The staff were also given a mental readiness tool schemed with four colors to help identify their levels of daily mental readiness and/or communicate their level of psychological injury. The unit manager and director disseminated the survey via email to 110 potential staff respondents. The pre-survey, which consisted of two sections, had an engagement of 16% (18/110 staff members) on the first section. Engagement decreased from 16% to 12% (13/110 staff members) in the second section of the pre-survey. This eight-week pilot project revealed that one critical incident occurred which required one Code Lavender. Three staff members used that Code Lavender distress defusing. Post surveys had a 16%-18% voluntary engagement (n=18/110/ n=17/110). The end of the pilot project revealed a need for continued building of a robust peer support team and education for leadership, managers, and directors aimed at assisting them with understanding differences between operational debriefings and critical incident stress debriefings/defusings. Distress defusings are an important tool to offer staff members when they experience a critical event.

Keywords: code lavender, workplace resilience, critical incident stress debriefing, mental readiness, defusings

“Ubuntu”- I am, because we are...
(African Nguni Bantu term, meaning ‘Humanity’)

This manuscript is dedicated to those that could not be here today, due losing the fight with their inner struggles, where their darkness never saw the light...

Let us show the rest our *Ubuntu*...
You are not alone;

Promoting Staff Resilience Through Distress Defusings Via Code Lavender

Problem Description

According to various reports, nurses are at a higher risk for suicide than the general population. There is no way to put a price on the loss of a human life, but the loss of a nurse does have financial ramifications. The cost of training a front-line nurse falls around \$61,000 (American Nurse Today, 2019). Even setting aside the emotional ramifications of a suicide, the financial impact alone should be a call to action to examine the contributing factors and address how nurses' workplace resilience can be strengthened, in order to lower the risk for suicide among nurses and other health care professionals.

The researcher for this pilot project posed the following PICOT question: Among hospital critical care staff in a trauma intensive care unit (P) will a "distress defusing program" (I) compared to no stress reduction program, improve workplace resilience within an (O) eight-week period (T)?

In general, 80% of Americans experience stress in the workplace (Werneburg, & et al., 2018). Some of the symptoms are headache (34%), feeling overwhelmed (33%), feeling nervous or anxious (33%), and feeling depressed or sad (32%) (Werneburg, & et al., 2018). There has been an abundance of documentation on the prevalence of stress and resiliency in physician providers, but far less in allied health such as nurses or nursing aids (Werneburg, & et al., 2018). In healthcare, the goal is to improve the outcomes of patients. Research shows that the quality of patients' care is directly related to the level of their healthcare providers' mental readiness (Glasper, 2016). What does that mean? If our health care teams do not have adequate mental readiness to care for the patients they serve, then health care providers may not be providing optimum care for the patients they serve.

The purpose of this pilot project was to implement a Code Lavender program with a focus on distress defusings for staff after they encounter a critical incident in the workplace. A critical incident can be defined as anything that disrupts the mindset and flow of the workspace or staff life. In this manuscript, the researcher will explain the process of setting up a Code Lavender program at a level-two trauma center in the northwestern area of the United States and will share insightful data from the critical care unit where the project was piloted.

Staff are working longer hours, patients are sicker, and staff are expected to do more with less and still meet austerity goals (Brennan, 2017; Wray, 2013). This contributes to burnout, compassion fatigue, and moral injury among staff. The scientific literature supports and recommends that healthcare leadership build resilient workforces. Doing so allows caregivers to practice effectively (Arrogante & Aparicio-Zaldivar, 2017). This poses an ethical challenge for leadership, as there are austere regulatory measures that need to be met as well as the pressure to do more with less to meet budgetary expectations. At the same time, there is a pull to meet and support the caregiver's needs to promote balance and fitness for duty.

Leaders paying attention to the resilience of their staff will help to mitigate moral distress, burnout, and other mental stresses. Resilience has a catalyzing role in improving clinical outcomes of patients and increasing their safety. Arrogante and Aparicio-Zaldivar (2017) noted that “resilience buffers the negative effects of burnout syndrome, and this could involve an increase of the quality of care and patient satisfaction, and a decrease of the number of medical errors, the rates of health care-associated infections, and mortality rates” (p.114). This supportive concept promotes a return on investment for healthcare administrators and leadership if they promote resilience in their workplace. An organization never wants to face serious safety events or sentinel events, and resilient caregivers can positively impact patient

safety.

Vyas et al. (2016) found participants with “low resilience were at significantly greater odds for developing physical, behavioral, and mental health conditions, particularly sleep disorders” (p. 1240). Those that experienced shift work were already at risk for disrupted sleep patterns. Building a Code Lavender program that offers distress defusings may help staff to process critical incidents and help normalize the physical and psychological reactions that may occur after an incident. Osta, King, Serwint, and Bostwick (2019; 2018) literature supports organizations using emotional debriefings to mitigate reactions such as sadness, anxiety, disturbed sleep, and hypervigilance. It is this type of research that helped guide the DNP researcher to explore how distress defusings can assist in processing emotional consequences of critical events. Another pilot research project that supported the use of Code Lavender defusings was the work conducted by Gauthier and Richardson (2016). This work looked at building code blue debriefings to foster resiliency. In Gauthier and Richardson’s work, 81% of respondents felt more comfortable discussing their emotions following a code blue, 88% felt better prepared to deal with the stress and emotions associated with code blues, and 94% felt that they were more likely to debrief immediately following a code blue in the future (Gauthier & Richardson, 2016, p. 567). This research supports the importance of implementing distress defusings following significant events so staff can process their emotions and reactions. This enables the mind to start healing.

Distress defusings are different from operational debriefings, and they may be confused with one another (See appendix A for comparisons). Operational debriefings address the systems processes or equipment related concerns. For example, the pacing monitor failed to pace a patient appropriately. Staff regularly complete operational debriefings post-events. The

distress defusings focus on the psychological first aid of participants or providers. An example from the literature shows there are “few measures in place for managing the effects of critical incidents on anesthesia staff.” (Tyrey, Muckler, & Vacchiano, 2017, p. 60). Their research found that providing avenues for debriefing an event assisted staff in emotionally processing the events in a positive way. This influenced and supported a healthy mindset and improved mental readiness for the next shift.

The project's aim was to pilot a Code Lavender program that facilitates distress defusings for health care staff. The aim was to supplement and support the organization’s novice peer support team and facilitate a standardized approach to critical incidents.

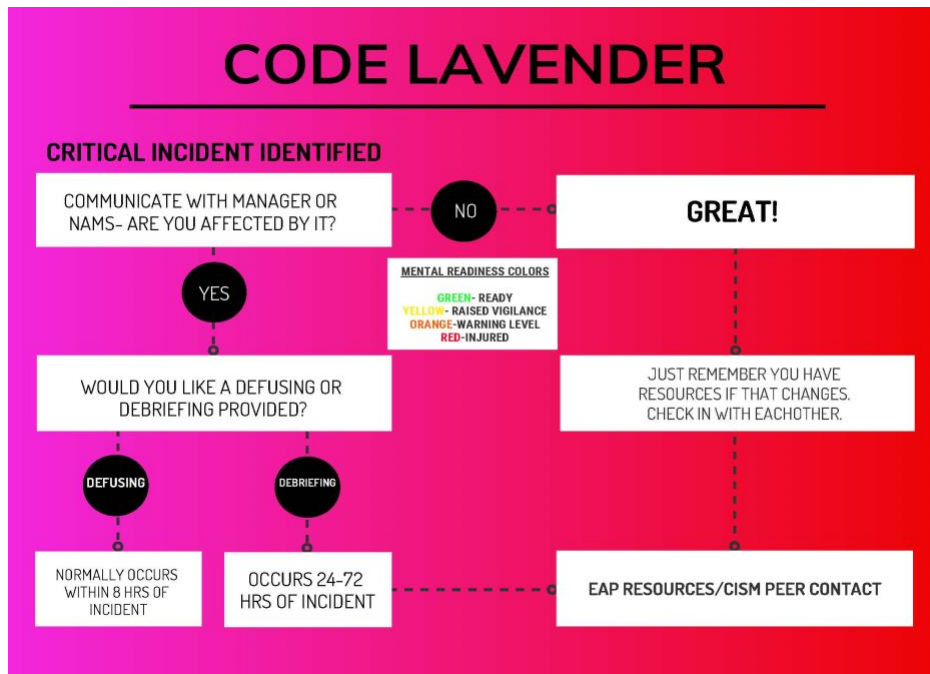
It costs 3.1 billion United States Dollars (USD) annually to treat depression, PTSD (post-traumatic stress disorder), and suicide among military service members (Vyas et al., 2016). Military personnel have been the pioneers of experiencing strained mental readiness. Our veterans are among the first to lead initiatives to help improve mental wellness programs. Distress defusings will be able to assist in mitigating the negative effects of critical incidents. As mentioned earlier, patients are only receiving care as good as their healthcare providers’ mental readiness (Glasper, 2016). If healthcare leaders do not address the negative effects of critical incidents on staff, burnout, stress, turnover, and physical ailments will continue, ultimately affecting patient care. Workplace resilience could not be more relevant in the ever-changing, dynamic health care environments of today.

In order to implement a Code Lavender program, the organization must be set up with a well-trained critical incident stress management (CISM) team. Team standards should be held to best practices according to the Mitchell model (International Critical Incident Stress Foundation, n.d.). The Mitchell model directs trained peer members to use best practices when facilitating

defusings or debriefings. The International Critical Incident Stress Foundation sets these best practice standards for implementing distress defusings or debriefings. Once the CISM is in place, the organization stakeholders must be supportive of the team being dispatched post critical incidents. It is the CISM team that will decide if a defusing, debriefing or peer-to-peer interaction is appropriate for the situation. Because of the stigma surrounding the act of reaching out and asking for help, the researcher provided the staff on the pilot unit with a mental readiness tool to aid in gauging one’s reactions or emotions post-critical incident. The mental readiness tool is broken down into four color categories that allow peers or unit leaders to gauge the severity of emotional needs (appendix B). The table below displays what a Code Lavender dispatching algorithm looked like.

Table 1

Code Lavender Dispatching Algorithm



Developed by Natasha Lukasiewich

In examining the significance of a well-supported Code Lavender program driven by a strong CISM team, it becomes clear that there is significant motivation to have a program in place. Every day staff are faced with longer shifts, overtime work, increased risk for burnout, secondary stress, compassion fatigue and mental health ailments. Having proactive programs in place will assist in keeping the professional quality of life scores in balance. The goal is to have staff feeling mentally ready to do their roles well, which in turn will help improve patient outcomes. If the health care industry does not attempt to address these issues, then healthcare will continue to see staff turnover, health care professionals leaving the industry and traumatized minds that have never been able to heal and process the events they repeatedly experience or witness. This can be compared to suffering repeated concussions and not expecting an eventual traumatic brain injury. Staff spend so much of their time at work, it makes sense to create a work environment as conducive to resilience as possible. Programs like Code Lavender can be used in a unit's platforms or within an organization but can also be melded into workplace violence-prevention programs. The organization that was used for this pilot project embedded the CISM into their code assault response team.

Prior to implementing the Code Lavender program at the test site, the DNP researcher became aware of three healthcare providers who died by suicide in the local community. Given the underreporting of suicides due to the stigma surrounding asking for help (American Foundation for Suicide Prevention, 2019), the DNP researcher wondered how many more providers the community may have unknowingly lost to suicide. Staff at the organizations that experienced these provider suicides felt the ripple effect and left their organizations, or continue to struggle with processing these events. This is a very significant problem. The healthcare industry spends millions of dollars on managing care for patients but has failed to adequately

address the problem of provider stress and subsequent rising suicide rates (Akhtar, 2019). The bigger question is, how could we have prevented these health care professionals' suicides?

Perhaps more emphasis on workplace resilience would have made a difference.

The organization where the researcher implemented the quality improvement project is a very large level-two trauma center in the western hemisphere of the United States. The organization had never implemented a Code Lavender program prior to the introduction of the pilot project. It was still a very new process for the organization to utilize its newly formed critical incident stress management team. In the year the DNP candidate spent observing and shadowing, she spent her time being mentored by varying levels of leadership and staff in order to understand the organization's current practice and culture. The DNP researcher was not an employee of the organization; therefore, this was a very important step in the process. The current practice of dispatching the CISM team was to contact one of the main CISM team leads to initiate an CISD (critical incident stress debriefing/defusing). This was not always effective as it caused delays in getting staff timely or appropriately timed CISM. It is important to build either a strong policy or standard of work. During implementation, it appeared that the organization favored the standard work product vs. the use of a policy. In the DNP's experience and expertise, having a strong policy in place helps set up organizations for greater support and success. True CISM policies allow for other staff in the organization to refer to best practice standards when implementing and dispatching CISM peer members for staff. This also helps normalize the process for those that do not fully understand the benefits of having staff on hand with the ability to ventilate and process the critical incident experienced.

Matheson et al. (2016) aimed to explore the characteristics and barriers to resilience in caregivers working in challenging environments. The authors took an inductive qualitative

approach, which was important to allow the participants to voice their thoughts, experiences and concerns. This aided the understanding of the internal personal motivators that allowed them to be more resilient. Lee et al. (2015) also found that some of the best strategies to promote resilience in healthcare staff were in-person discussions, social events outside the hospital, and breaks from stressful situations. A Code Lavender program that provides a Zen/Tranquility room or separate space to conduct distress-defusing sessions aligns with the goals of having a confidential safe space available.

Magitbay et al. (2017) assessed the efficacy of blended learning to decrease stress and burnout among nurses through use of the Stress Management and Resiliency Training (SMART) program. Their results yielded positive short and long-term results (8- and 24-week outcomes). Their results shed light on the efficacy of blended learning and reaching more recipients. For future Code Lavender program implementations, using online, in person and flipped classroom models may improve understanding of mental readiness programs.

Geun and Kang (2017) investigated the relationship between type D personality and PTSD symptoms of intensive care unit nurses and the mediating effect of resilience on this relationship. They were able to correlate the traits of type D personalities and PTSD. Type D personalities tend to bottle up their emotions and are usually quieter than the Type A personality counterpart (Clarke, 2019). Jeung, Kim, & Chang (2018) found that Type A personalities were more prone to adverse health outcomes but were not able to discern why. The authors stressed the importance of organizations assisting with stress management programs and personnel behavior modifications. The ability to reach out to those in emotional crisis will enable peer teams to provide support and help staff navigate professional resources if needed.

Previously noted, Vyas et al. (2016) estimated the protective role of resilience against the possible development of physical and mental health problems in active duty service members. They also attempted to quantify the reduced risks of developing PTSD, depression, and comorbid PTSD and depression for every unit increase in resilience. This study provided great insight into characteristics of resilience. Knowing characteristics of resilient workers, may enable leaders to build effective teams. In assessing nurses, Brown, Whichello, and Price (2018) found that bullying, increased workload, moral distress, and poor support systems were the biggest culprits in promoting nurse burnout. Perhaps we need to embrace more ‘Ubuntu’ African philosophies into North American cultures. Increasing civility and humanitarian principles in our interactions with our peers will be vital for addressing these issues.

Available Knowledge

There is a paucity of evidence describing the effects of distress defusings/debriefings on organizational resilience. There is a plethora of literature identifying the factors which contribute to resilient organizations and individuals. Research also supports the use of critical incident stress management programs. Much of the research recommends a baseline peer support program that is customized to the unique needs of each organization.

Search engines used in developing this pilot project were primarily from Capella University’s summon search. Much of the topic’s research came from the field of cognitive psychology and not from nursing or medical journals. An initial search returned over 50,000 results. The search was then narrowed using the following keywords: *resilience, distress defusings, peer support, critical incident stress management, healthcare, emergency departments, Code Lavender* and *first responders*. The search was filtered to include literature from 2016 to present day 2019. The search was further narrowed to include only full-text, peer-

reviewed journal articles. This gave a final result of 50 articles, of which twenty were used for this literature review. Much of the shared research is insightful and supportive to this pilot project. The themes and methodologies will be discussed.

Search results were not limited to nursing and included literature from other professions including physicians, certified registered nurse anesthetists and other health disciplines. The armed forces have significantly supported the scientific literature regarding resilience, debriefings, and defusings. Those contributions were used in the development of this project. Other professions such as schoolteachers or other public entities were excluded, as they do not perform patient care.

The DNP researcher pulled varying research that helped shape the Code Lavender distress defusing program for the chosen research site. It was found that Joyce et al., (2016) performed a systematic meta-review of workplace interventions for common mental disorders. “Of the 5179 articles identified, 140 studies met the inclusion criteria, of which 20 were deemed to be of moderate or high quality” (p. 683). Distress defusings are significant in that “workplaces can utilize to aid in the prevention of common mental illness, as well as facilitating the recovery of employees diagnosed with depression and/or anxiety” (p. 683). These findings are helpful in formulating best practices for the distress defusing team. Conversely, some anecdotal conversations with other health care providers revealed that some providers do not feel positively about using defusing or debriefings after a critical incident. Defusings and debriefings are not for everyone. Strong CISM team leaders play an important role in that respect, in that they can help identify the ideal candidates for such resources. Code Lavender can be used in hospitals to alert peer response team members to those staff members in need of support. The response was targeted – the Code Lavender team would only be dispatched when requested from

caregiver staff, as opposed to a standardized dispatch like the one sent for the operational debriefings after every critical incident. The critical incident is defined by those that need defusing or debriefing. A critical incident is subjective and based on the perceptions of each caregiver. What might be perceived as a critical incident to one staff member might be perceived differently by another. It was assumed that caregiver staff would embrace the distress defusing program into their workplace culture. As far as the DNP researcher is aware, the pilot organization has never had anything like this program implemented before. It is evident as discussed with the organization's Chief Nursing Officer that burnout does exist within the organization's health care system. There are three symptoms of burnout according to Sexton as cited by Arnold (2018). These include emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment. Emotional exhaustion is the most frequent symptom found within caregiver burnout. Addressing common symptoms of burnout like emotional exhaustion is a task that falls on more than just the shoulders of the individual experiencing burnout. Organizational leadership plays a large role in being able to boost staff resilience. It has been identified that "institutional culture, lack of trained facilitators, and the perception of inadequate time likely contribute to the problem[s]" (Osta & et al, 2019, p. 2) identified above. It was also noted that Matheson et al. (2016) conducted a focus group building upon previous literature review knowledge. The authors did an inductive thematic analysis on a prospective model that could be used to address resilience. The model focused on personal and workplace characteristics, social networks, and challenges to developing resilience. This supports the theme that burnout is not a personal attitude problem, but a workplace problem (Sexton, 2018).

While not scientifically valid, a poll was conducted via social media asking the following question: “As a healthcare provider (hospital/prehospital), what resources would you use more after a critical incident? A critical incident is anything you define as affecting your mental wellbeing. A critical incident affects your emotional balance and has been known to affect the quality of care in patients at times” (personal Facebook poll, November 25, 2018). Sixty-eight percent (n=13) preferred alone time and thirty-two percent (n=6) indicated a preference for distress debriefings (Appendix C). This data conflicts with some of the research that has indicated defusing and debriefings to be beneficial or preferred. This project helped discern if and how caregivers will embrace distress defusings. It is possible that those who responded to the poll as not preferring distress defusing might have been mandated to do so against their will in the past or did not have a properly trained facilitator, but this remains to be validated.

Wahlberg, Nirenberg, and Capezuti (2016) researched distress, coping, and self-efficacy in inpatient oncology nurses. Nurses were recruited through an oncology nursing society, social media, local meetings, and colleges. The researchers used the Nurse Distress Thermometer (NDT) questionnaire and the Occupational Coping Self-Efficacy Questionnaire for Nurses to formulate a summary of nurse perceptions. Using descriptive statistics, the authors found that study participants experienced a high level of distress, however those that reported higher self-efficacy scores reported less distress. These findings are important to understand in the DNP researchers’ project because they allow for a greater understanding of the inner psychological workings of some participants. Self-efficacy is an attribute of resilience. Self-efficacy can be viewed as one’s ability to succeed (Positive Psychology Program, 2019). An understanding of the function of self-efficacy will support the distress-defusing program by ensuring resources to promote self-coping are available for staff post-critical-incident. Ahlin et al. (2015) also

supported that caregiver assistance in times of stress may help buffer against burnout. The authors recommended further research to identify which type of support is most beneficial to staff. Debriefings or defusing may offer the support that caregivers need. It may also be beneficial to share with caregivers the symptoms they might experience after a critical incident and emphasize that these symptoms are typical. The DNP researcher used the professional quality of life scale tool to attempt to gain insight into the levels of compassion fatigue, burnout and secondary traumatic stress. Surprisingly, those that volunteered to take the pre and post surveys had average scores. See the results section for further insight and analysis.

Taylor et al. (2018) questioned if Schwartz Rounds support healthcare staff with emotional challenges at work, and how they might compare with other interventions aimed at providing similar support. Schwartz Rounds are a multidisciplinary forum for staff to discuss difficult emotional situations that arise when caring for patients (Schwartz Center, 2018). The authors found that the effectiveness of all psychological first aid interventions remains limited and that more research is needed. However, it was noted that a systems approach is crucial to benefit the staff and the organization. These findings highlight that there is no definitive answer to which type of resilience-building program is most beneficial. Stakeholder participation in the implementation of the Code Lavender program and evaluation of the program will be essential for any future research. What is clear, however, is that some kind of caregiver support program is essential to providing the highest quality of care for patients. Lack of caregiver support programs can contribute to poor patient safety outcomes, such as medication errors (Hall, Johnson, Watt, Tsipa, & Daryl, 2016). This research was noted a decade ago when Fahrenkopf et al. (2008) noticed that many residents met depression and burnout criteria, which placed them at a 6.2 times greater chance of making a medication error.

Geun and Kang (2017) performed their cross-sectional survey on the relationship between type D (distressed) personalities and stress and resilience. The authors supported the concept that Type D personalities have a higher tendency for post-traumatic stress disorder (PTSD).

Personality characteristics play a role in how much resilience an individual may have. According to Rushton, Batcheller, Schroeder, & Donohue (2015), there is a negative correlation between burnout and resilience in nurses who work in high intensity units. Those with higher resilience have less burnout. Promoting resilience can lower emotional exhaustion (Rushton et al., 2015). Foumani, Salehi, and Babakhani (2015) also found in their research “correlations of resilience with Neuroticism, Extraversion, and Flexibility, but not with agreeableness and conscientiousness” (p. 119). When working with teams, it is perhaps important to consider personality traits on high acuity units. This may support implementation of a Code Lavender program that focuses on distress defusings, as assisting caregivers in processing their emotions post critical events may be beneficial. When exploring characteristics of resilient health care professionals, one of the common themes that emerges across the literature is the presence of *jeu d’esprit*, which embraces flexibility and creativity (Tubbert, 2016). This is also supported in the Workplace Resilience Instrument which identifies *bricolage* (having the ability to use tools to problem solve in a creative way) among health care providers (Mallak & Yildiz, 2016). Other characteristics include decisive action and making decisions without necessary context. Intensive care and emergency nurses are frequently faced with critical situations; tenacity, interpersonal connectedness, honesty, self-control, and optimism are some of the common characteristics found in resilient caregivers.

Vyas et al. (2016) conducted a retrospective cohort study on the role of

psychological resilience in protecting against the development of PTSD and depression. The study also attempted to estimate the percent reductions in incidences of PTSD and depression and the cost savings achieved by increasing resilience. The use of defusings allows for staff to process the event and their emotions if needed. Does this process decrease chances of developing post-traumatic stress? This question will need further exploration in more long-term research projects.

Rationale

When dealing with human emotions, it is important to view the person from a holistic standpoint. The DNP researcher appreciates Martha Roger's theory of Unitary Human Beings (HubPages Inc, 2019). Roger's Science of Unitary Human Beings addresses the scientific nature of nursing, as well as the art of humanistic approaches. Roger's theory proposes nursing burnout may contribute to the stress of the patients being served. Burnout has a cascading effect on patients as supported by Dall'Ora, Griffiths, and Ball (2015). Some attributes of Roger's theory uses approaches to patient care, but in fact this methodology can be applied to burnout occurring in health care staff. Martha Roger's Theory of Unitary Human beings takes holistic approach when working with people. The distress defusings or debriefings that occur with staff embrace the emotional components that happen post critical events. In one of the phases, the facilitator talks about signs and symptoms that the individual may experience post event. These symptoms are explored from a physical, emotional, psychological, spiritual and behavioral. This embraces the holistic approach of Martha's Rogers theory.

The literature does not identify one single factor that improves resilience among health care staff; there are many factors. The Code Lavender program supports a multidimensional approach to resilience with distress defusings. Caregivers were given opportunities and tools to

help them manage the stress of critical incidents through ventilating and processing the events that occurred. Strict confidentiality presented challenges when trying to collect data from distress defusings or debriefings. This is due to having the ethical duty to keep peer defusings private and confidential, with respect to those participating. It challenging enough to reach out and ask for help, it would be detrimental to break trust of the recipients.

The study variables for this pilot project are as follows. The independent variables are the actual defusings/debriefings being conducted. The dependent variable is the reduction in burnout and perceived improved resilience among staff. There are always confounding variables, in this case the willingness of staff to participate in distress defusings. The main uncontrolled variable was the low number of critical events that occurred on the critical care unit during the implementation of the pilot program. Of course, in practice, this is not a negative thing – no one ever wants staff to experience traumatic events in their line of work. However, it made it more difficult to analyze the effects of the Code Lavender program on the staff as a whole when there were limited opportunities to collect insight.

It was assumed leadership was supportive of this project and encouraged staff to utilize the distress defusings. Other assumptions included that staff would see this project's tools as a valuable resource and utilize the Code Lavender program and the mental readiness tool (see Appendix B). It is also assumed that the hospital would not encounter any Acts of God that might disable the organization.

Specific Aims

Nurses are the largest health care workforce. The problem is when there is staff turnover, this could mean fewer open beds and fewer skilled providers to care for patients. Kovner, Brewer, Fatehi, & Jun (2014) noted in their research that total yearly organizational costs for

new RN turnover are 1.4 to \$2.1 billion. There is also evidence that this turnover affects organizational performance and patient outcomes (Kovner & et al., 2014). These issues are not isolated to the researchers' project site – they exist across the nation. National turnover rates sit at 19.1% (Nursing Solutions, 2019). The purpose of this pilot project is to shed light on the importance of promoting staff resilience via utilizing a Code Lavender program that focuses on distress defusings post critical events.

The goal of this pilot project was to initiate the organization's momentum in embracing greater use of their newly formed critical incident stress management team. Hospital organizations identify greatly with codes that signify importance of needed resources, such as "code blue." Across healthcare culture, "code blue" is known to be a call to bring all resources on deck for a patient that is in respiratory and/or cardiac arrest. Why not have an equivalent code for staff that are in need in psychological first aid? The main difference is that a Code Lavender is not announced over a hospital-wide loudspeaker, but instead initiates the process of enabling peer members and employee resources necessary to process a critical event.

Understanding this difference led the researcher to the following research question: Among hospital critical care staff in a trauma intensive care unit (P), will a "distress defusing program" (I) compared to no stress reduction program, improve workplace resilience within an (O) eight-week period (T)? The goal was to motivate staff in the critical care unit to identify and normalize the use of dispatching a Code Lavender to facilitate a defusing or debriefing led by trained CISM peers.

Methods

Due to the ethical necessity of respecting high confidentiality parameters of individuals receiving the benefits of Code Lavender defusings/debriefings, the research did not directly seek

out those that used the peer defusing sessions. The goal was to get staff to use their CISM resource. The researcher opted to take a qualitative indirect approach. The researcher used survey questionnaire methods to receive a sense of the critical care unit's response to critical events. There was an anonymous survey sent out pre-Code-Lavender pilot program implementation and post-Code-Lavender pilot program completion. This allowed the staff to choose to participate and share their valuable anonymous insight on workplace resilience, compassion satisfaction, burnout and secondary victim stress.

Context

The organization at which the DNP researcher piloted the Code Lavender project was in the western US hemisphere. It is a large level-two trauma center that also serves bordering state needs. It is not for profit and has served over 115,000 patients through its emergency departments. The structure at the organization is very typical of any large hospital organization. On the top tier is the President/CEO who has reporting entities such as Senior Vice President, Chief Financial Officer, Executive Vice President, Chief Operating Officer, and Chief Administrative Officer. All these positions have multiple departments or entities reporting to them. The researcher worked closely with the Chief Nursing Officer and leadership within that organizational structure to implement the Code Lavender pilot project. The researcher was not an employee of the organization; therefore, it took time to understand the workplace culture and possible barriers to implementing an effective Code Lavender program. From a leadership standpoint, the culture was very supportive of reality-based leadership styles. The researcher's observations were largely positive, in that leaders and managers appeared to be truly invested in doing the best for their staff and always managed each other up. The leadership and management team were very supportive of the researcher during project implementation. The

biggest barrier the researcher found was not being connected with critical care unit staff from an employee standpoint. Being an outsider gives limited access, therefore necessitating reliance on others to disseminate information, such as the surveys or education on mental readiness tools. It is unknown the depth or thoroughness of information passed on to staff. This could also be reflected in the engagement results of the pre and post-survey. Another barrier is that the CISM team did not have the support to be on call 24/7 due to budget constraints and memorandum of agreements with employee unions. It is unclear if missed opportunities occurred for staff defusing/debriefings due to not having the CISM team available 24/7. Defusings work best if conducted within eight hours of the critical incident (International Critical Stress Foundation, n.d.).

When the researcher initially approached the Chief Nursing Officer (CNO) of the organization, it was evident the CNO had a great interest in and support of the proposed project. The researcher was not an employee of the organization, therefore was reliant on support from the CNO and leadership. The first part of the research year involved fieldwork in addressing areas of opportunity and team unit strengths. With support from the CNO and the critical care unit manager and director, it was agreed that the critical care unit would be the ideal pilot unit. This unit had a history of experiencing many critical incidents but was also a unit that had won beacon awards in the past. The presence of supportive leadership and stakeholders was key to ensuring success in the project's implementation. There was also a component that was reliant on engaged CISM peer team members and their support to bolster the project. The researcher determined there was sufficient organizational support from leadership and stakeholders.

Regardless of the low number of actual defusings conducted on the pilot unit, the organization benefited from the project as a whole. While conducting fieldwork, the researcher

assisted the CISM team with building standards of work for dispatching the team, helping to start constructing strong CISM policies. The researcher supported the CISM peer team by having the professional CISM team she served on assist in mentoring the organization's CISM team.

Training sessions were implemented that included practicing role-playing scenarios and collaboration with ICISF (International Critical Incident Stress Foundation), and crisis-response-approved trainings occurred with a focus on using best practices in defusings, which reflected an embracing of the SAFER model (See Appendix D). The researcher also assisted in facilitating debriefings outside the pilot unit in order to help direct and share knowledge to build the organization's CISM team. The organization's team was also newly implemented into the new code assault response team to address workplace violence prevention initiatives. If anything, the presence of the Code Lavender distress defusing project has allowed the organization to obtain a baseline of data, which will help to foster successes and improve on opportunities identified throughout implementation of the project. It has also allowed leaders to take a world view and see the need to spread resilience training into nursing programs. Another span of opportunity that the DNP researcher identified was multiple requests to speak at symposiums, seminars, and conferences addressing resilience building and program implementations. The DNP researcher embraced all speaking/educating opportunities with great feedback and success.

Interventions

The pilot project design was set up to utilize the organization's current CISM peer team to conduct Code Lavenders with an emphasis on distress defusings. Code Lavenders were not announced over public hospital announcement systems like regular patient-related codes. Instead, Code Lavender was used as semantics to identify the need for a critical incident defusing or debriefing. Traditionally, defusings and debriefings are facilitated in confidential areas where

those participating can feel safe to process the critical incident they experienced. The choice was made to have a tranquility room built on the unit to help foster this process in the future. At the time of implementation, the tranquility room was not completed. Therefore, the CISM team members would set up another private room to conduct any defusing or debriefings for staff.

The mental readiness tool was provided on a laminated index card that was distributed in staff mailboxes to aid in initiating the conversation; facilitating staff in reaching out to one another. For instance, if a staff member came up to another employee or leadership person and stated they were in “red” (see Appendix B), that would indicate acute psychological injury and signal the need for the employee or leadership individual to provide immediate resource interventions for the staff member. This communication tool enables staff to share the need for help without revealing all the personal details that come with mental trauma injury. Mental trauma is still highly stigmatized; this tool helps decrease the stigma and normalize the process of asking for help. Once the need for psychological first aid is identified, the staff member or leader was able to reach out to the CISM team leader and start the process of setting up a Code Lavender distress defusing, which allows the facilitator to triage if the person(s) affected by the critical incident needs a further in-depth debriefing or employee assistance resources such as professional counseling.

When identifying practice recommendations, the researcher identified the site as a very large urban hospital organization that is part of their own privately owned health system that is experiencing staff turnover from nursing, allied health and physicians. The organization has also experienced the unfortunate loss of life of staff due to extenuating circumstances such as suicides and homicides. The researcher held in-person meetings and exchanged email correspondence with the Chief Nursing Officer regarding building staff resilience in the critical care or acute care

units. The CNO supported the project and implementation efforts with unit managers, directors, and staff. Executive sponsorship is crucial to the future success of this project.

Research by Mayer and Hamilton (2018) on critical incidents in health care confirmed that critical incidents occur in all health care settings and must be managed and addressed to enhance recovery of those working so they can return to the workplace. Qualitative methods were used to collect self-identified critical incidents from 11 different healthcare providers. The authors used interviews and literature reviews to support their findings. An obvious theme was “effective navigational strategies are needed to enhance recovery” (p. 234) so staff can return to work. One of these strategies is offering healthcare providers a distress-defusing or time to decompress. These findings support the focus of the researcher's PICOT statement.

It will be very important for all stakeholders to understand the three main pillars of crisis intervention: stabilization of stress, mitigating acute signs of distress, and restoration of adaptive mechanisms (Wuthnow, Elwell, Quillen, & Ciancaglione, 2016). These pillars support building resilience among health care providers.

The inclusion criteria were to include any staff members that had any patient contact in the critical care unit. Participants were not limited to nursing, although that was the main response and engagement means of this project. Exclusion criteria were other units' debriefings or defusings, which were not included in this research. Comparative data tracking was shared with the DNP researcher regarding the number of regular defusings/debriefings which were occurring outside the pilot unit.

The overall role of the DNP researcher and practice change manager was to lead and help facilitate appropriate supportive resources for the current CISM team. The DNP learner arranged collaborative trainings and mentorship with locally established CISM teams. These relationships

will be sustained to help build a regional platform and collaboration among other CISM teams. This is important to have in place in case the CISM teams become “contaminated” or “overwhelmed” with an extreme critical event that they cannot handle themselves, they may need to pull in outside resources for support of their CISM team in the future.

In hindsight, the researcher would have included at least one more unit in this pilot project to increase result variability, such as the emergency room or operating room. According to the comparative data, these units were experiencing higher critical incidents during the pilot project implementation period as compared to the pilot unit. Practice recommendations for the future are to ensure leadership, managers, supervisors, and unit educators are perfectly clear on the differences between operational debriefings and critical incident stress management debriefings. Feedback received from CISM team members included that there was confusion from units outside the pilot unit that the CISM team’s work was operational. The DNP researcher and CISM team leader took that opportunity to build and disseminate an educational infographic to clarify the difference between the two debriefings (see Appendix A). Another practice recommendation would be to ensure the organization has the budget and support to allow for CISM team members to be on call and available 24/7. It is unclear if there were missed opportunities for Code Lavender distress defusings due to CISM team members not having the ability to be available around the clock. There was no way to track this factor for this project. Health care is a 24/7 business and CISM teams should have the ability to reflect organizational business time models. In examining employee assistance resources, it was clear that it is quite common that if a staff member calls on a Friday afternoon to set up a time to speak to a trained counselor, they will not receive a callback until Monday of the following week, therefore leaving the staff member to attempt to process the event on their own over the weekend, which can be

detrimental to the staff member's wellbeing. Having a 24/7 CISM team would help bridge that gap; if anything, this supports the need to have 24/7 coverage and availability.

Intervention

Any staff member on the unit recognizing the need for assistance with mental readiness could initiate the Code Lavender functions. The staff on the piloted critical care unit appeared to have great rapport with their unit manager and had no major barriers in reaching out to her. It was repeatedly stressed to staff that anyone could request a Code Lavender. In the off hours, staff could reach out to the organization's Nursing Administration Manager on call. They had the ability to reach out directly to the CISM team lead. At the time of project implementation, it was not approved to have the CISM teams 'on call' and available 24/7. Historically speaking, well-developed experienced teams have 24/7 coverage, which increases accessibility to CISM staff regardless of the time of day. This is an important point to consider when building future teams.

Once the CISM team received the phone call indicating the need for a defusing or debriefing, they would ask the caller how many staff were affected and inquire as to possible times to conduct the defusing or debriefing. The initial conversations between the DNP researcher and the pilot units' leadership resulted in the decision that if a critical event occurred and the staff needed a defusing immediately, their patient assignment would be covered by another capable staff member.

Once a defusing (which can be a peer-to-peer or group defusing) has occurred, the CISM members are able to decipher if a full debriefing is needed. This allows the CISM peer members to utilize the defusings or debriefings to emotionally triage those affected by the incident by their level of mental readiness, using the mental readiness tool introduced in this manuscript

(Appendix B). During the defusing/debriefing, the CISM peer member takes a moment to normalize the reactions or symptoms experienced by the affected individual. The CISM peer member also looks for opportunities to prepare the affected individual for success in returning to work by offering mental health specialty resources or connecting them with the confidential resources of the employee assistance program offered by the organization.

Intervention One: Code Lavender. A Code Lavender is designed to support staff that experience some sort of distressing moment while on shift (Emergency nurses and Code Lavender, 2018). A Code Lavender team is a supportive tool that will assist staff in restoring calmness, feeling supported and connecting them with employee assistance programs if warranted. A Code Lavender is the vernacular used to initiate the distress defusings; a method of communicating that psychological first aid is needed. It is like calling a “Code Blue” overhead; everyone knows a patient needs resuscitation. The difference is that the Code Lavender will not be broadcasted hospital-wide. Instead, it will be shared with the peer contact team leaders via a designated phone number. The Code Lavender offers affected staff fifteen to thirty minutes to themselves or the option to attend a distress defusing. The staff may go for a walk, practice deep breathing exercises, use some time to reflect and process what they just experienced, or have a facilitated peer defusing session.

Intervention Two: Distress Defusings. Distress defusings focus on caregivers who are working with patients or their families during a critical incident (Appleton, Nelson, & Wedlund, 2018). The distress defusing occurs in three phases: introduction, exploration, and information. A distress defusing would be facilitated by a minimum of two peer support staff from the hospital who would meet with the caregiver staff after a critical incident. If the staff have a

patient assignment or responsibility, they will be relieved by a charge nurse, administrator, supervisor, or float staff. The distress defusing will be conducted in a private room.

In the introduction phase, the peer facilitators will introduce themselves to the participants and explain what to expect for the next fifteen to thirty minutes. The peer facilitators will explain that the distress defusing is completely confidential; participants do not have to speak if they do not want to. If the participants choose to speak, it is important for participants to relate the critical incident to their personal experiences.

The exploration phase will entail the peer facilitator asking questions such as: What happened? What were your most prominent thoughts? What was the worst part of the event from your perspective? What are some of the symptoms you may be experiencing?

During the information phase, the peer facilitators will provide information from an educating perspective. This can include identifying typical responses to the extraordinary circumstances, noting what to expect, helping to address concerns, summarizing the event, and helping to establish a plan of action if the participants need further professional assistance or access to their employee assistance program. The peer facilitators will give a final statement and ensure confidentiality of the information that was shared. See (appendix E) for a detailed breakdown of defusing steps and how they are wrapped up.

Intervention Three: Stress Continuum Model of Communication. It is leadership's responsibility to have operational stress control (Department of Defense, n.d). In health care environments, stress is inevitable, and leaders must be equipped to gauge the stress levels occurring for staff. The most challenging part is communicating the levels of stress. Implementing the Stress Continuum Model for staff, managers, and directors will help to overcome this challenge. The model is used in military settings, the American Red Cross, and

first responders. The model uses four colors: green, yellow, orange, and red. As the colors progress, they indicate an increased risk of psychological injury (See Appendix B). Leaders or peers can check in with staff to discern what level of stress they are experiencing at the beginning, middle or end of a shift. It is also an effective tool to use after a critical incident to screen psychological injury without the individual who experienced the psychological injury having to immediately reveal all the details of their experience (Institute of Medicine, 2014).

The overall role of the DNP researcher was to be a support to the CISM team. The DNP helped assist building standard work products, served as a subject matter expert in building strong policies, and acted as an educator and collaborator with other CISM teams in the community. The DNP researcher served as a mentor those that wanted to up their skills in peer support principles. The DNP researcher also served as a liaison to leadership to communicate any wants or needs for the CISM team – for example, having an official budget cost center to reflect the needs of the CISM team.

Implementing any type of stress management program is an all-hands-on-deck approach. Top-down leadership support for staff is the major factor affecting the success of these types of programs. It was evident that there needs to be more education from leadership on the true value of defusings and debriefings due to misunderstandings of operational debriefings versus critical incident stress debriefings (See appendix A for comparison). In the researcher's opinion, there was sufficient support in the pilot unit to implement a strong Code Lavender program; the challenge was ensuring that the Code Lavender program was at the forefront of daily huddles and conversations with staff. It is unclear and unknown if this occurred due to the researcher lacking regular access to the unit in order to interact with staff. Regardless, it was a valuable learning opportunity.

Study of the Interventions

Despite of the low number of actual distress defusings on the pilot unit during the program implementation (it is not possible to predict the occurrences of critical incidents), the researcher interviewed the unit manager regarding the implementation of Code Lavender and the use of the mental readiness tool. The unit manager shared that she did see an increase in staff reaching out and talking openly regarding the difficult cases. This indicates that implementing this pilot project achieved a decrease in the stigma surrounding reaching out and asking for help. Feedback received from staff included that they were excited to have the tranquility room installed on their unit. Even though this part of the project was not implemented in the pilot time frame, the feedback is that the tranquility room will commence being built in October 2019. The impact of this project has had ripple effects on the organization as a whole. Leadership has embedded the CISM team to part of the process on any of the code assault responses. This is a positive use of resources to help support staff's mental readiness.

In evaluating the pilot project, in hindsight it would have been more conducive to include multiple units in this research such as the emergency department and operating room units. Another opportunity would have been for the researcher to run the pilot project over twelve weeks versus eight weeks to allow more time for the program to run. Considering that construction on the tranquility room would not start until October 2019, this may have also encouraged more use of the Code Lavender distress defusing for the staff. Having a conducive room on the unit may have helped encourage others to reach out more and utilize the CISM resources.

In addition to knowledge of the stigma surrounding those struggling with their mental health, this research has also opened the researcher's eyes to the extent to which institutions do

not have full understanding of and insight into the magnitude of what is necessary to invoke positive change. This insight was gained outside the study via interactions with other units, peer teams and other organizations. Hospital organizations do not understand best practices for effective peer teams, and do not understand the differences between operational debriefings and critical incident stress debriefings. This is harmful to building mental readiness because operational debriefings are geared to fact finding and not focused on helping those cope with what critical event just occurred. Even though operational debriefings are meant to improve systems and processes, they can sometimes feel transactional. Understanding this has allowed the researcher's study site to embrace this change and provide the necessary information for staff to understand the difference. This is one major barrier that, if dismantled, will enable the sustainability of the Code Lavender peer support program.

The observed outcomes related to building the pilot Code Lavender peer support program were verbal discussions initiated among staff and with their unit manager. From a system point of view, this pilot project has supported the current peer team in becoming more robust and interconnected with regional resources. The pilot Code Lavender project also supported the value of the team functioning on budget, which they never had before. Additionally, the project supported the need to incorporate nursing administrators on call and other leadership stakeholders. Regardless of the relatively small numbers of staff engagement, this project has been a catalyst for great change in this organization. On a community level, other outcomes include the researcher being asked to speak about the research at conferences and serve on a steering committee in her own organization to help build a robust peer team. The researcher has also discovered that some liability insurance organizations are recognizing the importance of

providing mental health resources for staff, giving up to a 2% discount to organizations that embrace similar teams (personal communication, Sept 2019).

Due to the sensitive nature of ethics and the concern for keeping full confidentiality of defusing or debriefing sessions, the only data that was collected was that a defusing occurred for a pediatric critical incident, and that three people attended the defusing. This was the information shared with the researcher via the peer team leader. Therefore, evaluative measures were to assess the overall pulse of the critical care unit pre and post-implementation of the Code Lavender program. Two tools were used to measure the culture of the unit: the Workplace Resilience Instrument and the Professional Quality of Life Scale survey. Each participant was voluntary and anonymous. Therefore, it is not clear if the same participants participated pre and post survey, although the numbers are very similar in regard to respondents. See next sections for results.

Measures

The project design was based on conducting a pilot project in a chosen critical care unit. Each participant was voluntary, and identity was kept anonymous. If a staff member participated in a defusing, the CISM peer team lead only recorded the number of attendees in order to respect confidentiality standards of practice. The pre and post surveys were disseminated through email via a Survey Monkey platform, with guarantee of anonymity as well as clarification that participation was voluntary. Pre-survey data was collected before the start date of the Code Lavender pilot project (July 15th, 2019). The actual Code Lavender program ran availability for eight consecutive weeks, closing defusing data collection on September 6th, 2019. The post survey was handed out in paper format on September 16, 2019 at the unit staff meeting. This

change was implemented after conversations with the unit manager, who recommended conducting the post survey this way due to staff's low engagement with reading emails.

Data measures were based on a comparison of results populated into an Excel spreadsheet that Survey Monkey provides. See the results section for comparison on the pre and post results. Post results were entered into Survey Monkey to keep the Excel sheet formatting standardized.

The Workplace Resilience Instrument (WRI) and Professional Quality of Life (ProQOL) questions and scale system used were described in the previous sections (See Appendices F & G). The Workplace Resilience Instrument is set up with 20 questions on a Likert scale of 1-5. 1=not true at all and 5=true nearly all the time. The questions posed varying topics like improvising solutions or being able to solve difficult problems to questions that address autonomy and inquire if staff have access to the resources, they need to perform their jobs. These questions provide insight into active problem-solving skills, team efficacy, confidence and bricolage. The ProQOL questionnaire, also on a Likert scale, has 30 questions. 1=never and 5=very often. These questions include ones like if the individual is happy, if they get satisfaction from work and life, and questions that address internal thoughts. These parameters help provide insight into potential levels of exhibited compassion fatigue, burnout score and secondary traumatic stress. This questionnaire has the individual reflect back over the past 30 days; therefore, the scores are likely to change. For more details on both tools used, refer to Appendices F & G, which demonstrate the instruments. The researcher received permission to use both tools from the original tool developers. See Appendices H & I for a copy of approval letters.

The Workplace Resilience Instrument's four factors (active problem solving, team efficacy, confident sense-making, and bricolage) had an internal consistency of (alpha: 0.77-0.83; omega: 0.77-0.83.) (Mallak & Yildiz, 2016). "The inter-factor correlations of the WRI subscales are mostly moderate and significant at $p < 0.05$ " (p. 9).

In regard to the ProQOL measurement's average score for compassion satisfaction, the section of questions that cover compassion satisfaction has an average score of 50 (SD 10; alpha scale reliability .88). Burnout's average score on the burnout scale is 50 (SD 10; alpha scale reliability .75) and Secondary Traumatic Stress has an average score on this scale of 50 (SD 10; alpha scale reliability .81) (ProROQOL.org, 2018).

The only planned change that occurred in this pilot project was the administering of the post surveys in paper format. This was done on the recommendation of the unit manager, with anticipation that participation would increase, which it did not. The unit manager's concern was that staff may not have been reading the emails which prompted them to answer the online Survey Monkey versions of the surveys. Otherwise the pre and post surveys stayed consistent with the exception of adding two questions that addressed the mental readiness tools and overall feedback from participants post pilot code lavender program.

Analysis

The main goal of the pilot Code Lavender project was to have staff utilize the CISM team for distress defusings post critical incidents. Due to the ethical requirements of respecting strict confidentiality for those using the CISM team's services, the data collected in this project was aimed at obtaining a sense of the overall pulse of the unit culturally. The data collected pre and post the eight weeks of implementation was from two separate groups, therefore making the data nonparametric, treating the data like two separate groups. The researcher had a statistician run a

Kolmogorov–Smirnov test. This test conducts an evaluation to identify any significance in the data. The results came back insignificant; therefore, it is the responsibility of the researcher to avoid drawing any conclusions or making any assumptions about correlations of the data collected from the pre and post surveys. It would have been ideal to have the same pre and post participants' data and have data from those that were directly using the critical incident defusing sessions. However, given the advice from other psychological researchers, that would not have been ethically sound practice due to confidentiality constraints. Therefore, the DNP researcher chose to use the data only as an informational platform.

Ethical Considerations

Ethics in health care may be thought of as a set of rules, but in reality, it represents the conduct of a research study (Milton, 2019). The goal is to ensure there is moral compass in research and ways of protecting the public (Milton, 2019). Once one understands the premise of ethics in research, any research done can be seen as of value to the field of work in which one is focusing research.

When embracing ethics in research, it is imperative to consider being an ambassador for the research community. The factors to consider when doing research are practicing responsible ethical conduct while working with one's advising/mentorship committee, confidentiality, treatment of data collection, awareness of the consequences for mistakes, negligence, research misconduct awareness, respect for professional standards, human participant protections, how research results are shared and ensuring authorship and credit is properly given (National Academy of Sciences, 2019).

In the DNP researcher's pilot project, some of the key ethical standards considered are "(1) minimize risks; (2) reasonable benefit-risk ratio; (3) fair subject selection; (4) adequate

monitoring; (5) informed consent; (6) privacy and confidentiality; (7) conflicts of interest; (8) addressing vulnerabilities; and (9) human subjects training” (Ross, Loup, Nelson, Botkin, Kost, Smith, & Gehlert, 2010, p. 1). According to National Academy of Sciences (2019), there are three sets of obligations researchers should adhere to; 1) honor the trust colleagues have in the researcher 2) obligation to oneself and 3) obligation to serve the public. The DNP researcher is aware of these standards and held them to the highest level of expectation during implementation of the pilot project.

Any research that involves human participants carries potential risk to those participating. That is why it is important to have a process in place to determine the level of risk and the weighted benefits to society. Research benefits people and society as a whole (Resnik, 2018). The presence of an Institutional Review Board (IRB) guarantees an ethics review committee is involved in the research process, ensuring there are strong protections for human participants (Clapp, Gleason, & Joffe, 2017). The IRB is a strong network of committees geared toward ensuring participants’ safety. These networks are comprised of third parties such as the IRB of the United States and other ethics review boards (Clapp, Gleason, & Joffe, 2017). Not only do they examine participant risk, they also identify any conflicts of interest. The DNP researcher’s pilot project had only mild human participant risk, therefore it received exempt review approval from dual IRBs – one from the DNP’s academic institution and one from the project site’s IRB. The reason for this “mild” risk designation is that the project acts as a pilot study with quality improvement focus. All participants involved in the distress defusings were kept confidential according to CISM industry debriefing standards. Any data collected from survey tools were also deidentified, with no means of tracking data back to an individual that had participated in the Code Lavender distress defusing pilot program.

Regarding the issue of site permissions, the DNP researcher was fortunate enough to find an organization that supported the proposed pilot project. The DNP researcher's preceptor was the Chief Nursing Officer for the organization.

In any research project, it is important to be aware of any conflicts of interest. The DNP researcher specifically looked at the conflict of interest sections in the written research in order to understand the motivation behind the research. In the DNP researcher's pilot project, it does not appear that there are any conflicts of interest. The time spent at the organization was entirely voluntary time, and no entity paid to conduct the pilot project.

Disclosure is one strategy to mitigate conflict of interest (Bero, 2017). In reviewing the DNP researcher's project, it was determined that the tools which were used to gather data did not have any conflict of interest. The owners of the tools gave permission to use the tools and no financial gain was received to use the tools. If anything, the tool owners encouraged sharing the results upon completion of the project. The training of the peer support team was completed by volunteer peer members from an outside organization, who assisted with training. There was no financial gain for those educators entering the pilot site to train the newer peer team members. Therefore, the DNP researcher was confident that no conflicts of interest existed in this pilot project.

It is very important to be aware of bias in research; one of the most significant goals the researcher must consider is their ability to limit bias and be transparent about what bias exists (Bero, 2017). Therefore, it is important to share the processes and references used to develop the pilot project. The reader should be able to identify the sources and decide if the bias is collectively limited. Bero (2017) noted that "biased studies will have systematically different (either larger or smaller) effect estimates than studies that are not biased" (p. 1723). The DNP

researcher knows that personal bias is very low due to the fact that the researcher was not associated with the organization as an employee. The employees at the organization did not know the DNP researcher personally and had not had the opportunity to build a strong working relationship. This was one concern the DNP researcher had in setting up the pilot Code Lavender program. If the DNP researcher conducted the research at a site where she had many positive, close, pre-established relationships, that may have affected the participation numbers for the study. It is challenging enough that the project is a pilot quality improvement project, so the DNP researcher appreciates limiting bias and limitations to the research conducted.

The researcher had been vigilant in the interactions had at the practicum site. The researcher has been diligent in ensuring her interactions have been from an observational standpoint, working closely with leadership as opposed to mingling with the front-line staff who act as the participants of this project. This may be a challenge for some, as bias recognition includes an ability to both practice self-awareness and tap into emotional intelligence.

Being self-aware and emotionally intelligent is an important trait the DNP researcher must possess. Since the researcher believes in distress defusings and debriefings, it is also important to avoid extensively projecting those biases on participants. With that being said, it is also important to be aware that “the conclusions of research may be presented (i.e., spun) in a way to make the findings look more favorable or certain than they actually are” (Bero, 2017, p. 1723). The DNP researcher is also aware of this bias and ensured that the data is true, transparent and accurate in the reporting stages.

Results

Table 2 below is a snapshot of the side by side comparisons of the survey data that occurred over an eight-week period in which the Code Lavender pilot program was implemented

on the critical care unit. The values did not change significantly; the highlighted green shows a positive data trend direction, the red highlights the negative data trend direction. Because the research participants were voluntary, it was not possible to control for the variables of consistency which would come in having the same respondents to both the pre and post-surveys. This caused unreliable overall comparison conclusions. The DNP researcher did consult with a statistician to run the small sample data to see if any significance was indicated. Using a Python statistical analysis program, the statistician conducted a Kolmogorov-Smirnov test on the recommendation of the author from the WRI due to the nature of the samples being separate entities. This test is nonparametric. Even though this test is normally run with larger samples, it was chosen to see if there was any significance to the resulting data. Out of all the data tested, the only significant results that showed change were in the mean burnout results ($p=0.05$, t-test). One can ask if there is an explanation for why that would be the area where the effect is more apparent. Is this something that occurred during the eight weeks of the Code Lavender pilot project? The researcher can also ask if burnout something that people can more consistently rate? At this time, the pre and post data is inconclusive.

The survey tools were meant to get a sense of the culture of the unit where the Code Lavender pilot project was being implemented. The goal was to implement availability of defusings to staff with hopes of breaking down barriers or stigmas around asking for help. Additionally, it is unknown if only the staff who are truly engaged in the unit participated. The researcher questions if other staff who may be struggling emotionally would have taken the time to complete the surveys. This information is unknown and unclear. It is interesting to see the staff's active problem-solving skills increase; this trend may indicate that staff on this unit may need more emotional readiness support. During this pilot project's eight-week implementation

period, the team efficacy scores, team confident sense-making, and bricolage slightly decreased, but the data was concluded to be insignificant via running the SK Python statistical tests.

In conducting the pilot program, the researcher may ask if any changes have been occurring on the unit or ask what is happening to the participants outside of the work environment or an organization as a whole. The question of whether a Code Lavender program has the ability to create greater emotional awareness among the participants is an interesting one; perhaps having strong peer support teams has enabled these participants to be forthcoming with their feelings. With this type of data, the researcher can only speculate on the results.

Looking at the pre and post ProQOL results, the compassion satisfaction scores slightly decreased, the burnout scale slightly increased, and secondary traumatic stress scores slightly increased. As stated in the previous paragraph the data evaluated is not significant, one can only speculate. However, the researcher can share that in the community there have been multiple high-profile deaths (pediatrics) and staff suicides that have affected this organization.

Table 2.

Pre and Post Survey Results

| Section | Pre-Survey WRI N=18 | Pre-Survey PROQOL N=17 | Post Survey WRI N=18 | Post Survey PROQOL N=17 |
|-------------------------------|------------------------------------|---------------------------------------|-------------------------------------|----------------------------------------|
| Active Problem Solving | 4.01/5.0 | | 4.20/5 Increased | |
| Team Efficacy | 4.09/5.0 | | 3.90/5 | |

| | | | | |
|--------------------------------------------|----------|-------------|---------------------|-------------------------|
| | | | Decreased | |
| Team Confident Sense Making | 4.03/5.0 | | 3.97/5 Decreased | |
| Bricolage | 3.77/5 | | 3.70/5 Decreased | |
| Overall Score | 3.98/5 | | | 3.95/5 Decreased |
| Compassion Satisfaction | | 42.54 (Low) | | 40.8 (low) Decreased |
| Burnout Scale | | 20.1 (low) | | 23.8 (low) Increased |
| Secondary Traumatic Stress | | 20.8 (low) | | 24.6 (low) Increased |

Part 1 of the pre-survey had an engagement score of 16% (18/110 staff members). Of those who responded, 17 were RNs and one was a nursing aid. Eight participants had 1-5 years of experience, six had 6-10 years of experience, three had 11-15 years of experience and one participant had 16-20 years of experience. 16 of the 18 participants were female and 2 were

male. The first part of the survey looked at workplace resilience within the unit. The parameters were broken down into four measurements: active problem solving, team efficacy, confident sense-making and bricolage. The pre-survey results show an average of 4.01/5 points on the active problem-solving scale. The higher the number, the greater the impact. This shows that participants exhibit an average of 81% (n=18) active problem-solving strength within their team. The lowest value was 2.66/5 and the highest was 5/5. The average total overall team efficacy score was 4.09/5. This exhibits that the team has an 82% overall average of team efficacy on the unit. The lowest score average was 3/5 and the highest was 5/5. The average total for confident sense-making on the unit resulted in 4.03/5 which equals an 81% average. The lowest score noted was 3/5 and the highest was 5/5. The team scored 3.77/5 in bricolage, which indicates an overall 75% team cohesion. The lowest score result was 2.83/5 and the highest was 5/5. The workplace resilience instruments are also useful in getting a general picture of the unit's overall resilience rating, which is 3.98/5, resulting in an overall 80% resilience score. These values do not surprise the researcher, as it takes resilient individuals to work in critical care and emergency environments.

Part 2 engagement decreased to 12% from 16% (13/110 staff members vs 18/110 staff members). Of those participants, 12 were RNs and one was a nursing aid. Seven participants had 1-5 years of experience, and six had 6-10 years of experience. It appears as though the participants that had 11-15 years and 16-20 years of experience dropped out of the second part of the survey. The second part of the survey was completed by 12 females and 1 male. In reviewing the data for overall compassion satisfaction exhibited by the unit, the researcher found a result score of high (42.54); anything greater than 42 puts the participant in the high range for compassion satisfaction. The lowest score result was 35, indicating average compassion

satisfaction. The highest score result was 50. In reviewing the data for burnout levels, the researcher found that the unit average burnout score was 20.1, indicative of a low burnout rate. The highest result was 28, indicating an average burnout rate (between 23-41) on the unit. The lowest result was 13; anything below 22 indicates a low burnout rate. Reviewing the secondary traumatic stress levels on this unit revealed an average score of 20.8, which is indicative of low secondary traumatic stress levels (less than 22). The highest result was 33 (23-41) which is on the higher end of average secondary traumatic stress. No participants were identified as having a high secondary traumatic stress level (greater than 42), which is a good indicator that staff have both resilience and positive coping mechanisms in place.

In the post survey from the Part 1 WRI, there was a 16% voluntary engagement in the survey (n=18/110). With recommendation from the unit manager, the post surveys were administered on paper instead of via the online Survey Monkey platform. This was an effort to try to increase engagement, however, this did not change the engagement level of participants. There were also two extra questions added to the post survey. One question was added in order to evaluate the mental readiness tool distributed to staff by the unit manager. The question asked participants if they found the tool useful. Out of the 18 participants, 12 answered the question. With a 66% (n=12/18) participation rate with this question, the varying responses were as follows: 33% found the tool useful (n=4/12), 25% (n= 3/12) did not find it useful, and 42% (n=5/12) stated they did not receive the tool or did not know what the tool was. The second question added on the post survey was an open-ended question to allow participants to share any general feedback regarding resilience. Out of 18 participants, 2 wrote comments regarding the themes of ensuring work-life balance and checking in with one another. In the post survey, there was one nursing aid; the rest of the 17 participants were registered nurses. Four were male and

14 were female. Of those that participated, 12 participants had 1-5 years of healthcare experience, two had 6-10 years of healthcare experience, two had 11-15 years of nursing experience, one had 16-20 years of nursing experience, and one had greater than 30 years of healthcare experience. The average active problem-solving score on the post survey was 4.2/5 (84%). The lowest score was 2.7/5 and the highest score was 4.7/5 on the scale. The participants from an overall team unit in the post survey showed a high score regarding the ability to troubleshoot challenges. The average total on the overall team efficacy score was 3.9/5. This exhibits that the team has a 78% overall average of team efficacy on the unit. This was a decrease from the initial pre-survey of 82%. The lowest score average was 3.25/5 and the highest was 4.75/5. The confident sense-making post survey scores' average was 3.97/5, which translates to 79% confident sense-making for the unit as a whole. The lowest score was 3.6/5 and the highest score was 4.4/5. Overall mean bricolage post survey results scores were 3.7/5 which yields 74%. The lowest score was 2.7/5 and the highest score was 4.5/5. When tallying the overall workplace resilience score in the post survey, the score was 3.94/5.0, yielding a 79% overall workplace resilience score on the critical care unit according to the data given. The pre-survey overall workplace resilience score was 3.98/5 versus the post score of 3.94/5.

In Part 2 of the PROQOL post survey there was a 15.4% (17/110) participation rate. There appears to be one participant that did not complete part 2 for reasons unknown. There were 16 registered nurses that participated in Part 2 and one nursing aid. There were four male and 13 female participants. Of those, 11 had 1-5 years of healthcare experience, two had 6-10 years of healthcare experience, two had 11-15 years of health care experience, one had 16-20 years and one had more than 30 years of healthcare experience. Post survey compassion satisfaction scores results were 40.8, which signifies high compassion satisfaction levels. Post

burnout scores results were 23.8, which signifies low burnout among those who participated. Lastly, the post survey scores for secondary traumatic stress were 24.6, which signifies low secondary traumatic stress.

When the researcher first embarked on this pilot project, the main goal was to promote a focus on utilizing peer support teams more frequently and utilizing defusing protocols. The use of the peer team organization-wide was in the spotlight for the organization's stakeholders, so much so that they implemented the team to be part of the code assault team. They recognized the emotional trauma that occurs when violence against health care staff occurs. It is highly recommended that the community keep promoting and supporting the building of strong peer support teams. It is further recommended to build a larger sample of units where peer support defusings are provided to staff. It would be beneficial to see if the model of emotional readiness and resilience building is effective for busy health care institutions.

It would have been preferential to see more peer defusings initiated on the unit, however, it was not possible to predict the frequency of critical incidents on the pilot unit. Perhaps extending the project longer than the initial eight weeks may have provided more insight. Regardless, the researcher is pleased to see that the unit had a break from critical incidents occurring. Teams need to have respite and time to process previous critical incidents. Overall, outcomes were achieved regarding the unit initiating a Code Lavender defusing. The researcher would have liked to see a larger sample of participants in the pre and post surveys, but that is part of the implementation of pilot programs.

The researcher has had the opportunity to spend many hours of observation at the chosen research site. During the time spent there, the researcher observed the general culture of the organization being merely 'having a peer support team' evolve to now embedding the team

resources where mental readiness is necessary. The team leader is working with stakeholders to examine the peer team's long-term goals in regard to team sustainability. The organization's peer team has also collaborated with other community peer teams that practice and train to the same standards. At the time of this manuscript's writing, a new regional team vision was being developed by individuals from EMS and the local hospital teams. Together, they are stronger.

Aside from the collaboration of local peer teams, which was an unintended outcome of the pilot project, other unintended outcomes included the project acting as a support for the pilot unit to receive sponsorship to build a tranquility room. This room will serve as a place of respite for the staff, a designated area for peer teams to conduct defusings, and an area for staff to process their own critical events or take time for themselves. One other unintended consequence of the project is the DNP researcher gaining the opportunity to speak at local conferences and assist other organizations in building their peer support teams.

The only applicable missing data occurred when participants chose not to complete both Part 1 and Part 2 of the pre and post surveys. Those factors were beyond the control of the researcher. Ethically speaking, participants should always have the choice to discontinue their participation in any research endeavor.

The DNP researcher offers great appreciation and gratitude to the organizations' Chief Nursing Officer and leadership team for all their support in this Code Lavender initiative. They were very inclusive and welcoming to the researcher being on-site for a year. The peer support team and their team leaders also played a large part in facilitating this research project. The researcher could not have implemented the pilot project without their support and participation. Everyone that was part of this project reached out to help in any way they could in order to meet the outcomes. The main barrier the researcher experienced that may have impeded the project's

further success was the researcher not being an employee of the organization. Perhaps greater engagement may have occurred if staff knew the researcher or if there were more face-to-face interactions between the researcher and the participating staff. At the same time, the researcher wanted to respect the flow of the unit and limit bias as much as possible.

Post-implementation of the Code Lavender project, the researcher had conversations with the peer support team leader and some of the organizations director's regarding their viewpoints about the success of this project. It is unclear if the organization will continue using the verbiage of "Code Lavender." However, it is clear that supporting the needs of the peer support team is crucial and beneficial to the organization. Due to talks of longevity and succession of the peer support team, the researcher now feels confident that the program will continue to grow and provide staff with more accessibility and knowledge of peer support defusings and debriefings. The researcher also worked with the peer support team's leader to develop standards of work and, potentially, peer support program policies. The overall community, health care providers and first responders are participating in an important moment, creating positive changes and momentum to respond to the needs of peer support programs.

The biggest practice change from the Code Lavender project is in the organization's identified areas of opportunity, such as building a clearer initiation process for staff and utilizing the nursing administrators on call to be the funnel of team activations. These roles are available in the organization 24/7. The organization will also be implementing better education for the leaders to help them understand the difference between operational debriefings and critical incident stress debriefings. It is clear that these two processes need to be kept separate. Lastly, the organization is looking at how they can ensure there is sustainability for promoting the peer support team to their fullest potential.

The following are recommendations for building strong effective peer support teams:

1. Invest money upfront for training a peer team with best practices.
2. Consider using the Mitchell model when conducting defusings and debriefings.
3. Ensure leadership and stakeholders are supportive and onboard with peer support team initiatives.
4. When conducting defusings, ensure staff know that their patient assignments will be covered so they can truly concentrate on processing their critical incident.
5. Have the team available 24/7, even if that means having an on-call person. Employee assistance programs have their limitations on the weekends, so peer support teams need to be accessible at all times. Healthcare is a 24/7 business – why would one limit access to resources to only daylight hours?
6. Have a tool such as the mental readiness tool to gauge one's emotions and provide a method of communicating with one another in a non-judgmental way.
7. Peer teams need to train regularly and collaborate with other peer teams.
8. Educate staff organization-wide, perhaps introducing peer support teams at onboarding events.
9. Ensure staff can differentiate and understand operational debriefing and critical incident stress debriefings.
10. Always keep any peer support interactions confidential – interactions are not expected to be reported back to leadership/managers/directors.
11. Remember to keep defusings or debriefings in homogenous environments.
12. Keep talking and keep working to decrease the mental health stigma surrounding reaching out.

13. Take time to reach out to one another, do not depend on others in crisis to always reach out, because it doesn't always happen that way.
14. Think proactive, rather than reactive. In the long run, this will benefit all.
15. Provide vetted mental health clinicians trained in psychological trauma injury.

Discussion

Summary

The care that patients are receiving is truly only as good as the mental readiness of health care providers. It is highly recommended that organizations embrace and support in-house peer support team and programs. This Code Lavender pilot project was able to support this organization's initiative to build a stronger peer support team. Even with the small number of survey respondents, the unit manager and leader now have a baseline to refer to in regard to the emotional readiness that has occurred over the eight-week program implementation period. It would be very interesting to trend this data over the next 6-12 months. There was little feedback regarding if the mental readiness tool was an effective tool for staff, but more education and embracing the tool in everyday language may normalize communication among staff, team members and leaders about their mental readiness for a shift. Many organizations such as the Red Cross and Canadian military have had success with the mental readiness tool. It is a matter of embracing it in a hospital health care platform.

One of the key findings from the Code Lavender project was the definite need of a peer support program. An additional finding was an awareness that there may be some mental readiness changes occurring within the unit that may need attention. It will be interesting to follow up at a later date with the organization to see how the program has evolved.

The Code Lavender project's major strength is that it gave the organization much needed best practice foundations to catapult the CISM program in the right direction. There was a significant ripple effect to embed the CISM team into other organizational platforms such as the code assault response team or the workplace resilience team. The Code Lavender project also helped support the pilot unit in receiving a designated tranquility room for staff to use, which was funded by a donor grant. The project provided some baseline data of staff areas of strength and areas of opportunity for work in regard to building stronger and more resilient staff members. It aided in starting the conversation and helping to break down stigma surrounding reaching out for help, or the barriers to getting staff the necessary psychological resources to perform their jobs better, which ideally will help with improving patient outcomes.

Interpretation

Due to the nature of maintaining strict confidentiality and ethical principles that exist when dealing with the emotions of staff members, the researcher concluded that it is not ethical to make any conclusions from the data collected from the pre and post surveys. To make correlations on the metrics would be irresponsible. Therefore, it is safe to say that more research is needed to validate the correlation between having distress defusings for staff on critical care and the potential to improve workplace resilience. At this time there is no direct association between the Code Lavender program and improved workplace resilience.

Overall, the researcher holds the value of building strong, effective peer support teams at the same level as building health care providers' hard skills, whether that be the surgical skills of a surgeon or the critical thinking of a bedside provider. Having strong, resilient minds at the bedside is just as important as having strong bedside clinical skills. It is important that health

care shifts to the focus that one cannot be without the other. It is like the Ubuntu belief of humanity. I am, because we are.

Even though the pilot unit only had one defusing/debriefing during the eight-week study time, there were approximately nine critical incident events (personal communication, 2019) that the CISM peer team was called to outside of the study unit. The main indicators of events were related to pediatric deaths or events and unexpected demises of a patient or colleague. Looking outside of the main study units show the supportive need to have robust, trained peer teams. Other research conducted by Barton and Kahn (2019) noted “that attending to negative emotions may be equally important, at least in groups”(p. 1425) when trying to improve resilience. It is research like this that shows promise in the continued use of defusings and debriefings post critical events.

It is the belief of the researcher that the pilot Code Lavender project has made a great impact on the unit and the organization as whole. It will be important for the organization to follow up, keep tracking events and address staff needs in regard to emotional readiness. The return on investment will outweigh any costs that are incurred in building an effective peer support team. One life saved is worth every effort. Barton and Kahn (2019) noted in their research that having any reflective group work that allows for pauses or time outs allows for reflective change and the ability for groups to process together in times of adversity. It is human nature to want to be supported by others, another support to Ubuntu beliefs. Once organizations respect this natural theory, cultures can be changed, and mental health stigmas reduced.

In closing, the researcher’s anticipated outcomes had no expectations going into this joint research adventure, although the researcher anticipated greater survey engagement due to the large staff population associated with the unit.

When it comes to deciphering the costs of building an effective Code Lavender program with properly trained CISM peer members, there are no documented universal costs. The CISM team was already in place, therefore no extra costs occurred from that standpoint. The major cost considerations an organization should take into account are how many team members need basic peer support training, individual and group crisis intervention training, and suicide prevention training; costs associated with paying staff to facilitate a defusing or debriefing; and costs for staff members affected by a critical incident to attend a defusing or debriefing. Other associated costs are the training of leadership and continuing education for peer members. Due to the researcher's background in acting as an advanced peer support team member for a local professional law enforcement critical response team, the researcher's time with this pilot project was completely voluntary to her project and teaching engagements, and thus had no cost to the organization. The researcher was able to invite the organization's current peer team to the law enforcement critical response team's peer sponsored events for extra continuing education and sponsored peer training events. The only cost in that case was the organization paying staff to attend. It may appear that there are some upfront costs to building a properly vetted peer team, but it is the professional opinion of the researcher that those costs do not compare to the loss of life that occurs with line of duty deaths, suicides, post-traumatic stress and depression. For example, as recorded by military sectors, it costs the US \$3.1 billion USD to treat depression, PTSD, and suicide among military service members annually (Vyas et al., 2016). Front-loading effective peer teams outweighs the long-term cost of a lack of mental readiness for staff members.

Limitations

The most obvious limitation on the Code Lavender distress defusing project was the low number of distress defusings conducted during the pilot project implementation period. This was because the need for distress defusings was very low during the research period. This was not anticipated by the researcher due to contradictory information from leadership – namely, that the chosen units experiences higher than normal critical incidents as compared to other units in the organization. The other limitation was the lower engagement in filling out the pre and post surveys. Out of a possible 110 staff members, only 16%-18% engaged in the pre-survey and 16% & 18% in the post-survey. This is possibly due to having only the unit manager and director disseminate the survey and the researcher having very little interaction with the project participants. As this was an identified barrier, the researcher made numerous attempts to offer to come to staff meetings or huddles to provide clarity on the project if needed, instead of allowing staff to rely solely on emails or leadership for information. The researcher's status as an outsider (not an employee of the organization) could be seen as a barrier to achieving higher engagement numbers, although this is only speculation. The researcher did not have the opportunity or insight to observe the unit "culture," only to receive feedback from the surveys, which function as the sole insight into the unit's culture. The DNP researcher did make an effort to reach out to the unit manager and director; it was communicated that if needed, the DNP researcher was available to do unit walk-throughs and attend unit staff meetings. The invitation was never extended during the pilot research time.

Conclusions

The researcher serves as a critical response peer member on a local law enforcement team, therefore there may be bias in the support of the usefulness of organizations implementing

strong peer support teams that can be initiated like a Code Lavender. The researcher has witnessed first-hand the benefits of defusings and debriefings from an anecdotal standpoint. One factor the Emergency Medical Services and healthcare community cannot deny is the increased suicides occurring across the nation with those serving patients (Ahktar, 2019). At the point of writing, there needs to be a concerted effort to try different mental health resiliency building tactics. Inaction and awareness campaigns are not assisting the reduction of suicides in health care providers.

This project spread to outside first responder agencies and even the hospital organization that the researcher worked for. The DNP researcher was invited to be an expert on the steering committee as they build their own plan for a peer support caregiver program. The DNP researcher provided insight to her current place of employment, sharing lessons learned and aiding in moving towards setting up a successful debriefing program. It is the goal of the researcher to speak at national conferences on how to start, implement and evaluate effective Code Lavender defusing programs.

The theme encountered throughout the project of patients not receiving optimum care from those charged with their care has huge implications for the need of strong peer support teams. Other strong indicators include the national attention on decreasing suicides among health care responders. It was previously noted that negligence of staff supports is detrimental on many levels. Providing those that can respond to and support those individuals serving the patient population may have larger ripple effects that science can measure. We must rise to the occasion and do what is truly best for staff and patients.

Regarding the research site, the suggested next steps would be to ensure all leaders are informed and educated on the importance of using peer support teams to provide for those that

may be in need of defusings or debriefings. Nationally speaking, the researcher would like to see national patient safety goals embracing the importance of ensuring organizations have vetted mental readiness tools. This includes providing vetted mental health clinicians, privately or through the EAP service, and ensuring clinicians are trauma-informed and trained.

In closing, it is the intention that this research keeps the momentum going to improve on the resources of the study site and ripple out the lessons learned to others. Taking a national initiative and identifying what programs are working to improve mental resilience is imperative. May this momentum continue in those reading this manuscript. I challenge you to Ubuntu, I am, because you are.

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Appendix A

| <p>OPERATIONAL DEBRIEFING</p> | <p>VS</p> | <p>CRITICAL INCIDENT STRESS DEBRIEFING</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>A PROCESS THAT ALLOWS AN ORGANIZATION TO LEARN EXACTLY WHAT HAPPENED, IMPROVE RESULTS FOR FUTURE EVENTS, INCREASE READINESS FOR FUTURE SITUATIONS.</p> | <p> DEFINITION</p> | <p>THIS IS A SUPPORTIVE SMALL GROUP, CRISIS INTERVENTION RESOURCE. A TYPE OF PSYCHOLOGICAL FIRST AID TO HELP PROCESS PSYCHOLOGICAL INJURY.</p> |
| <p>HOT DEBRIEFS: OCCURS IMMEDIATELY AFTER THE EVENT TO ENSURE ALL FEEDBACK, OUTCOMES AND ACTIONS REQUIRED ARE OBTAINED BEFORE ANYONE LEAVES. FORMAL DEBRIEFS: PRE-ARRANGED TO ANALYZE THE ELEMENTS OF THE EVENT MORE CRITICALLY</p> | <p> TYPES</p> | <p><u>HELP PROCESS</u> THE EVENT AND NORMALIZE THE EMOTIONS/SYMPTOMS. DEFUSING: OCCURS <u>WITHIN 8 HRS</u> DEBRIEFING: OCCURS <u>WITHIN 48-72 HRS</u></p> |
| <p>A PATIENT IS BEING RESUSCITATED AND EQUIPMENT ISSUES OCCURRED- A HOT/FORMAL DEBRIEF IS NECESSARY</p> | <p> EXAMPLES</p> | <p>A TEAM JUST FINISHED RESUSCITATING A TEAM MEMBER. THEY ARE NOW IN EMOTIONAL CRISIS AND NEED HELP PROCESSING THE EVENT.</p> |
| <p>STAND DOWN PROCESS OCCURS WITH THOSE INVOLVED AND SHARE WHAT OCCURRED. THE FACTS ARE SHARED REGARDING THE INCIDENT.</p> | <p> STEPS</p> | <p>DEFUSING- 3 STEP PROCESS DEBRIEFING- 7 STEP PROCESS</p> |
| <p>OPERATIONAL DEBRIEFINGS DO NOT ADDRESS THE PSYCHOLOGICAL INJURY PARTICIPANT(S) MAY ENSUE.</p> | <p> WHAT IT IS NOT</p> | <p>IT IS NOT AN OPERATIONAL DEBRIEFING, COUNSELING OR PSYCHOTHERAPY</p> |
| <p>NORMALLY A SUPERVISOR/MANAGER/TEAM LEADER/RISK MANAGER/PATIENT SAFETY OFFICER.</p> | <p> WHO CAN FACILITATE</p> | <p>ONLY TRAINED PEER MEMBERS WHO ARE TRAINED IN BEST PRACTICE DEFUSING/DEBRIEFING TECHNIQUES. WWW.ICISF.ORG</p> |
| <p>ALL LEVELS OF LEADERSHIP, STAFF INVOLVED WITH THE INCIDENT, QUALITY, PATIENT SAFETY ETC...</p> | <p> WHO CAN PARTICIPATE?</p> | <p>ONLY HOMOGENOUS GROUPS. THOSE WHO WERE DIRECTLY AFFECTED BY THE CRITICAL INCIDENT. NO SPECTATORS ALLOWED. PEER FACILITATOR DISCRETION.</p> |

Appendix B

| READY (Green) | REACTING (Yellow) | INJURED (Orange) | ILL (Red) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>DEFINITION</p> <ul style="list-style-type: none"> Optimal functioning Adaptive growth Wellness <p>FEATURES</p> <ul style="list-style-type: none"> At one's best Well trained and prepared In control Physically, mentally, and spiritually fit Mission focused Motivated Calm and steady Behaving ethically Having fun | <p>DEFINITION</p> <ul style="list-style-type: none"> Mild and transient distress or loss of functioning Always goes away Low risk for illness <p>CAUSES</p> <ul style="list-style-type: none"> Any Stressor <p>FEATURES</p> <ul style="list-style-type: none"> Feeling irritable, anxious, or down Loss of motivation Loss of focus Difficulty sleeping Muscle tension or other physical changes Not having fun | <p>DEFINITION</p> <ul style="list-style-type: none"> More severe and persistent distress or loss of function Leaves a "scar" Higher risk for illness <p>CAUSES</p> <ul style="list-style-type: none"> Life Threat Loss Inner Conflict Wear and Tear <p>FEATURES</p> <ul style="list-style-type: none"> Loss of control Panic, rage, or depressed mood Substance Abuse Not feeling like normal self Excessive guilt, shame, or blame Diminished sense of purpose, meaning, or hope in the future | <p>DEFINITION</p> <ul style="list-style-type: none"> Unhealed stress injury causing life impairment Clinical mental disorder <p>TYPES</p> <ul style="list-style-type: none"> PTSD Depression Anxiety Substance Dependence <p>FEATURES</p> <ul style="list-style-type: none"> Symptoms persist and worsen over time Sever distress, social or occupational impairment |
| <p>Unit Leader Responsibility</p> | <p>Individual, Peer, Family Responsibility</p> | | <p>Caregiver Responsibility</p> |



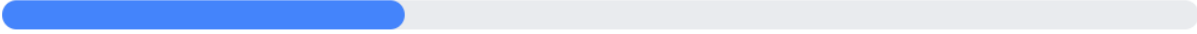
Appendix C

As a health care provider (hospital/prehospital), what resource(s) would you use more after a critical incident? A critical incident is anything you define to affect your mental wellbeing. A critical incident affects your emotional balance and has been known to affect the quality of care in patients at times.

Definitions: Distress Defusings are done immediately right after the critical incident with qualified peer/mental health facilitators

and

the 15 minutes alone time would be that you have your assignment covered or go out of service for that time to regroup and process your own thoughts, without worry of your assignment. That time you would have paid coverage.



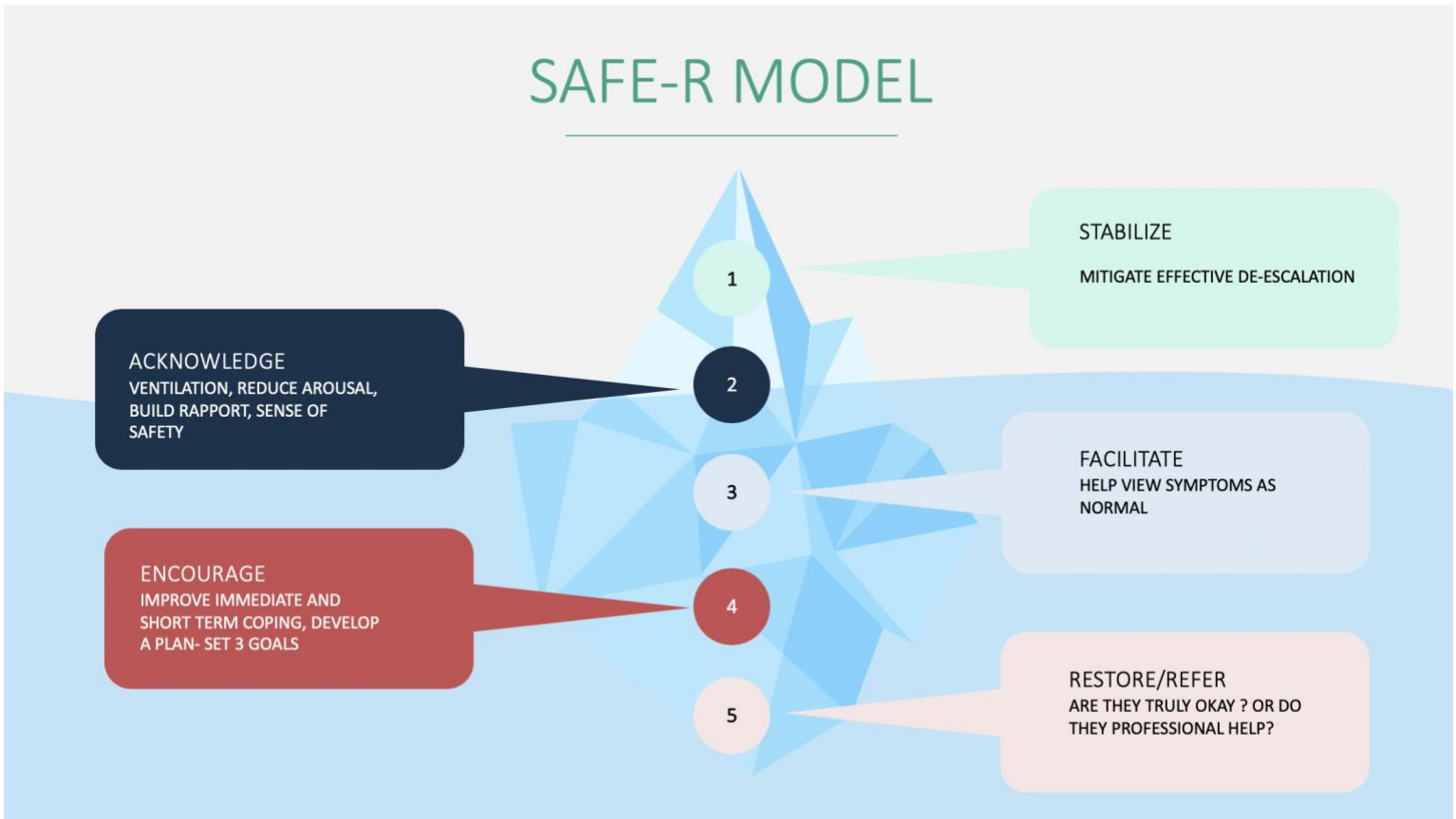
32% Distress Defusing ☑



68% 15 minutes alone

Appendix D

SAFE-R MODEL



Appendix E

DEFUSING (usually within 8 hours)**1. Introduction**

- Introduce yourself
- Assure them you are present for them.

2. Exploration

- What happened?
- Symptoms discussed

3. Information

- Accept, summarize information from group
- Normalize experiences and reactions
- Teach practical stress survival skills
- Stay with them if necessary

THE SAFER MODEL

Crisis intervention with Emergency Services, Disaster, Critical Incidents

| | |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| STEP ONE | Stimulation reduction |
| STEP TWO | Acknowledge of the crises <ul style="list-style-type: none">• What happened?• How are you doing? |
| STEP THREE | Facilitation of understanding & Normalization of symptoms/reactions |
| STEP FOUR | Encourage effective coping techniques |
| STEP FIVE | Recovery & Restoration of independent functioning or provision of assistance in obtaining acute care. |

Appendix F



Workplace Resilience Instrument

| | Not true at all | Rarely true | Sometimes true | Often true | True nearly all the time |
|-----------------------------------------------------------------|--------------------|----------------|-------------------|---------------|-----------------------------|
| 1. I enjoy improvising solutions to problems. | 1 | 2 | 3 | 4 | 5 |
| 2. I take delight in solving difficult problems. | 1 | 2 | 3 | 4 | 5 |
| 3. I consider many feasible solutions when solving a problem. | 1 | 2 | 3 | 4 | 5 |
| 4. Team goals guide my individual actions. | 1 | 2 | 3 | 4 | 5 |
| 5. I show confidence in decisions affecting my team. | 1 | 2 | 3 | 4 | 5 |
| 6. I discuss team member roles with my team members. | 1 | 2 | 3 | 4 | 5 |
| 7. I understand my team's overall goals. | 1 | 2 | 3 | 4 | 5 |
| 8. I approach new situations with confidence. | 1 | 2 | 3 | 4 | 5 |
| 9. I try to make sense of the situation when it becomes chaotic | 1 | 2 | 3 | 4 | 5 |
| 10. I know what resources to access. | 1 | 2 | 3 | 4 | 5 |
| 11. I openly share information with others. | 1 | 2 | 3 | 4 | 5 |
| 12. I can perform the roles of my other team members. | 1 | 2 | 3 | 4 | 5 |
| 13. I have access to the resources I need. | 1 | 2 | 3 | 4 | 5 |

| | Not true at all | Rarely true | Sometimes true | Often true | True nearly all the time |
|-----------------------------------------------------------------------------------|--------------------|----------------|-------------------|---------------|-----------------------------|
| 14. I have the knowledge needed to do my job. | 1 | 2 | 3 | 4 | 5 |
| 15. I exercise creativity when under extreme pressure. | 1 | 2 | 3 | 4 | 5 |
| 16. When the situation becomes chaotic, I am able to make sense of the situation. | 1 | 2 | 3 | 4 | 5 |
| 17. When the situation becomes chaotic, I approach the situation as a challenge. | 1 | 2 | 3 | 4 | 5 |
| 18. When the situation becomes chaotic, I get a renewed focus on the problem | 1 | 2 | 3 | 4 | 5 |
| 19. I take calculated risks when the situation calls for it. | 1 | 2 | 3 | 4 | 5 |
| 20. When the situation becomes chaotic, I take time to reflect on next steps. | 1 | 2 | 3 | 4 | 5 |

Scoring Instructions

The Workplace Resilience Instrument (WRI) is scored across four factors: Active Problem-Solving, Team Efficacy, Confident Sense-Making, and Bricolage.

Factor scores:

Active Problem-Solving: Sum the scores from items 1-3 and divide by 3: _____

Team Efficacy: Sum the scores from items 4-7 and divide by 4: _____

Confident Sense-Making: Sum the scores from items 8-14 and divide by 7: _____

Bricolage: Sum the scores from items 15-20 and divide by 6: _____

Although not defined theoretically, you may wish to compute an overall resilience score by either averaging the scores from each of the four factors or by finding the average score across all 20 WRI items.

Appendix G

| PROFESSIONAL QUALITY OF LIFE SCALE (PROQOL) | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------|---------|--------------|
| COMPASSION SATISFACTION AND COMPASSION FATIGUE (PROQOL) VERSION 5 (2009) | | | | |
| When you [help] people you have direct contact with their lives. As you may have found, your compassion for those you [help] can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a [helper]. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the <i>last 30 days</i> . | | | | |
| 1=Never | 2=Rarely | 3=Sometimes | 4=Often | 5=Very Often |
| _____ | 1. | I am happy. | | |
| _____ | 2. | I am preoccupied with more than one person I [help]. | | |
| _____ | 3. | I get satisfaction from being able to [help] people. | | |
| _____ | 4. | I feel connected to others. | | |
| _____ | 5. | I jump or am startled by unexpected sounds. | | |
| _____ | 6. | I feel invigorated after working with those I [help]. | | |
| _____ | 7. | I find it difficult to separate my personal life from my life as a [helper]. | | |
| _____ | 8. | I am not as productive at work because I am losing sleep over traumatic experiences of a person I [help]. | | |
| _____ | 9. | I think that I might have been affected by the traumatic stress of those I [help]. | | |
| _____ | 10. | I feel trapped by my job as a [helper]. | | |
| _____ | 11. | Because of my [helping], I have felt "on edge" about various things. | | |
| _____ | 12. | I like my work as a [helper]. | | |
| _____ | 13. | I feel depressed because of the traumatic experiences of the people I [help]. | | |
| _____ | 14. | I feel as though I am experiencing the trauma of someone I have [helped]. | | |
| _____ | 15. | I have beliefs that sustain me. | | |
| _____ | 16. | I am pleased with how I am able to keep up with [helping] techniques and protocols. | | |
| _____ | 17. | I am the person I always wanted to be. | | |
| _____ | 18. | My work makes me feel satisfied. | | |
| _____ | 19. | I feel worn out because of my work as a [helper]. | | |
| _____ | 20. | I have happy thoughts and feelings about those I [help] and how I could help them. | | |
| _____ | 21. | I feel overwhelmed because my case [work] load seems endless. | | |
| _____ | 22. | I believe I can make a difference through my work. | | |
| _____ | 23. | I avoid certain activities or situations because they remind me of frightening experiences of the people I [help]. | | |
| _____ | 24. | I am proud of what I can do to [help]. | | |
| _____ | 25. | As a result of my [helping], I have intrusive, frightening thoughts. | | |
| _____ | 26. | I feel "bogged down" by the system. | | |
| _____ | 27. | I have thoughts that I am a "success" as a [helper]. | | |
| _____ | 28. | I can't recall important parts of my work with trauma victims. | | |
| _____ | 29. | I am a very caring person. | | |
| _____ | 30. | I am happy that I chose to do this work. | | |

YOUR SCORES ON THE PROQOL: PROFESSIONAL QUALITY OF LIFE SCREENING

Based on your responses, place your personal scores below. If you have any concerns, you should discuss them with a physical or mental health care professional.

Compassion Satisfaction _____

Compassion satisfaction is about the pleasure you derive from being able to do your work well. For example, you may feel like it is a pleasure to help others through your work. You may feel positively about your colleagues or your ability to contribute to the work setting or even the greater good of society. Higher scores on this scale represent a greater satisfaction related to your ability to be an effective caregiver in your job.

The average score is 50 (SD 10; alpha scale reliability .88). About 25% of people score higher than 57 and about 25% of people score below 43. If you are in the higher range, you probably derive a good deal of professional satisfaction from your position. If your scores are below 40, you may either find problems with your job, or there may be some other reason—for example, you might derive your satisfaction from activities other than your job.

Burnout _____

Most people have an intuitive idea of what burnout is. From the research perspective, burnout is one of the elements of Compassion Fatigue (CF). It is associated with feelings of hopelessness and difficulties in dealing with work or in doing your job effectively. These negative feelings usually have a gradual onset. They can reflect the feeling that your efforts make no difference, or they can be associated with a very high workload or a non-supportive work environment. Higher scores on this scale mean that you are at higher risk for burnout.

The average score on the burnout scale is 50 (SD 10; alpha scale reliability .75). About 25% of people score above 57 and about 25% of people score below 43. If your score is below 43, this probably reflects positive feelings about your ability to be effective in your work. If you score above 57 you may wish to think about what at work makes you feel like you are not effective in your position. Your score may reflect your mood; perhaps you were having a “bad day” or are in need of some time off. If the high score persists or if it is reflective of other worries, it may be a cause for concern.

Secondary Traumatic Stress _____

The second component of Compassion Fatigue (CF) is secondary traumatic stress (STS). It is about your work related, secondary exposure to extremely or traumatically stressful events. Developing problems due to exposure to other's trauma is somewhat rare but does happen to many people who care for those who have experienced extremely or traumatically stressful events. For example, you may repeatedly hear stories about the traumatic things that happen to other people, commonly called Vicarious Traumatization. If your work puts you directly in the path of danger, for example, field work in a war or area of civil violence, this is not secondary exposure; your exposure is primary. However, if you are exposed to others' traumatic events as a result of your work, for example, as a therapist or an emergency worker, this is secondary exposure. The symptoms of STS are usually rapid in onset and associated with a particular event. They may include being afraid, having difficulty sleeping, having images of the upsetting event pop into your mind, or avoiding things that remind you of the event.

The average score on this scale is 50 (SD 10; alpha scale reliability .81). About 25% of people score below 43 and about 25% of people score above 57. If your score is above 57, you may want to take some time to think about what at work may be frightening to you or if there is some other reason for the elevated score. While higher scores do not mean that you do have a problem, they are an indication that you may want to examine how you feel about your work and your work environment. You may wish to discuss this with your supervisor, a colleague, or a health care professional.

WHAT IS MY SCORE AND WHAT DOES IT MEAN?

In this section, you will score your test so you understand the interpretation for you. To find your score on **each section**, total the questions listed on the left and then find your score in the table on the right of the section.

Compassion Satisfaction Scale

Copy your rating on each of these questions on to this table and add them up. When you have added them up you can find your score on the table to the right.

- 3. _____
- 6. _____
- 12. _____
- 16. _____
- 18. _____
- 20. _____
- 22. _____
- 24. _____
- 27. _____
- 30. _____

Total: _____

| The sum of my Compassion Satisfaction questions is | So My Score Equals | And my Compassion Satisfaction level is |
|----------------------------------------------------|--------------------|-----------------------------------------|
| 22 or less | 43 or less | Low |
| Between 23 and 41 | Around 50 | Average |
| 42 or more | 57 or more | High |

Burnout Scale

On the burnout scale you will need to take an extra step. Starred items are "reverse scored." If you scored the item 1, write a 5 beside it. The reason we ask you to reverse the scores is because scientifically the measure works better when these questions are asked in a positive way though they can tell us more about their negative form. For example, question 1. "I am happy" tells us more about

- *1. _____ = _____
- *4. _____ = _____
- 8. _____
- 10. _____
- *15. _____ = _____
- *17. _____ = _____
- 19. _____
- 21. _____
- 26. _____
- *29. _____ = _____

Total: _____

| The sum of my Burnout Questions is | So my score equals | And my Burnout level is |
|------------------------------------|--------------------|-------------------------|
| 22 or less | 43 or less | Low |
| Between 23 and 41 | Around 50 | Average |
| 42 or more | 57 or more | High |

| You Wrote | Change to |
|-----------|-----------|
| 2 | 5 |
| 3 | 4 |
| 4 | 3 |
| 5 | 2 |

the effects of helping when you are *not* happy so you reverse the score

Secondary Traumatic Stress Scale

Just like you did on Compassion Satisfaction, copy your rating on each of these questions on to this table and add them up. When you have added them up you can find your score on the table to the right.

- 2. _____
- 5. _____
- 7. _____
- 9. _____
- 11. _____
- 13. _____
- 14. _____
- 23. _____
- 25. _____
- 28. _____

Total: _____

| The sum of my Secondary Trauma questions is | So My Score Equals | And my Secondary Traumatic Stress level is |
|---------------------------------------------|--------------------|--------------------------------------------|
| 22 or less | 43 or less | Low |
| Between 23 and 41 | Around 50 | Average |
| 42 or more | 57 or more | High |

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Appendix H



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Thu 5/24/2018 11:16 AM

Natasha Lukasiewicz, HHP, RN, CCRN, CEN, CFRN, LNC



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|  Citation for Workplace Re... 11 KB |  WRI Instrument & Scorin... 140 KB |
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Hi Natasha,

Thank you for the details. I've attached the WRI for your use and the citation for its use. Please share any research results when you have completed your project. Best wishes in you work.

Dr. Larry Mallak



Appendix I

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(Print Name): Natasha Lukasiewich

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