Compassion Fatigue and Resilience in Palliative Care Clinicians

Michelle Baker and Sara Kalis

Department of Graduate Nursing

NSG 8207: Clinical Project 3

Dr. Melissa Skoff and Dr. Rhea Ferry

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Abstract

Nature and Scope of the Project: Increasing demands are being placed on palliative care clinicians. Resilience decreases the effects of compassion fatigue caused by work and emotional demands. The aim of this project is to find if resilience education has an effect on resilience and compassion fatigue in palliative care clinicians.

Synthesis and Analysis of Supporting Literature: Few studies on resilience and compassion fatigue have focused on providers or palliative care, most focus on nursing. Research shows a strong negative relationship between resilience and compassion fatigue, but minimal studies have been done on resilience training as an intervention for compassion fatigue. Utilizing the self-efficacy theory, the evidence-based solution is providing resilience education.

Project Implementation: Twelve palliative care clinicians were assessed via surveys to measure resilience and compassion fatigue before and after seven weeks of resilience education. The primary significant challenge encountered was creating seven weeks of quality resilience education and knowing if the palliative care clinicians were reading the materials.

Evaluation Criteria: The Resilience Scale measures resilience, and the Professional Quality of Life Scale measures compassion fatigue. This project will be deemed a success if there is an increase in resilience and/or a decrease in compassion fatigue among participants.

Outcomes: This project did result in a decrease in compassion fatigue. Resilience showed a significant improvement in all participants (score) Looking at the job class of participants, the nurse and spiritual care group had the most significant improvement in both increased resilience and decreased compassion fatigue (score), as compared to doctors (score), or APRNs (score). Resilience education

Recommendations: This shows (hopefully) that resilience education can increase resilience and decrease compassion fatigue in palliative care clinicians. In a time of extraordinary demands on healthcare professionals, it is recommended that clinicians have resilience education. It is crucial for healthcare organizations to acknowledge the importance of resilience education for their employees and initiate programs.

Keywords: compassion fatigue, resilience, palliative care, physician, nurse practitioner

Compassion Fatigue and Resilience in Palliative Care Clinicians

In 2018, the total national expenditure in health care in the United States was 3.6 trillion (Centers for Disease Control and Prevention [CDC]b, 2021). In the United States, from 2010 to 2020 citizens age 65+ were the largest growing population group with an increase of 37.5% (USA Facts, n.d.). This population also required the greatest amount of health care, with citizens 65+ accounting for 13% of the population but utilizing 34% of the healthcare (Leatherby, 2016). The greatest use of healthcare resources is from chronic illnesses. The leading causes of chronic illnesses are heart disease, stroke, cancer, and diabetes (CDCa, 2021). Of these, heart disease and cancer are the leading two causes of illness or death of any other diseases (CDCa, 2021). People 65+ are the highest percentage population of people with these diseases; in 2017-2018, people 65+ represented 71% of people with heart disease and 73% of the people with cancer (CDCa, 2021). With the expected increase in people 65+, and this being the group with the greatest health-related needs, the demands within healthcare are expected to increase. Additionally, this population with chronic illness and comorbidities require more extensive care, such as palliative care, to better serve their needs.

Palliative care treats patients with chronic illnesses with the goal of improving their quality of life (Minnesota Network of Hospice and Palliative Care [MNHPC], n.d.). According to MNHPC (n.d.), palliative care is whole-person care for patients with serious illnesses. Whole-person care includes physical, emotional, and spiritual care as well as support for the family. Palliative care often involves managing physical symptoms such as pain, nausea, shortness of breath, or insomnia; providers also address emotional, spiritual, and financial concerns related to having a chronic disease (MNHPC, n.d.). Goal setting, maximizing independence, and improving quality of life are part of the primary role of palliative clinicians.

In order to provide the best care, palliative care is multidisciplinary including physicians, advanced practice nurses, nurses, spiritual care, therapists, and social workers. In the United States, to receive palliative services, the patient can be any age (although the greatest number of those receiving services are 65+ due to having the highest rate of chronic illnesses), have a serious illness but does not have to be near death, and may choose to continue to receive treatment for their illnesses. Some of the chronic illnesses commonly treated in palliative care include: cardiac disease, respiratory disease, kidney failure, Alzheimer's, cancer, ALS, and Parkinson's disease (MNHPC, n.d.).

As previously discussed, there is an increasingly aging population in the United States with increasing healthcare needs. Ironically there are many aging palliative care physicians that may be close to retirement, as it is estimated that 40% are age 56 or older (Kamal et al., 2019). With the increased needs and decreasing supply of palliative care providers, it is estimated that there will be one provider for 808 eligible patients (Kamal et al., 2019). In 2019 Minnesota had 169 physicians, 54 Advanced Practice Nurse, and 192 nurses who specialized in palliative care (Center for Advanced Palliative Care, 2019). This is four clinicians per 100,000 residents, which is an insufficient number of providers for the population (Center for Advanced Palliative Care, 2019).

Palliative care providers are at higher risk for compassion fatigue than other providers as palliative care providers are exposed to others' pain and suffering routinely as they provide care to patients with chronic health conditions (Cross, 2019). The American Psychological Association (APA) Dictionary of Psychology (n.d.a) defines compassion fatigue as "the burnout and stress-related symptoms experienced by caregivers and other helping professionals in reaction to working with traumatized people over an extended period of time" (para. 1).

Likewise, Merriam-Webster (n.d.a) defines compassion fatigue as "the physical and mental exhaustion and emotional withdrawal experienced by those who care for sick or traumatized people over an extended period of time" (para. 1). Compassion fatigue can cause physical and emotional exhaustion as well as emotional withdrawal. This can manifest itself as "apathy or indifference toward the suffering of others" (Merriam-Webster, n.d.a, para. 2). People can develop physical, mental, and emotional symptoms from compassion fatigue including sleep disturbance, isolation, depression, loss of hope, anger, increased emotional intensity, and impaired judgment (University of Wisconsin, 2017). Research has shown that compassion fatigue affects clinicians in the workplace and is a significant predictor of turnover intention (Cao & Chen, 2021); in addition, compassion satisfaction has been shown to be negatively associated with feelings of burnout, compassion fatigue, and turnover intention (Well-English et al., 2019).

Not everyone who works with traumatized or sick people develops compassion fatigue, it is very individualized and depends on personal characteristics and individual resiliency. With the risk of compassion fatigue, resiliency is important for palliative care providers, however, a study of palliative care providers showed 38.2% reporting low resilience and a high level of burnout in Canada (Wang et al., 2020). Resilience is defined as the ability to recover after a change (Merriam-Webster, n.d.b). The APA Dictionary of Psychology's (n.d.b) definition of resilience is paraphrased as a dynamic process of adapting to life's challenges through flexibility. This flexibility is mental, emotional, and behavioral, all of which are influenced by a person's view of the world, availability of resources, and coping skills. Since this is a dynamic process, resilience is a skill that can be learned and practiced. Opposite to compassion fatigue, resilience has been linked to positive aspects of job satisfaction, including lower turnover intention of

nurses, lower compassion fatigue, and higher work engagement (Can & Watson, 2019; Cao & Chen, 2021). Yet, a lack of resilience remains a major concern. Studies completed within multiple areas of health care show that healthcare workers can have a low level of resilience (Mealer et al., 2014; Soode et al., 2011; Soode et al., 2014; Werneburger et al., 2018; & West et al., 2017). These studies demonstrate that resilience training would be beneficial and should be considered as a high priority in health care organizations.

The Problem Identification/Available Knowledge

Compassion fatigue can result from caring for people or prolonged exposure to people who are sick. Compassion fatigue is often used interchangeably with secondary traumatic stress for the reason that it often occurs as a secondary response when working with and hearing the stories of patients who have had traumatic experiences (Administration of Children and Families, n.d.). The Professional Quality of Life Scale (ProQOL), a validated test to measure compassion fatigue, asks questions regarding the physical and mental manifestations related to compassion fatigue, including "exhaustion, frustration, anger, and depression" (Stamm, 2010, p.12). This can be used in a palliative care setting given the emotionally demanding nature of managing chronic illnesses, at times with advanced symptoms affecting quality of life and failed treatment attempts.

Compassion fatigue affects an organization related to staff retention and costs as well as patient care. In research, compassion fatigue has been related to the quality of work performance (Chu, 2021; Labrague & de Los Santos, 2021), job disassociation (Labrague & de Los Santos, 2021; Samson & Shartzman, 2018), and burnout (Wells-English et al., 2019). Additionally, studies on compassion fatigue have demonstrated this relationship between compassion fatigue and job turnover (Cao & Chen, 2021; Labrague & de Los Santos, 2021; Wells-English et al.,

2019); as well as previously discussed job disassociation and burnout can also lead to turnover. Brown and Abuatiq (2020) report that the cost of turnover for a clinical nurse ranges from $40,300 to $64,000, resulting in the average hospital losing $4.4 million to $6.9 million annually. Additionally, work or job performance can have a large impact on an organization; with compassion fatigue negatively affecting work performance, this can lead to monetary costs to the organization due to low productivity (Chu, 2021). Lack of job engagement or low productivity costs companies 18% of their annual salary (Herway, 2020).

The majority of studies on compassion fatigue have been cross-sectional, showing the current state and that relationships exist, but not how to change the current state as very few studies have been done with an intervention to change compassion fatigue. The studies with an intervention included: self-compassion, wellness, or resilience training. These studies have had mixed results. One study identified resilience training as an intervention that provided evidence of increased compassion satisfaction, but had no effect on compassion fatigue (Pehlivan & Güner, 2020). Other studies with resilience training as an intervention had results of increased resilience, quality of life, health behaviors, happiness, mindfulness, coping and decreased stress, anxiety, burnout, and depression (Magibay et al., 2017; Stoliker et al., 2022; Werneburg et al., 2018); however, these studies did not look at compassion fatigue. With evidence that shows a strong link between compassion fatigue and resilience, with the limited number of studies that have been done, there is a gap in the knowledge of the effects of resilience training as an intervention.

Most studies also did not have a longitudinal component, but those that did provide mixed results on effectiveness of the study's intervention. After wellness training, one study followed up after ten weeks finding that the participants maintained an increase in their resilience

(Mueller et al., 2018). Another study had a follow-up of one year which showed no sustained effect from the education, but there was poor participant participation at the one-year mark, which may have affected the results (Novak, 2020). Werneburg et al. (2018) were able to show a sustained increase in resilience after three months following resiliency training. This shows a gap in the research and a lack of knowledge of the results of an intervention that will be sustained both for resiliency and compassion fatigue.

Much of the literature found on compassion fatigue and resilience pertains to oncology or hemodialysis nurses. Although oncology and hemodialysis also provide care to chronically ill patients, they are different specialties from palliative care. There is a gap in the knowledge, specific to palliative care providers, regarding the current state of compassion fatigue and resilience and if an educational intervention will have an effect.

Of the research identified, the majority has been conducted on nurses and other health care providers, leaving a gap in the knowledge and research regarding advanced practice providers and physicians on compassion fatigue and resilience. With the shortage of palliative care providers (which is also expected to increase), ensuring resilience and decreasing compassion fatigue is vital.

Increasing resilience may be one way to decrease compassion fatigue. Related to patient care, Labrague and de Los Santos (2021) found that the presence of psychological resilience reduces the negative effects of compassion fatigue on frontline nurses' job satisfaction, turnover intention, and the quality of their care. Likewise, Can and Watson (2019) found that a lack of resilience and wellness were a strong predictor of compassion fatigue.

The importance of resilience for employees' well-being and performance at work has grown steadily in recent years among professional organizations both within and outside of

healthcare (Scheuch et al., 2021). Of organizations with resilience programs, 40% are healthcare organizations; however other industries with identified resilience programs were in education, business, military, police, or disaster workers (Scheuch et al., 2021). The United States Army has an online resilience program for anyone to access, but is directed toward service men and women and their families (US ARMY, n.d.). The de Visser et al. (2016) study shows successful resiliency training, which helped military members manage their stress, effectively reduce stress symptoms, and improve job performance. Likewise, police officers have resiliency programs that are encouraged, but are not currently required (Wyllie, 2021). In McCraty & Atkinson (2012), the authors demonstrated the importance and positive impact of resilience training on police officers, who are among one of the most stressful occupations. Their study results indicated that the officers experienced reductions in stress, negative emotions, depression, and increased peacefulness and vitality as compared to a control group.

The aim of this project is to determine the effects of resilience education on compassion fatigue and resilience in palliative care clinicians.

PICOT Question

For palliative care physicians, advanced practice nurses, spiritual care, and nurses; in a central Minnesota healthcare organization, what impact would a comprehensive resiliency training program have on resilience and compassion fatigue of staff as compared to current practices over a 8 weeks period of time? A cause-and-effect diagram (Appendix A) outlining the issues leading to the PICOT includes the problem causes categories: people, methods/processes, materials, environment, and equipment; these causes lead to the problem statement previously stated. Discussion on the issues related to the cause will be expounded upon in the organizational project information section.

Literature Review, Matrix (Appendix B) Development, and Literature Synthesis

The literature review was completed utilizing APA Psycinfo, Medline, Cinahl, and Pubmed. Keywords of compassion fatigue, compassion fatigue, and resilience were used for all searches. Additional searches were completed using other keywords of palliative, palliative care, nurse practitioner, advanced practice nurse, physician, and doctor.

Resilience education has been shown in research to improve multiple aspects in the life of health care workers, including increasing resilience, quality of life, health behaviors, happiness, mindfulness, coping and decreasing stress, anxiety, burnout, and depression (Magibay et al., 2017; Stoliker et al., 2022; Werneburg et al., 2018). In Werneburg et al. (2018), a resilience program was introduced to healthcare workers. After a 12-week resilience training program, participants showed an improvement in resiliency, perceived stress, anxiety level, quality of life, and health behaviors. A three-month follow-up showed a sustained improvement in all areas. Magtibay et al. (2017) implemented a stress management and resilience training program for nurses. This training could be completed in multiple formats including online, reading, or facilitated discussion. Post-intervention results showed a statistically significant decrease in anxiety, stress, and burnout and an increase in resilience, happiness, and mindfulness. In Stoliker et al. (2022), their quasi-experimental study provided online resilience training to bachelor-level nursing students. Results found a statistically significant improvement in resilience; an improvement, although not statistically significant, was also found with an increase in coping and a decrease in anxiety and depression.

The research was identified for resilience and compassion fatigue utilizing resilience education as an intervention. In Pehlivan and Güner (2020), their experimental study examined oncology nurses and the effects of multiple types of resilience education: short-term training,

long-term training, or no resilience training. The study revealed that both the short- and long-term resilience program had a statistically significant positive influence on the mean compassion satisfaction scores compared to the control group. However, there was no statistical difference between either of the intervention group or the control group related to compassion fatigue, burnout, perceived stress, and resiliency. Nurses were evaluated again at six and twelve months after the education sessions, and compassion satisfaction remained significantly higher than the control group at these time frames.

The research was also identified with other interventions for resilience and compassion fatigue. The experimental study by Franco and Christie (2021) aimed to find if a one-day self-compassion training with pediatric nurses would increase their feelings of wellbeing and professional quality of life. The participants were split between the intervention and control groups. Compared to the non-intervention group, participants in the intervention exhibited significant increases in self-compassion, mindfulness, compassion for others, resilience, and compassion satisfaction, and significant decreases in burnout, anxiety, and stress compared to the non-intervention group. In a quasi-experimental study by Stanton et al. (2015) on compassion fatigue and resilience, nurses received an intervention of transcranial direct current stimulation (tDCS). The results showed no statistically significant improvement in compassion fatigue or resilience with the use of tDCS. However, they did find a slight (non-significant) improvement in compassion fatigue at a higher current, which requires more research to confirm the significance of this finding. Novak et al. (2020) implemented a nine-week mind and body education training with college students, measuring the training's impact on resilience, empathy, and perspective taking. Initial results showed a statistically significant increase in resilience; unfortunately, at one-year follow-up, an assessment determined resilience levels returned to baseline, but few

study participants from the original sample responded to the one-year follow-up assessment. Mueller et al. (2018) completed a quasi-experimental study on physical therapy students to find the impact of an online psychological wellness course on resilience, empathy, and engagement. The wellness course was either initiated at the beginning of clinicals, or delayed after clinicals had begun. They found that after both groups had received the education, they scored equally well on resilience. This provided evidence that the timing of the education is less important than receiving the education in general.

Two qualitative studies were identified regarding palliative care related to resilience and compassion. Koh et al. (2020) obtained feedback to determine factors related to burnout and resilience from palliative care professionals (including doctors, nurses, and social workers) who have been working in the field for ten years or more. The major themes of burnout and resilience that emerged were: struggling, changing mindset, adapting, and resilience; intervening factors included: self-awareness, reflection, and evolution. The overarching theme of intervention was that palliative care providers had to undergo transformative growth before achieving resiliency. Additionally, researchers found that cultural and team resilience is an important factor in individual resiliency. Powell et al. (2020) completed a qualitative systematic review of eight studies involving hospice and palliative care nurses looking at themes related to resilience. Three main themes of resilience were identified including stressors, coping, and exposure to death. Within the major themes, there were ten sub-themes. Sub-themes within stressors included: all nursing work is stressful, too close to home, and some patients are more challenging than others. Sub-themes of coping include relational care, emotional expression, giving and receiving support, maintaining a work-life balance, and making a different mindset. There are no sub-themes in exposure to death.

A large number of the studies found were cross-sectional with no interventions. Labrague and de Los Santo (2021) completed a cross-sectional study looking at the relationship between compassion fatigue, resilience, nurse turnover intention, job satisfaction, and quality of work performance. They found that compassion fatigue was directly related to increased turnover intention, decreased job satisfaction, and poorer quality of work performance. Interestingly, they also found that increased resilience decreased the negative effects of compassion fatigue. Cao et al.'s (2021) cross-sectional study revealed passive coping (relinquishing responsibility for oneself in a stressful situation) was a high indicator of compassion fatigue, whereas adaptive coping (using adaptive strategies to manage stress or a situation) and a high level of family support is positively correlated with compassion satisfaction.

Cross-sectional studies are not able to show causality, just a relationship. However, a significant relationship between resilience and compassion fatigue was identified in eight cross-sectional studies. Correlations have been identified with compassion fatigue, resilience, turnover, work engagement, disassociation, mindfulness, and burnout (Cao & Chen, 2021; Cao et al., 2021; Kase et al., 2019; Labrague & de Los Santo, 2021; Samson & Shrartzman, 2018; Silver et al., 2018; Wang et al., 2020; Wells-English et al., 2019). All of the cross-sectional studies identified a relationship between compassion fatigue and resilience.

Several considerations emerged from the evidence found. Various research (including experimental, quasi-experimental, qualitative, and cross-sectional studies) show a link between resilience and compassion fatigue, but studies with interventions reveal mixed results with improvement. Despite this, both long- and short-term resilience programs have shown to be effective. For a sustained change, two longitudinal studies showed sustained improvement (Pehlivan & Güner, 2020; Werneburg et al., 2018), whereas the other study did not (Novak et al.,

2020). Despite this link, few studies have been done with resilience training as an intervention for compassion fatigue.

When reviewing the literature, themes emerge for both compassion fatigue and resilience. Themes that are positively associated with compassion fatigue include job disassociation and burnout, whereas negatively associated themes include: resilience, self-care, coping, and educational tools. Themes that are positively associated with resilience include: adaptability, support system, and self-awareness, and themes negatively associated with resilience include: job disassociation, stress, emotional fatigue, and low self-compassion.

Few of the studies identified were completed using physicians, spiritual care, nurse practitioner, or APRNs, and few were done with palliative care providers. Only one research study was identified when searching for literature in the last five years on compassion fatigue, palliative care, and nurse practitioners. Five research studies emerged by doing the same search except with doctors as the key work (rather than nurse practitioners). The same search with spiritual care revealed one expert opinion article but reviewed research done with nurses, not spiritual care. Regarding palliative care, there were few studies that focused on these providers specifically. A greater number of studies were identified with oncology or hemodialysis providers. Some of the research used the term “palliative care” interchangeably with “end-of-life” and “hospice care”; this finding changed by country. In some countries, the term “palliative care” is used instead of “hospice.” Additionally, one of the systematic reviews identified lumped palliative care and hospice providers together in the review. A majority of the studies found in the literature review of resiliency and compassion fatigue have included nurses, while very few involved nurse practitioners.

Evidence shows resiliency training can have positive effects on healthcare workers and suggests the possible solution of resilience training to decrease compassion fatigue and increase resilience. Compassion fatigue and low resilience are correlated with increased turnover intention, disassociation, burnout, and decreased job satisfaction, quality of work performance, engagement, and mindfulness. Furthermore, the gaps in the literature regarding resilience education on compassion fatigue, utilization of palliative care providers, and having study participants of physicians, spiritual care, and advanced practice clinicians related to compassion fatigue and resilience supports the need for additional research.

Organizational Project Information

The organization at which the project will be implemented is located in an area of central Minnesota that serves both a suburban and rural population. The target population of this project is the palliative care team at this agency, which includes four nurse practitioners or APRNs, three physicians, seven nurses, and one spiritual care worker. All clinicians listed will be included in the project. Goals of this agency are health and well-being, listening, human dignity, expert clinical care, community and relationships, and smart stewardship (CentraCare, 2022b). This project aligns with the organization's values as it directly impacts this agency's palliative care unit and its healthcare providers' well-being through resiliency. Through empowering the palliative care providers with resilience, this project has the potential to positively impact the community and the relationship between the agency and its patients. The agency has a strategic plan to stay relevant in the communities in which they serve through ongoing improvement and maximizing individual skills and improvement (CentraCare, 2018). The purpose of the strategic plan is to "enhance wellbeing and resilience" (CentraCare, 2018, p. 3). With project goals to

increase resilience and decrease compassion fatigue, this fits in with the agency's strategic plan and purpose through improvement in these areas.

Driving this project is our project team. This team consists of professionals from various areas with expertise in palliative care or project management. Dr. Skoff and Dr. Ferry are the project chairs and are faculty members of The College of St. Scholastica. They are instrumental in advising the planning, implementing, and evaluating this project. Michelle Jaskolka is Director of Palliative Care and Senior Transitions at the Central Minnesota agency in which the project is being implemented. She oversees the palliative care team for both inpatient and outpatient services, and she is vital to the success of this project by directly overseeing the unit in which our project will take place. Within the department, Kasy Omann, Palliative Care Certified Nurse Practitioner, is the mentor for this project.

Stakeholders are people who are likely to be affected by the project results. The participants of the project are stakeholders, including clinicians in the palliative care inpatient, outpatient, and home health departments. The Director of Home Health, Kristi Husen, is a stakeholder due to the palliative care home health nurses who are participating in the project. Other stakeholders include members of the department who are not clinicians, as well as patients.

The Gap Analysis

The literature shows a gap in knowledge regarding physicians, spiritual care, and advanced practice providers in palliative care related to compassion fatigue and resilience. A gap analysis was done, on the palliative care department in the Central Minnesota agency, to identify the difference between current knowledge, skills, and/or practices and the desired best practice (or the desired state). As shown in the gap analysis diagram (Appendix C), the current state does not match the desired state. The palliative care unit is part of a larger healthcare system

employing 11,800 people, and the current state is that the employees are facing challenges including (a) no resources available for resilience education, either required or optional, (b) lack of Chief Wellness Officer at the organization, (c) increased workload with COVID-19, (d) recent changes in job requirements, (e) and no weekend coverage for the palliative department causing an influx in referrals on Mondays (CentraCare, 2022a; M. Jaskolka, personal communication, 2/23/22).

The desired state would be to have available easy-to-access resources to increase knowledge about resiliency. Other desired states would include decreased staff turnover, having a Chief Wellness Officer, increased staff to see palliative care patients, and weekend coverage in palliative care.

The identified gap which is addressed in this project is the lack of educational resources on resilience. Although the organization identified wellness as a priority, this is not the current practice. The gap is created by deficient knowledge and resources from the organization on resilience, no organizational Chief Wellness Officer, and the inability of the unit to recruit a new physician creating a staff shortage.

Methods used to identify the current gap were an interview with the department head of the palliative care unit in which she indicated that there was no specific educator for the unit, the lack of resources on resilience, the inability to recruit a physician for job opening, increased workload since COVID-19, and recent changes in job requirements (M. Jaskolka, personal communication, 2/23/22). Additional information related to the gap was obtained by searching the organization's website for staff information on wellness and resilience.

Needs Assessment

The Central Minnesota agency in which the project will be completed has no identified information on resilience for employees. Palliative care services have increased due to the COVID 19 pandemic (M. Jaskolka, personal communication, 2/23/22). This increase in utilization could cause increased stress, compassion fatigue, and burnout in palliative care providers; therefore, support for these healthcare providers is essential. Increasing resiliency can help combat these negative aspects by giving healthcare professionals the skills and resources needed to process and overcome hardships.

In order to close the gap between best practice evidence and the current state, an increase in knowledge on resiliency is needed to increase resilience and decrease compassion fatigue in palliative care clinicians. In order to accomplish this goal, there are multiple strategies that will be deployed. Firstly, a pre-and post-survey will be completed by palliative care clinicians to show the statistical impact of the education provided. The survey will be organized through an established survey site and delivered by email. Then, weekly educational materials on evidence-based areas of resiliency will be compiled and organized. Information will be sent to the clinicians for seven weeks via weekly email. With the completion of the project, the goal is to share the educational materials with the organization as a whole.

There will be no monetary cost to the organization. Due to the nature of the project, the developers' main resource will be time (to construct and implement the pre-and post-surveys, as well as the creation of the weekly emails); otherwise, the project will have a minimal financial cost to the developers. Clinicians participating in the study will take time from their week to review materials and complete surveys. All surveys and education materials will be sent by project developers by email, so there will be no reproduction costs.

Strengths, Weaknesses, Opportunities, and Threats Analysis

As shown in the SWOT Diagram (Appendix D), there are strengths, weaknesses, opportunities, and threats to the project and how they interact on different levels including global, national, community, organization, unit, and with the project developers.

The strengths of this project are the internal aspects globally and of the community, organization, unit, and project developers, which contribute to its success. Globally, there is a growing trend to have compassion for others as evidenced by an increasing number of resources available and research being completed to support this project. The community in which the project is being completed is culturally diverse and is open to new thoughts and ideas, which can increase the acceptance of changes in practice by clinicians. The organization allows access to current employees to different units of the organization; since the project coordinators work for the organization, this provides increased accessibility of the unit, including being invited to team meetings and shadowing experiences with the providers. A strength for the organization is the low cost of the project with potential positive returns financially and with patient satisfaction. On the unit level, there are vested stakeholders. The unit director is supportive of the project and has assisted project developers in securing a mentor. Inpatient clinicians have a strong cohesion as a group, which can help clinicians with resiliency and decrease compassion fatigue. The palliative care clinicians are interested in the project, which should increase participation and follow through. For project developers, strengths include the excitement of working with this particular unit, thus transferring excitement to the project, and previous experience with palliative care which assists the project developers in understanding the challenges of working in palliative care.

Weaknesses are the internal aspects that may limit this project and include characteristics in the nation, organization, unit, and of the project developers. In the US, there is a lack of qualified palliative care providers, this is also true for the state of Minnesota. The organization is also feeling the effects of this shortfall with difficulty recruiting a palliative care physician. The department has also had recent staff turnover adding to the need for more clinicians. This has left the unit short-staffed, adding to the stress and time constraints of the clinicians. An additional weakness at the organizational level is the lack of resources on compassion fatigue and resilience for all employees. Weaknesses have been identified on the unit level, including recent changes in job responsibilities, technology issues with telemedicine visits, and the environmental setup of the inpatient palliative care department that does not allow for unit discussions, all potentially leading to the increased stress of clinicians. Weaknesses of the project include the time demands of the clinicians to participate in the project and the unknown level of compassion fatigue and resilience of the clinicians going into the project. If clinicians start with a high level of resilience and low compassion fatigue, per the pre-intervention survey, there is only small room for improvement with the project. Finally, for project developers, clinicians included in the project work in different care areas, including inpatient, outpatient (in two separate clinics), and home health, creating different needs for compassion fatigue and resilience, which will all need to be addressed with the educational materials.

Multiple opportunities are created by this project on the global, community, organizational, and unit levels. If this project is published, it will contribute to the knowledge available on compassion fatigue and resilience and may encourage other organizations to implement resilience education. In the community, there is the opportunity for improved patient care and greater patient and family satisfaction of healthcare services provided by the

organization. Another opportunity is sharing the educational materials to the organization as a whole to increase resilience and decrease compassion fatigue to all employees, which could have an effect on the organization and the community as a whole as the organization has over 11,000 employees. This project has the potential opportunity to decrease staff turnover and increase job performance and productivity, which could result in decreased organizational costs. On the unit and individual level, the project is to increase resiliency and reduce the compassion fatigue of palliative care providers as well as increase job satisfaction.

However, several threats to this project on the global, organizational, and unit level must also be considered. A threat to healthcare, in general, is the recent COVID-19 pandemic, this has created changes within healthcare and placed additional stress on organizations and clinicians. For the organization, an initial threat is a large organization that does not put effort into wellness or resilience as evidenced by a lack of resources and no Chief Wellness Officer. The lack of a chief wellness officer also makes the process more difficult to determine how to share organization-wide information on wellness. Other threats include organizational pressure for the palliative care unit to expand and an organization that makes frequent changes to technology and staff expectations placing additional stress on the clinicians. On the unit level, there has been a staff change with an unknown start date of a new hire who may start after the project has been implemented. Finally, threats include a small department in which the project is being completed; the project will have a small sample size.

Guiding /Theoretical Framework and Change Theory

The middle-range theory utilized to guide this project is the self-efficacy theory. Self-efficacy theory encompasses the idea that people can exercise influence over what they do (Resnick, 2018). Based on social cognitive theory, the self-efficacy theory consists of triadic

reciprocity, which arises from the interrelationship between a person's behavior, environment, and cognitive factors (Resnick, 2018). Behavior, personal factors, and the environment do not all have equal influence on reciprocity (Resnick, 2018). It is possible for one factor to have a more substantial influence than the other, and this influence can change over time depending on the situation (Resnick, 2018).

Resnick (2018) states that self-efficacy theory is separated into two distinct categories, both of which influence the person's performance of a task: self-efficacy expectation and outcome expectation. Self-efficacy expectations encompass what a person believes they are capable of accomplishing, and outcome expectations are what a person expects the outcome to be if an endeavor is accomplished. The belief of what a person thinks they can accomplish for self-efficacy and outcomes expectations is derived from four different sources: direct experience if they have performed the action in the past, vicarious experience of seeing other people successfully complete a task, encouragement or discouragement of others, and feedback that they receive during the activity either psychological (i.e., praise), or physiological (i.e., pain). Research has shown that a positive view of self-efficacy and outcome expectations are essential for behavior change utilizing the self-efficacy theory (Resnick, 2018). Therefore, assisting a person in believing that they can accomplish a task can be done using: encouragement from others, seeing others successfully perform the task, receiving positive results, and having a pleasant experience. Factors affecting a person's buy-in for being successful at a task are directly related to the effort that person will put forth to achieve the task.

Previous research provides evidence that specific interventions are effective in improving behavior by strengthening self-efficacy and outcome expectations (Resnick, 2018). This will be used in this project during the intervention phase in the educational materials by increasing the

participants' feeling of self-efficacy, or ability to complete the task of increasing resilience and decreasing compassion fatigue. As the project is being completed by participants who work together, they may notice changes in their co-workers also participating in the project and their progress of increased resilience and decreased compassion fatigue. Encouragement will be provided in the educational materials to work on specific recommendations of improving resilience for the week. Tasks that will be asked of the participants in the weekly educational materials will attempt to be pleasant and things that the staff will want to do, further reinforcing self-efficacy by them completing the task and the pleasant physiological or psychological response that they receive. After the study is complete this theory continues to support this project, as the palliative care providers will have additional tools related to resilience knowledge that they can use to empower themselves (strengthening self-efficacy), ultimately positively impacting their behavior and environment (outcome expectations).

The change model that will be used to implement the change is the FOCUS Plan, Do, Study, Act (FOCUS-PDSA) cycle. This model focuses on steps that need to be taken to accomplish a goal (Sollecito & Johnson, 2018). The model begins with FOCUS, the abbreviation represents (a) Find a process to improve, (b) Organize the team that knows the process, (c) Clarify the current knowledge of the process, (d) Understand the causes of process variation, and (e) Select the process improvement (Sollecito & Johnson, 2018).

The FOCUS section of the FOCUS-PDSA cycle must be completed prior to the PDSA cycle beginning as it is the planning phase of the intervention. To begin, a process needs to be identified to make a beneficial improvement, increase resilience and decrease compassion fatigue was selected. A team was organized, including the project developers, mentors, and instructors. The current knowledge was discovered with the literature review. Different processes for

improvement were identified, and the specific intervention of resilience education was chosen for the improvement.

For the PDSA part of the cycle, the Plan phase focuses on understanding the problem or opportunity and identifying key attributes of the topic (Sollecito & Johnson, 2018). The planning phase is the longest of all the parts of the model for this project. The project focus of resilience and compassion fatigue was selected, the location and unit in which the project would be implemented were secured, research was conducted on the topic, and the intervention was identified.

Next, in the Do phase, the plan that has been created to decrease compassion fatigue and increase resilience is put into place and carried out (Sollecito & Johnson, 2018). In this phase, a pre-intervention survey will be conducted prior to participants receiving educational materials. Then educational material on resilience will be sent out per email for seven weeks. With the educational materials, a brief survey will be sent out requesting feedback on the information. Once this is completed, a post-intervention survey will be conducted.

In the Study phase of the cycle, the project is assessed for the intended improvement (Sollecito & Johnson, 2018). The pre-and post-intervention surveys will be analyzed to assess for changes to see if the resilience education had an effect on compassion fatigue or resilience. The weekly feedback will also be analyzed.

Finally, in the Act phase, it is determined if the process has been effective or if a change needs to be made to the process (Sollecito & Johnson, 2018). The results of the surveys will be disseminated to the staff who participate in the project. Depending if there was an improvement and based on the weekly feedback, changes can be made to the educational materials with the end goal of them implementing it with the entire Central Minnesota agency in which the project

is being implemented. In the instance that there was no improvement, the intervention and process will be reassessed, and the intervention and/or implementation process may need to be altered.

Aims/Goals/Objectives Clarified

The aim of this project is to increase the knowledge of resiliency, therefore increasing resilience, decreasing compassion fatigue, and positively impacting the palliative care unit at the Central Minnesota agency.

Goals and SMART Objectives

The goal shows where we want the project to culminate, and the SMART objectives are the steps in the process. The project goal is: to increase resilience and decrease compassion fatigue in palliative care clinicians after seven weeks of resiliency education. Several SMART objectives have been identified to reach the project goal.

- The first objective is to create a pre-intervention survey of resilience and compassion fatigue and distribute it through the organization's email to 100% of the palliative care clinicians (nurses, physicians, advanced practice nurses, and spiritual care) at a Central Minnesota palliative care department by August 28, 2022.
- The second objective is to send out a weekly resilience education with resiliency interventions, as well as a request for feedback, to the palliative care clinicians (nurses, physicians, advanced practice nurses, and spiritual care) via email from September 5, 2022 through October 23, 2022.
- The third objective is to take 100% of the results from the pre-intervention survey from the palliative care clinicians (nurses, physicians, advanced practice nurses, and spiritual

care) at a Central Minnesota palliative care department and compile them into a spreadsheet by September 9, 2022.

- The fourth objective is to electronically disseminate the post-intervention survey by utilizing SurveyMonkey and the organization's email to 100% of the palliative care clinicians (nurses, physicians, advanced practice nurses, and spiritual care) at the Central Minnesota palliative care department by October 24, 2022.
- The fifth objective is to add the post-intervention survey results into a spreadsheet and analyze data results of pre- and post-tests using Intellectus software and disseminate results to the organization and staff by December 7th, 2022.

Desired Outcomes

The primary desired outcome of the project is to determine if resilience training decreases the rating of compassion fatigue and increases the rating of resilience by palliative care clinicians. Another desired outcome of the project is to have a high level of participation in the surveys and for the clinicians to read and implement information put forth in the educational materials. If the project is successful, the desired outcome will be to implement the education to the organization as a whole to increase resilience and decrease compassion fatigue for all employees. Likewise, a desired outcome is for all healthcare organizations to implement resilience education for employees to improve resilience and decrease compassion fatigue.

Gantt Chart

The Gantt chart (Appendix E) depicts the timeline for the project. This timeline aids the project developers in the organization of the project as well as gives a visual construct of the tasks that need to be completed supporting the evolution of the project. The project is broken down into Planning, Implementation, and Evaluation phases. The planning phase is the

longest-lasting phase of the project, because it encompasses the development of the PICOT, securing a site, completing a literature review, securing a mentor, development of SMART goals and objectives, organizational assessment, development of theoretical frameworks, develop and find surveys, IRB approval, and development of educational materials. Some of the activities in the planning stage needed to be started prior to others, such as the project developers needed a clear view of the literature prior to development of goals and objectives, and the goals and objectives needed to be clear prior to finding surveys to know what is to be measured. However, many activities overlapped and several were done concurrently; securing a mentor, development of SMART goal and objectives, the organization assessment, and development of a theoretical framework were done simultaneously as the outcome may have some impact on the other areas, but do not dictate them. The planning activities need to be completed prior to implementation other than the development of all of the educational materials, which will continue to be developed during the implementation phase.

The implementation phase will begin as soon as the IRB approval is obtained and run for 61 days to allow time for pre-survey, educational information to be distributed, and post-survey. As depicted in the Gantt chart, the pre-survey must be completed prior to initiation of the educational materials. This is important as viewing of the educational materials could change the pre-implementation scores. Likewise, the educational material needs to be completed prior to the post-intervention survey to get the full effect of the materials.

The analysis phase can begin prior to the completion of the implementation phase as pre-survey information can be analyzed. However, the analysis phase cannot be finished until the post-implementation survey is completed and the results are analyzed. Once all of the information is received from the surveys, it will be analyzed and then reported to the

organization. Findings cannot be reported until the project is completed and the results are analyzed.

Work Breakdown

The work breakdown structure (Appendix F) depicts the breakdown of tasks needed to complete the project. The work breakdown is divided into planning, implementation, and evaluation phases.

In the planning phase, tasks that were completed include (a) development of PICOT, (b) securement of site, (c) literature review, (d) mentor secured, (e) development of of smart goals and objectives, (f) organizational assessment, (g) development of theoretical framework, (h) develop and find surveys, (i) IRB process, and (j) development of educational materials. These tasks are broken down further in the diagram in Appendix F.

In the implementation phase, a pre-intervention survey, dissemination of educational materials, and a post-intervention survey will be conducted. Steps for the pre-intervention survey include determining the recipients of the survey, obtaining email addresses, developing an email introduction to the project, attaching the survey to the email, checking the number of participants who have completed the survey on day five, and if 100% of participants have not responded to send another email with the survey linked. Similar to the pre-intervention survey, the post-intervention survey will be sent to the recipients of the pre-survey, on day five, the number of participants who have completed the survey will be checked, and if 100% participation has not been achieved, the survey will be sent again.

In the analysis phase, the survey results will be investigated. This process will begin with entering survey results into google sheets, these will then be transferred to Intellectus for analysis

to be run on the data. Once the results are analyzed, they are disseminated per this report and directly to the unit.

Communication Matrix

Communication with stakeholders is important in the project. For the planning phase, project developers Michelle Baker and Sara Kalis communicate by phone and text for project deadlines and information. Developers take turns being in charge of specific projects, assigning specific tasks to teammates, and submission of assignments prior to the deadline. Due dates are listed on the communication matrix within the DNP project charter/action plan (Appendix G). Due dates are arranged so teammates can review all information before class submission. Twice quarterly meetings are held with the project chair, Dr. Melissa Skoff, in part one, and Dr. Rhea Ferry in parts two and three. These meetings are held online and set up through email. Other stakeholders, including Michelle Jaskolka, Kristi Husen, and Kasy Omann, are kept in contact utilizing email with in-person meetings as needed.

For the implementation phase, stakeholders will also include the clinicians involved in the project who are the participants. Participants of the project will be contacted per email. Pre- and post-surveys, as well as educational materials, will be disseminated per email. The evaluation phase communication will be completed per email.

Logic Model

The logic model (Appendix H) describes how the project's resources, activities, and results are related. The resources are the inputs that are invested into this project such as time, energy, and support. The resources of time, energy, and support include: time from staff to read resiliency information and complete surveys, support from department and hospital management for conducting activities, access to palliative care clinicians' emails in order to receive

information, time and energy from the project developers (Michelle Baker and Sara Kalis), and time and energy from faculty members (Melissa Skoff and Rhea Ferry).

There are various activities and outputs of this project's logic model. Activities include: reading the weekly newsletter with resiliency education and intervention, educating staff on resilience and resiliency techniques, and utilization of work email as primary communication on resilience. Outputs, or direct results of the activities listed, include the educational material sent out, staff responses from the weekly education, and survey results on resiliency and compassion fatigue.

Outcomes are the results of the project. These include short-term (1 month), mid-term (2 months), and long-term (3 months) outcomes of the project. The short-term outcome expected is an increase in resiliency knowledge. The mid-term goals of this project include: decrease in compassion fatigue and burnout, as well as an increase in resiliency skills. Finally, the long-term goals of the project include: increased resiliency resources available to agency staff, an increase in staff resiliency, and a decrease in staff turnover.

Budget

There are costs for the project developers for this project. An advanced level of SurveyMonkey is going to be used, which will cost researchers $70 for each month, and it is anticipated that this will be needed for two months. Additionally, the use of The Resiliency Scale costs seventy-five dollars, whereas The Professional Quality of Life Scale is free as long as credit is given to the author. The Intellectus Statistics will be used for analyzing data; this is a free platform, so there will be no cost for use of this software.

There are no direct costs to the organization associated with this project, however, there are indirect costs of time. The primary cost of time with this project is the amount of time it will

take for the participants to complete the pre-and post-intervention survey and to read the information provided on resiliency. Over the lifetime of the project, with the long-term goal of sharing the resilience education and interventions created in this project with the organization as a whole, the project will have no cost as the organization has staff who are able to share the materials and has a resource site to which the materials can be shared.

There are no direct monetary gains associated with this project for either the project developers or the organization. However, there is the possibility of organizational gains regarding staff with decreased compassion fatigue and increased resiliency; these gains include increased staff engagement, quality of work, job satisfaction, coping, adaptability, and decrease in job disassociation, burnout, and staff turnover. These gains can decrease organizational costs at no monetary cost to the organization.

Methodology and Analysis

The aim of this project is to determine the impact of resiliency training on resilience and compassion fatigue for palliative care clinicians in a Central Minnesota organization over a period of 8 weeks. The measures chosen to study this process include outcome, process, and balancing measures. In this methodology and analysis section, the participants, survey measurements, and statistical analysis will be described. The design and methods chosen for this project are based on evidence-based practice for quality improvement.

All physicians, CNPs, APRNs, nurses, and spiritual care specializing in palliative care in the in-patient, out-patient, and home health departments in the Central Minnesota agency will be asked to participate in the project. No incentives will be provided due to the opportunity for bias and an increase in project costs. Once the project is completed, the plan is to make the educational materials available to all employees within the organization. This will sustain the

project and make it widely available. The only continuing expense for this project is the time vested for employees to complete their education. The potential benefit to the organization is increased retention, work performance, work engagement, job satisfaction of employees. As none of these are actual costs or benefits, only potential, the return on investment is 0%.

Table 1

ROI of clinical project Outcome, Balance, and Balancing Measures

Project Cost to organization	Financial Value	Return on Investment
$0	$0	0%

Outcome, Balance, and Balancing Measures

Outcome Measures

Outcome measures will be quantitative data obtained through the participants completing the same surveys both pre- and post-resiliency training via SurveyMonkey utilizing email. SurveyMonkey is a website used solely for the purpose of creating and filling out surveys. The site allows for quantitative and qualitative surveys (e.g., Likert scales and open-ended questions respectively), by using SurveyMonkey to deliver our pre-and post-tests we hope to attain results from our participants that are easy to utilize and analyze. Within the survey, the initial question will be to choose which describes your position best: (a) physician, (b) CNP or APRN, or (c) nurse or spiritual care (Appendix M). The purpose of delineating a job position is that previous research has little evidence on advanced practice providers and physicians. By grouping participants by job class, participants will remain anonymous but the data can then be separated and analyzed. Spiritual care is being combined with nursing as there is only one spiritual care worker and this grouping will allow the spiritual care worker to remain anonymous.

The Professional Quality of Life (ProQOL) (Appendix I)

The first outcome measure will rate the level of compassion fatigue using the ProQOL. This measure was developed by Dr. Beth Stamm for "understanding the positive and negative aspects of helping those who experience trauma and suffering" (ProQOL, 2021, para. 1); this measure has been in use since 1995 (ProQOL, 2021). The ProQOL is the most widely used measure of the negative and positive effects of working with people who have experienced tremendous stress (Stamm, 2010). There were 46 papers using the ProQOL among the 100 in the Published Literature in Posttraumatic Stress Disorder database (Stamm, 2010).

The ProQOL has been tested and found to be reliable and valid in rating compassion fatigue (ProQOL, 2021). Validity and reliability were originally validated in a study using 1135 participants and had an alpha (probability) of 0.81 showing the scale ability to rate compassion fatigue to be statistically significant (Complete Dissertation, 2022). In the recent study by Geoffrion et al. (2019), the authors tested the validity of the ProQOL and in their analysis, found that it supported the ProQOL's convergent validity. The ProQOL has 30 questions with a 5-point Likert scale from never (1) to almost always (5) (Stamm, 2010). All questions in the scale must be answered for it to be used for the study.

The Resiliency Scale (Appendix J)

The second outcome measure is The Resiliency Scale. This scale was first designed by Wagnild and Young in 1993, and will rate the level of the participants' resiliency (The Resilience Center, 2022). The Resiliency Scale has been shown to be reliable and valid in measuring resilience; internal consistency has been determined by a comparison of twelve studies that used the Resiliency Scale utilizing a wide range of subject populations (Wagnild, 2009). The Resiliency Scale is currently available in 35 different languages (The Resilience Center, 2022). The Resiliency Scale has 25 questions with a 7-point Likert scale from disagree (1) to agree (7)

(The Resilience Center, 2022). All questions in the scale must be answered in order to be used for the study.

Process Measures

The process measures will ensure the process to improve resilience and compassion fatigue can be achieved. The first process measure is the completion of the pre-intervention survey by participants. The second process measure is providing all participants with the same educational material, which will be delivered to the participants by email. The educational materials will include an overview of resilience including personal, social, and spiritual. These three areas will then be broken down into two subgroups in weekly education with recommendations for improvement in those areas. Each week a short survey (per SurveyMonkey) will be attached to the education material asking the participants to rate the materials and provide feedback on one item they plan to implement in their lives (Appendix L). A process measure of a post-intervention survey will then be conducted per email. The final process measure that will be analyzed is the number of participants who fully completed both the pre-and post-intervention surveys.

Balancing Measures

The balancing measure is necessary to ensure that unanticipated negative outcomes do not result from the educational sessions. As the largest potential negative effect of the study is taking clinician time, a clinician satisfaction survey regarding the time it took to complete the training with a 1-10 ranking will be sent with the post-survey per email (Appendix K). This measure will provide evidence to gauge any negative effects of the amount of time it took to complete the training created by the project.

Project Methodology for Pre-Implementation, Implementation, and Post-Implementation

The FOCUS-PDSA is the change model being utilized for the project. The planning has been completed, and the next step is the Do stage; the first step in the Do stage is informed consent and the pre-implementation survey. In an email with information on informed consent to participate in the project, The Resilience Survey and the ProQOL will be sent to all participants linked with a QR code. The email will request participation and give the participants one week to complete the survey. An established timeline is important in the email so the participants are aware of the expected time frame. Researchers will be able to see the number of responses received, so on day five after the survey has been sent out if the participation is less than expected (80% participation) or if surveys are being returned incomplete, a second email will be sent including the link to the survey requesting participation in the project. The pre-implementation survey will provide quantitative data including the number of participants and the data received from the surveys. The project developers will review the survey results. The number of participants who complete the survey will make inferences regarding the commitment of the participants and unit for the project. If project developers note low participation, the survey can be re-sent to participants. The data from the survey will be entered into a Google sheet. All participants will receive the same survey and educational materials, there is no control group or separate interventions that are being trialed.

Continuing with implementation in the Do stage in the PDSA cycle, the educational material with suggestions for improving resilience will be sent out weekly for seven weeks. The timeframe of one week was chosen to allow participants time to read the materials and start a change prior to the next educational materials. Continuing to follow the PDSA, reflection and studying the effects of the intervention needs to be continuously done throughout the change process. Therefore, a short survey is attached to each weekly educational material by a QR code.

By requesting feedback that will take less than a minute to complete, it will track the number of participants who are completing the educational materials. There is the possibility that the participants will read the information and not provide feedback, however, there is no way to track if the participants are reading the information. The weekly feedback will provide both qualitative and quantitative data which can be used to alter future educational materials during the project.

A post-implementation survey will be sent to all participants per SurveyMonkey by email linked with a QR code. This includes all of the same survey questions as the pre-implementation survey including their job position, The Resilience Scale, and the ProQOL. In the email attached to the survey, it will ask the participants to complete the survey in one week. After five days, the survey responses will be reviewed for the number and completeness. If it is found that the number or completeness of the responses is lacking (less than 80%), an additional email will be sent out with the survey link requesting participation in the post-survey. All survey responses will be entered into a Google sheet.

Continuing with the Study stage, Intellectus software will be used to analyze the data. All data will be entered into the software including all individual line answers and total numbers for each survey. The means of the pre-and post-intervention survey results will be separately compared using paired t-tests which will show if there was a significant statistical difference, or effect size, between the pre and post-intervention responses, what direction in which the difference was made (more or less resilient and emotional fatigue), and the confidence interval (Dancey et al., 2012). If the data is skewed, then the Wilcox analysis will need to be utilized (Dancey et al., 2012). An analysis of comparing mean scores on the post-intervention will be done by dividing physicians, APRNs, and the nurse/ spiritual care groups to analyze if there is a

statistical difference within and between these groups again using paired t-tests. By being able to divide the groups, the results will show if the education is able to be generalized to the population groups from which they are derived. Running statistical analysis of resilience and compassion fatigue separately will provide evidence if either or both qualities had a statistically significant change. Likewise, by entering data for each question into the Intellectus data set, individual question mean responses, and the responses which contribute to compassion satisfaction, burnout, and secondary traumatic stress, can also be analyzed from the pre- to the post-intervention survey.

In addition, the data will be analyzed with a Pearson correlation coefficient, indicating whether or not there is a correlation or relationship between resilience and compassion fatigue scores. A scattergram will be used to depict these results.

The potential problem with the implementation plan is the participants may not complete all the steps of the project, including any surveys or educational materials. The use of SurveyMonkey will decrease the chance of an individual answer being omitted as this software can stop the participant from moving on to the next set of questions until it is answered. Another potential problem is staff changes during the project. The department is currently hiring another clinician, and the clinician may not begin prior to the implementation of the project.

Intervention Plans

Between the time of project planning and implementation, during the IRB review, project goals and objectives were reviewed and found to be up to date and accurate. The planned go-live date for the project will be disseminated to the participants on August 29, 2022 beginning with the pre-implementation survey. A date of September 5th is the planned date for completed responses to the pre-implementation survey. Starting on September 5, 2022 the weekly

educational material will be sent to the participants, with the last one being sent on October 17, 2022. On October 24, 2022 the post-intervention survey will be sent to participants with an expected completion date of 10/31. The data will be analyzed utilizing Intellectus.

IRB/Ethical Considerations

This quality improvement project was sent through the College of St. Scholastica IRB for ethical consideration, and was approved. The purpose of the IRB is to review research for ethical considerations prior to implementation in order to protect the participants. Several boards oversee the protection of human subjects. The United States follows both international and national codes of conduct for research. Ethical considerations for this project were taken from several sources. The first source for ethical consideration is the American Nurses Association (ANA). ANA Code of Ethics with Interpretive Statements (2015) ethical statement is:

> The ANA is the premier organization representing the interests of the nation's 3.6 million registered nurses. ANA advances the nursing profession by fostering high standards of nursing practice, promoting a safe and ethical work environment, bolstering the health and wellness of nurses, and advocating on health care issues that affect nurses and the public. ANA is at the forefront of improving the quality of healthcare for all. (p. 2)

The second source of ethical conduct was taken from the Ethical Principles and Guidelines for the Protection of Human Subjects in Research, publication by the Department of Health, Education, and Welfare (2014), also known as the Belmont Report. The objective of the principles "is to provide an analytical framework that will guide the resolution of ethical problems arising from research involving human subjects (p. 3). The Belmont Report states:

> The basic ethical principles that should underlie the conduct of biomedical and behavioral research involving human subjects, and to develop guidelines, which should be followed

> to assure that such research is conducted in accordance with those principles. It is a statement of basic ethical principles and guidelines that should assist in resolving the ethical problems that surround the conduct of research with human subjects. (p. 1)

The third ethical principle was taken from the International Ethical Guidelines for Biomedical Research Involving Human Subjects, published by The Council for International Organizations of Medical Science in collaboration with the World Health Organization (2002). The ethical principle of the document states:

> To indicate how the ethical principles that should guide the conduct of biomedical research involving human subjects, as set forth in the Declaration of Helsinki, could be effectively applied, particularly in developing countries, given their socioeconomic circumstances, laws and regulations, and executive and administrative arrangements (p.7).

Additionally, the guidelines "draw the attention of sponsors, investigators and ethical review committees to the need to consider carefully the ethical implications of research protocols and the conduct of research, and thus conduce to high scientific and ethical standards of biomedical research" (p. 13). These ethical considerations are taken into account by the developers of the project as well as the IRB approving this project, and this project is in compliance with ethical considerations.

Privacy and confidentiality were taken into consideration for participants. All of the records from the project will be kept confidential and are anonymous. No information will be provided to identify any individual participant; data will be reported in grouped or aggregated form. In the survey, the participants are not asked their name or identifying information other than job class. Information is kept in a password protected computer. As there is only one

spiritual care worker, the nurses and a spiritual worker were put together in one job group to keep their identity anonymous.

The risks that the participants potentially encounter are a violation of the expectation of normal everyday life and the extra time and mental effort required to complete the surveys and education. To minimize this risk, the surveys and educational materials were kept to a time length of approximately 15 minutes per week. Another risk is the inconvenience considering the length of time requested for participation. Again, to minimize this risk, the educational material is limited in length to take approximately 15 minutes to complete. The last risk is the potential for psychological risks associated with the reassessment of resilience and compassion fatigue. To minimize this risk, participants will not be able to be identified as all data will be disseminated in grouped format. Additionally, standardized tests were utilized, which have been proved reliable and effective in measuring both resilience and compassion fatigue. All risks are addressed in the introduction email, so participants can choose to participate or not participate after fully knowing what is expected of them.

Ethically, the project intervention has more potential positive returns than negative. The project could provide the organization with increased staff engagement, quality of work, job satisfaction, coping, adaptability, and a decrease in job disassociation, burnout, and staff turnover. These gains can decrease organizational costs. On a community level, the results may improve patient care and satisfaction, improve patient outcomes, and decrease compassion fatigue and increase resilience in other healthcare workers. Globally, the research can add to the knowledge of resilience and compassion fatigue as well as decrease general healthcare costs if published.

Several ethical considerations were taken into account when planning this project. This project is not funded by the facility in which it is taking place, so this reduces any potential conflict of interest. No deception of the participants is used in this project. The students developing this project have no authority in the palliative care department, which would impede the voluntary participation of this project.

Palliative care was chosen for this project as they are at high risk for compassion fatigue related to work demands resulting from caring for patients who have serious chronic illnesses, but little research has been done on palliative care providers. All palliative care clinicians within the Central Minnesota organization will be recruited for the project per a recruitment letter sent via email. This includes recruiting all palliative care inpatient, outpatient, and home health clinicians, including four nurse practitioners or APRNs, three physicians, seven nurses, and one spiritual care worker. It is estimated that there will be 15 participants. No vulnerable persons will be included in the project. The palliative care clinicians will be requested to participate in the project per the survey cover letter email including informed consent (Addendum N). The consent states that project participation is voluntary. The potential risks and benefits of the project for participants is also discussed in the cover letter.

The IRB process was straightforward utilizing the IRBnet website. Although the process seemed daunting from the beginning, when the time for IRB approval came, it was a smooth process due to the preparations that had already been made. Information on the project proposal, all surveys that are going to be used, and project approval was uploaded into the IRBnet website. Once the appropriate forms were uploaded, the students and faculty involved in the project signed the proposal. Once signed, it is automatically sent to the IRB committee for approval.

Revisions of the IRB package needed to be completed prior to it being approved. The IRB package was returned with required revisions of changing the wording on the informed consent to make it clear that the participant answers on the survey are anonymous and adding contact information for other people within the College of St. Scholastica. The revisions were made, and the proposal form was re-uploaded and the package was closed without the need to create a new package or upload other information previously uploaded that did not need revisions. It was returned again due to the consent form needing different wording to indicate that the facility is giving consent to conduct the project, and adding a project description to the consent form instead of the project title. The consent form was updated and the package was resubmitted. A message was received from the IRB indicating the original request for the addition of anonymity and the phone numbers were not updated in the IRB. Review of the IRB package was completed, and discovered that the information is in the package twice, but was only updated in one area. The information is in the package twice since it is uploaded as a stand-alone document and as an attachment to the IRB form. All areas were updated and the package was relocked. The IRB package was then accepted. In total, the IRB package was updated three times prior to being accepted. Once accepted, the IRB package application showed an effective date of August 26, 2022.

Implementation

Project developers met with the facility mentor to review the project goals, objectives, desired outcomes, and work plans prior to implementation; it was determined that these are appropriate to meet the needs of the identified problem. It was decided that the project mentor would send out a mass email to all the potential participants in the project as a pre-introduction. With this, it will give the project credibility coming from staff within the unit, and the project

developers will have all the email addresses of the participants. With the IRB package approval on August 26, 2022 the projected start date of August 29th did not need to be altered in the timeline.

All surveys were placed into SurveyMonkey prior to the August 29, 2022 start date. On the planned start date, the survey along with an introductory letter was sent to all 16 potential participants. By day four, there were only six respondents, so an email reminder was sent out to complete the survey. On September 5, 2022, the date when the first educational newsletter was sent out, 10 pre-implementation survey responses were received. Two additional pre-implementation surveys were received after this date for a total of 12. This is 75% of potential participants. One respondent omitted to answer 2 questions on the ProQOL, otherwise all surveys are complete. The average time it took for respondents to complete the survey was nine minutes. It was anticipated that it would take 10-15 minutes to complete, so this was less time for participants than expected.

Project developers were unable to find quality resources for resilience education already created, so it was developed in the form of newsletters. In an effort to create professional appearing newsletters, the platform of Canva was utilized. This had an additional cost to project developers of $10 per month. It was utilized for two months for a total of $20. A template for the weekly educational materials was utilized so that each week's education would follow the same format and flow. Project developers found a graphic artist who would make a graphic depicting all seven categories of educational material used for individual editions of the newsletter to create unity and understanding of the education (Addendum O). This graphic was done at no cost to project developers. The two-question survey, for weekly feedback, was created and placed on

the weekly education for feedback (Appendix L). All educational material was created and distributed weekly as planned.

There were a couple of unexpected challenges with the implementation. The development of the educational materials was more time-consuming than anticipated, and had the added expense of the platform used to create the materials. However, a quality product was created on a topic with limited resources that can be utilized in multiple settings.

Another unexpected challenge was the weekly surveys which were being utilized for the development of educational materials. One week after the initial educational material was sent, there were only three responses from the weekly survey. With only three responses it was difficult to know how many people had read the material. Project developers met with their mentor during week two of the educational materials. The project mentor has been printing the educational material and putting it out in a common area in the unit. She stated that she would follow up with staff on completing the survey. During this meeting, the mentor also stated that the first educational material was possibly too technical and high-level of information, and that the staff wanted something more "easy reading." Project developers met with the project chair the same week. This issue of creating more easy reading and less technical material was discussed. Determined that creating material which is informative enough to create a change is the greatest priority for the project's success. Determined that the best strategy moving forward is to create material that is interesting to read, but keeping it more informative than simple.

After week 4 of the educational material, project developers noted that only one additional weekly survey had been completed. The project mentor also emailed around the same time that was noted stating that the weekly survey was not working. It was discovered that the weekly survey could only be completed once. The project mentor also asked that the QR codes

be labeled so that if a participant gets behind, they are able to identify which is the correct survey. New weekly surveys were created which were unique to each week's education, labeled, and emailed to the participants.

In addition to the Likert scale, there was an open question of what the participant will use from the newsletter. Information from this was used to improve the education throughout the process. One of these instances came from a week 1 newsletter comment of "would like link directly to YouTube attached to the information." This feedback was used in the creation of a future newsletter when there was another YouTube video recommended to increase resilience; in the later newsletter, YouTube was directly linked to the newsletter to easily find the video rather than having to search for it. After that later newsletter, there was an additional survey comment of "I like the attached links."

In hindsight, the weekly surveys had positive and negative aspects. The negatives were: they were hard for the participants to keep track of, project developers did not correctly anticipate how they would work on a weekly basis, and by the time the survey was completed educational material for two weeks later was being developed, so it had limited usefulness for its intention of helping to develop preceding educational material. On the positive side, the project developers were able to make a couple of changes to newsletters based on the feedback creating a better product for the participants.

The post-implementation survey was sent out one week after the final educational newsletter on October 24, 2022. The timeline to have the survey completed was October 31st, but there were only six responses, so the survey was extended by one week. In total, nine post-implementation responses were received. It was noted that there were two pre-implementation responses from physicians; however, there were no post-intervention in the

job classification of physicians. The additional week for the post-survey responses pushed the original timeline for data analysis and dissemination back one week, otherwise, the project ran on time as planned for implementation.

Results from Data Collection

All surveys were sent out per email and data was collected through the platform SurveyMonkey. The survey results associated with the educational material were analyzed independently. The pre- and post-implementation surveys of the Pro-QOL and the resilience scale results were analyzed using Intellectus software. In total, 12 participants completed the pre-implementation survey and nine completed the post-implementation survey. All data was complete except one participant skipped two questions in the Pro-QOL section of the pre-implementation survey. The result for the incomplete survey was not utilized in the analysis. As all participants were anonymous, no efforts could be made to identify the participant to obtain the data.

As previously discussed, there was an unintended issue with the participants being able to complete the survey associated with the weekly education. This may have interfered with the number of responses to this survey, but it is not expected that this had an impact on the overall project results as the resilience education materials survey was only used as feedback for project developers for creating educational materials. No unintentional benefits or consequences were noted. No ethical implications emerged.

Survey for Feedback on Educational Materials Results (Appendix L)

This survey included a Likert Scale of 1 “not helpful” to 5 “very helpful” on the educational materials on resilience. There was also a free text area to state what you (the participant) will implement in their life from the education that was provided. The intention of

this survey was to receive feedback on the educational material in real time in hopes of gaining information that would be useful for creating later materials. From the weekly surveys, there were six responses from week 1, one response from weeks 2-4, and two responses from weeks 5-7. In total, from the educational material, there were no scores of 1, one score of 2, one score of 3, nine scores of 4, and two scores of 5 for an average rating of 3.9 out of 5. In addition to the comments previously detailed, they in include: “inner critic so true,” “the material is interesting, just a little long,” “I appreciate the reflection after a stressful situation,” “I appreciate the information on health connections and buddy system,” and “altruism is a great trait to regularly exercise.”

The Professional Quality of Life Scale (ProQOL)

In the ProQOL (2021), compassion fatigue is based on a combination of scores on questions regarding burnout and secondary traumatic stress. For burnout, the higher the scores indicate a higher risk of burnout. Scores below 23 reflect a low level of burnout whereas scores greater than 41 indicate a high risk of burnout. Secondary traumatic stress has separate questions within the ProQOL, and is indicated with higher numbers in this category. Participants have increased potential for secondary traumatic stress with scores of 43 or greater. The scores of burnout and secondary traumatic stress are then combined for a compassion fatigue score, and again the lower scores indicate less compassion fatigue. The high-risk potential for compassion fatigue scores is 84 or higher. Additionally, the ProQOL scores for compassion satisfaction, these results were also analyzed.

The pre-intervention mean compassion fatigue score of all participants was 47.38 and the post-intervention mean score was 45.75 (see Figure 1). The results of the two-tailed paired samples *t*-test based on an alpha value of .05, shows that although the difference between the

pre-and post-intervention survey results was in the expected direction, results showed that this was not statistically significant: t= -0.70 (8), p= .507 (See Table 2).

Figure 1

The means of Pre- and Post-Intervention Compassion Fatigue with 95.00% CI Error Bars

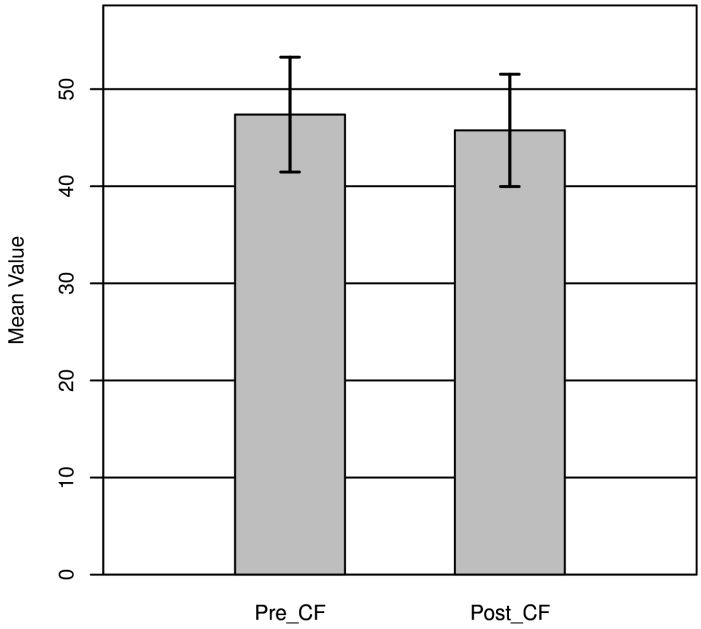


Table 2

Two-Tailed Paired Samples t-Test for the Difference Between Pre- and Post-Intervention Compassion Fatigue

Pre-Intervention		Post-Intervention				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
47.38	8.53	45.75	8.35	0.32	.761	0.11

Note. N = 8. Degrees of Freedom for the *t*-statistic = 7. *d* represents Cohen's *d*.

Mean compassion fatigue by job classification of pre- and post-intervention results were also analyzed using the paired t-test. As there were no post-intervention survey results in the physician category, only results from the nurse/spiritual care and advanced practice nurse practitioner (APRN) groups were able to be analyzed. Neither of the groups' results were statistically significant. The nurse/spiritual care group showed a decrease in compassion fatigue with a pre-intervention mean score of 43.50 and post-intervention of 42.25. The mean resilience of the APRN group also decreased from 51.25 to 49.25 from pre- to post-intervention survey scores.

Other results were also analyzed for statistical significance within the ProQOL of pre- and post-intervention results of compassion satisfaction, burnout, and secondary traumatic stress. The results of the two-tailed paired samples *t*-test based on an alpha value of .05, shows that although the difference between the pre- and post-intervention survey results was in the expected direction, however, results showed that none of the results were statistically significant in any of the categories of compassion satisfaction, burnout, and secondary traumatic stress (see Table 3).

Table 3

	Pre-Intervention		Post-Intervention				
	M	SD	M	SD	t	p	d
Compassion Satisfaction	38.11	3.76	41.22	2.95	-2.26	.054	0.75
Burnout	25.62	4.75	22.50	3.07	1.40	.204	0.50
Secondary Traumatic Stress	21.75	4.13	23.25	5.55	-0.50	.630	0.18

Note. d represents Cohen's *d.*

Resilience Scale

For the resilience scale, a score of 25-100 is very low, 101-115 is low, 116-130 on the lower end, 131-145 is moderate, 146-160 is moderately high, and 161 to 175 is rated as high (The Resilience Center, 2022).

The pre-intervention mean resilience score of all participants was 138.56 and the post-intervention was 142.56 (see Figure 2). The results of the two-tailed paired samples *t*-test based on an alpha value of .05, shows that although the difference between the pre- and post-intervention survey results was in the expected direction, results showed that this was not statistically significant: t= -0.70 (8), p= .507 (See Table 4).

Figure 2

The means of pre- and post-intervention resilience scores with 95.00% CI Error Bars

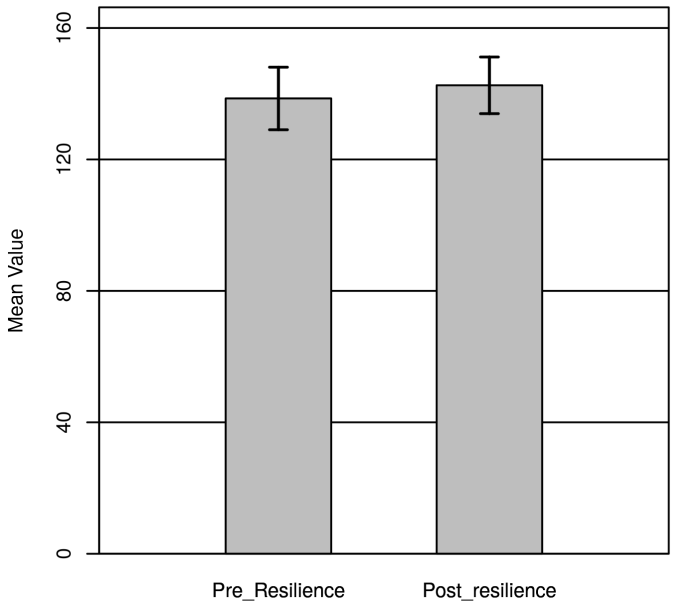


Table 4

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

Pre-Intervention		Post-Intervention				
M	*SD*	*M*	*SD*	*t*	*p*	*d*
138.56	14.57	142.56	13.19	-0.70	.507	0.23

Note. N = 9. Degrees of Freedom for the *t*-statistic = 8. *d* represents Cohen's *d.*

Mean resilience by job classification of pre- and post-intervention results were also analyzed using the paired t-test. As there were no survey results in the physician category, only results from the nurse/spiritual care and APRN groups were able to be analyzed. Neither of the groups' results had statistically significant results. The nurse/spiritual care group showed a decrease in resilience with a pre-intervention mean resilience score of 145.40 and post-intervention of 140.20. The mean resilience of the APRN group increased from 130.00 to 145.50 from pre- to post-intervention survey scores.

Relationship Between Resilience and Compassion Fatigue

The data was analyzed with a Pearson correlation coefficient, assessing if there is a correlation or relationship between resilience and compassion fatigue scores. The result of the correlation was examined based on an alpha value of .05. There were no significant correlations between post-intervention survey results of participants for resilience and compassion fatigue (See Table 5). The scatterplot of the relationship between compassion fatigue and resilience is depicted in Figure 3.

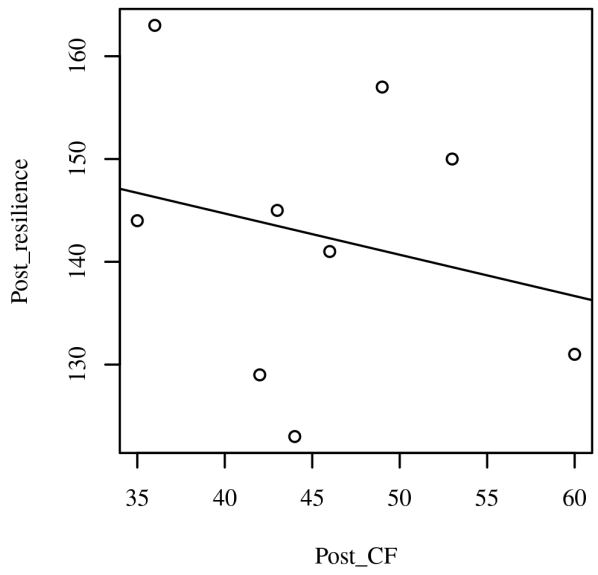
Table 5

Pearson Correlation Results Between Post-Intervention Compassion Fatigue and Resilience

Combination	*r*	95.00% CI	*n*	*p*
Post-Intervention Compassion Fatigue and Resilience	-.24	[-.78, .50]	9	.533

Figure 3

Scatterplots with the regression line added for Post-Intervention Compassion Fatigue Resilience



Discussion of Data/Outcomes Interpretation

The aim of this project is to find if a comprehensive resilience training program will have an impact on palliative care physicians, advanced practice nurses (APRNs), spiritual care, and nurses related to resilience and compassion fatigue. Although it was not statistically significant, this project showed an increase in resilience and compassion satisfaction, and a decrease in

compassion fatigue, burnout, and secondary traumatic stress after seven weeks of resilience education. This means that overall the participants had improvement, but with no statistical significance, the data is not strong enough to generalize to other people.

One drawback to obtaining significant results is in the pre-implementation survey participants scored in the "moderate" range for both resilience and compassion fatigue. With study participants already in the moderate range, there is not as much availability for growth.

Another goal of this project was to analyze the results and differences between participants in different job classifications. As no physicians completed the post-implementation survey, their results were not able to be analyzed. No statistical significance was found in either the nurse/spiritual care and APRN groups. Although not statistically significant, one unexpected result was in the nurse/spiritual care group with a decrease in resilience after the education. The APRN group had an improvement in resilience whereas the nurse group had a slight decrease in resilience. There are multiple possibilities as to why one group improved while the other group declined. Some of the possible explanations include that the nurse/spiritual care group had less time available to read the materials or that the APRNs more fully understand a DNP project looking for improvement and boosting their post-implementation results. Additionally, feedback was received from the project mentor that the education was possibly "too technical," but a decision was made to continue with a high level of education for the training. If the materials were written at too high of a level, some of the participants may not have been able to implement the education into their lives.

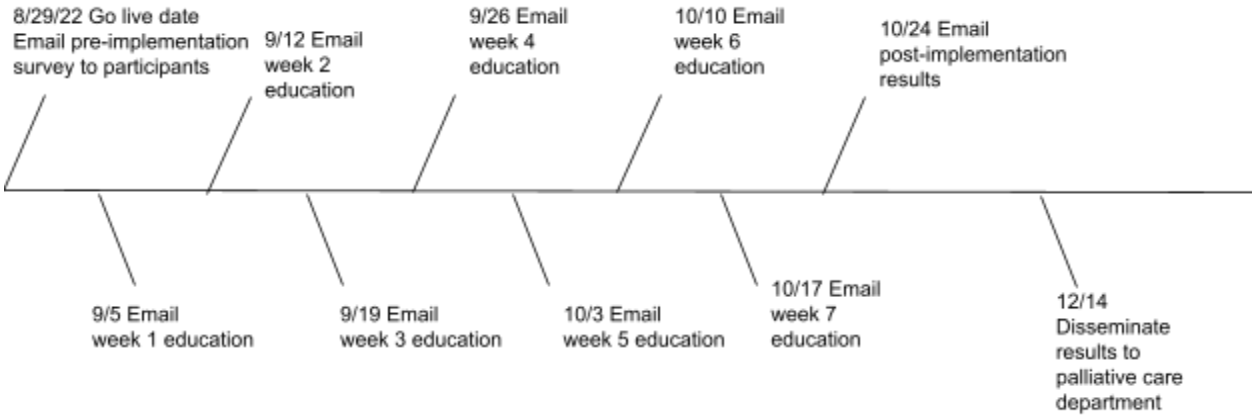
Previous studies have shown a correlation between compassion fatigue and resilience, however, this was not demonstrated in the results of this project. The lack of showing a correlation is most likely due to the small effect created by the intervention,

The goal of having a high level of participation in this project was partially achieved. Of the potential participants, 75% completed the pre-intervention survey. However, only 56% completed the post-implementation survey limiting the project results of an already small sample.

The timeline of the project met most of the goals set prior to implementation. The goals not achieved on time per pre-implementation planning were completing the post-intervention survey as participants were given an additional week, and the dissemination of results. Dissemination of the results will be completed at a regular staff meeting on December 14, 2022 which does not occur until after the initially planned date. A timeline of events is depicted in Figure 4.

Figure 4

Timeline of Implementation



Limitations

One limitation of this project is the small sample size. In addition, one area which project developers hoped to analyze data, but was unable to, was with the palliative care physicians.

Although two physicians completed the pre-implementation survey, none of the physicians completed the post-implementation survey, so those results could not be analyzed or compared to the nurse/spiritual care or APRN groups.

Implications

It is extremely important for clinicians to have high resilience and low compassion fatigue to maximize job potential and retention of staff. Although there were not statistically significant results in this project, the increase in resilience and decrease in compassion fatigue is encouraging. It is possible that a more intensive training program, that is either lower level complexity of materials or a long-term resilience training would show additional benefits. Additional research will need to be conducted to determine the benefits of resilience training. Additional research would also be beneficial to investigate the decline in resilience by the nurse/spiritual care group in resilience after the training program.

Dissemination

Results of this project will first occur with the submission of this paper to the College of St. Scholastica with a due date of November 22, 2022. On December 6th, 2022 results will be disseminated to students and staff at the College of St. Scholastica. At a palliative care meeting set on December 14, 2022, the results will be presented to the participants. A short PowerPoint will be presented to discuss the results. The project poster is planned to be shared at a poster conference when the next one is offered. Project developers are considering submitting the project to the Sigma Repository or Doctoral Project Repository for publication.

Conclusion

Palliative care providers are continuously caring for patients who are seriously ill and these providers are at risk for compassion fatigue. Few studies have been completed on palliative

care providers, and even fewer on doctors and advanced practice nurses. Resilience and compassion fatigue has been shown to be related in research. In the organization in which the project is going to be implemented, there is a gap in resources available to providers related to resilience creating an opportunity for improvement. A program for resilience training will be created and disseminated to the department utilizing the Self-Efficacy Theory Middle Range theory. The FOCUS-PDSA model will be utilized to implement the project in order to make a change. With the resilience training provided, pre- and post-intervention surveys will be utilized to determine if a change was made related to compassion fatigue and resilience. A Gantt chart was created indicating the expected time frame of the project. The work breakdown and communication matrix were created to indicate which student in the group is completing each task and how group members will communicate with each other and with stakeholders. Project budget, measures, and methodology were analyzed. Outcome, process, and balancing measure were all analyzed. It was determined that the data will be analyzed per the paired t-test and ANOVA utilizing Intellectus. The project has been accepted by the IRB, and implementation began on August 29, 2022 with the pre-intervention survey. The project ran smoothly with releasing the weekly educational materials as planned. A couple of unexpected issues arose with the weekly survey and level of detail within the education, but these were not limiting factors of this project. Project participants were found to have an increase in resilience and a decrease in compassion fatigue. However, no findings were significant. No correlation was found between resilience and compassion fatigue. The small sample size may have had limiting effects on the project. Having employees with a high level of resilience and low compassion fatigue is extremely important, this project adds to the wealth of knowledge and identifies additional areas needed for research on resilience education and its effects.

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Stoliker, B. E., Vaughan, A. D., Collins, J., Black, M., & Anderson, G. S. (2022). Building personal resilience following an online resilience training program for BScN students. *Western Journal of Nursing Research*, *44*(8), 755–764. https://doi-org/10.1177/01939459211017240

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Wang, C., Grassau, P., Lawlor, P. G., Webber, C., Bush, S. H., Gagnon, B., Kabir, M., & Spilg, E. G. (2020). Burnout and resilience among Canadian palliative care physicians. *BMC Palliative Care*, *19*(1), N.PAG. https://doi.org/10.1186/s12904-020-00677-z

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Werneburg, B. , Jenkins, J., Friend, J., Berkand, B., Clark, M., Rosedahl, J., Preston, H., Daniels, D., Riley, B., Olsen, K., & Sood, A. (2018). Improving resiliency in healthcare employees. *American Journal of Health Behavior, 42*(1), 39-50. https://doi.org/10.5993/AJHB.42.1.4

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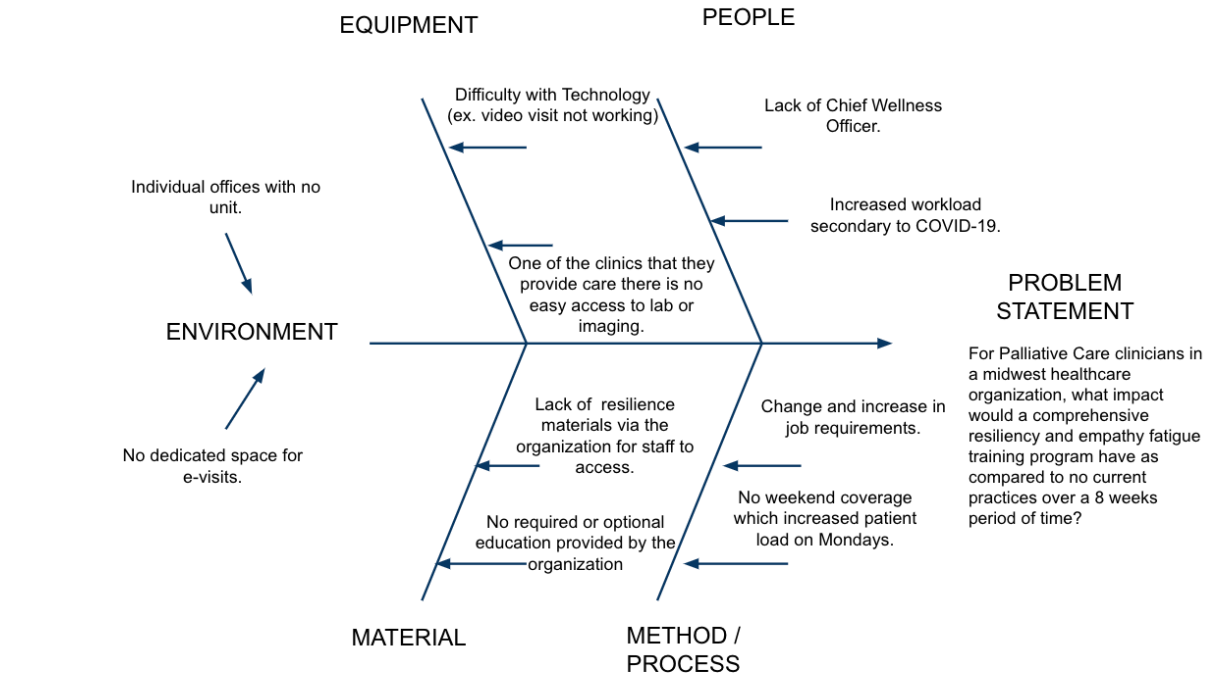
Appendix A

Cause and Effect Diagram



Team members: Michelle Baker & Sara Kalis

Appendix B

Literature Review Matrix

Citation	Study Objectives	Level of Evidence/Design /Subjects	Intervention and Outcome measurements	Results	Study Limitations	Implications
Can, N., & Watson, J. C. (2019). Individual and relational predictors of compassion fatigue among counselors-in-training. *The Professional Counselor*, *9*(4), 285–297. https://doi.org/10.15241/nc.9.4.285	The aim is to determine the prevalence of compassion fatigue in counselors-in-training. To find predictors of compassion fatigue.	Cross-sectional survey. 86 Counselors-in-training recruited through professional list servers. Level 4	No intervention. Surveys sent to participants: Professional Quality of Life survey, Interpersonal Reactivity Index, Supervisory Working Alliance Inventory, Brief Resilience Scale, and Flourishing scale.	Resilience and wellness were significant predictors of compassion fatigue.	The cross-sectional design does not indicate causality, only relationships. Study was done with counselors, so may not address clinicians in health care.	With increased resilience and wellness, compassion fatigue may decrease.
Cao, X., & Chen, L. (2021). Relationships between resilience, empathy, compassion fatigue, work engagement and turnover intention in haemodialysis nurses: A cross‐sectional study. *Journal of Nursing Management*, *29*(5), 1054–1063. https://doi.org/10.1111/jonm.13243	The aim of this study was to explore the relationships between resilience, empathy, compassion fatigue, work engagement and turnover intention in Chinese haemodialysis nurses	Cross-sectional survey. Chinese hemodialysis nurses. Level 4	No intervention. The study measured turnover intention, compassion fatigue, resilience, empathy, and work engagement to look at relationships.	Compassion fatigue statistically had the strongest effect on turnover intention, second was work engagement, and third was resilience.	The cross-sectional design does not indicate causality, only relationships. All of the nurses in the study were from one province in China which limits its generality.	Compassion fatigue, work engagement, and resilience have an effect on the intention of nurses leaving their current positions. Improving these factors could help to reduce turnover.
Cao, X., Wang, L., Wei, S., Li, J., & Gong, S. (2021). Prevalence and predictors for compassion fatigue and compassion satisfaction in nursing students during clinical placement. *Nurse Education in Practice*, *51*, 102999. https://doi.org/10.1016/j.nepr.2021.102999	The aim is to look at the relationship between social support, coping, compassion, and resilience.	Cross-sectional survey. Chinese nursing students receiving clinical placement. There were 917 participants from 15 different nursing schools. Level 4.	Perceived Social Support Scale, Jefferson Scale of Empathy, Connor-Davidson Resilience Scale, and Simple Coping Style Questionnaire.	Cognitive empathy and resilience were strong negatively correlated indicators of empathy fatigue. Passive coping was a high indicator for compassion fatigue. Adaptive coping was negatively correlated with burnout. Family support is positively correlated with compassion satisfaction.	The cross-sectional design does not indicate causality, only relationships	Changing passive coping to adaptive coping may decrease compassion fatigue and burnout. Improved family support can increase compassion satisfaction.
Franco, P. L., & Christie, L. M. (2021). Effectiveness of a one day self-compassion training for pediatric nurses' resilience.	See if a 1 day self-compassion education day would improve pediatric nurses	Quasi-experimental, pre and post-survey. 22 nurses attended the edu and 26 nurses did not attend.	One day self-compassion education day. Outcomes based on survey	Participants in the intervention exhibited significant increases in self-compassion, mindfulness, compassion to others, resilience and	Very little information is given on statistics. The survey questions used are	Nurses' schedules may hinder their ability to attend lengthy training, however the skills needed for resilience are important to

Journal of Pediatric Nursing, *61*, 109–114. https://doi.org/10.1016/j.pedn.2021.03.020	resiliency, well-being, and professional quality of life.	Pediatric nurses Level 3		compassion satisfaction, and significant decreases in burnout, anxiety, and stress compared to the non-intervention group.	unknown.	decreasing burnout, empathy fatigue, and turnover. Providing a one-day training gave nurses an accessible alternative to gain knowledge and skills that increase resilience.
Frey, R., Robinson, J., Wong, C., & Gott, M. (2018). Burnout, compassion fatigue and psychological capital: Findings from a survey of nurses delivering palliative care. *Applied Nursing Research*, *43*, 1–9. https://doi.org/10.1016/j.apnr.2018.06.003	The aim is to find the relationship between protective factors with burnout and compassion fatigue.	Cross sectional study of 256 registered nurses in New Zealand working in Palliative Care.	No intervention. On-line surveys include: the Psychological Empowerment Scale, DRS-15, Professional Quality of Life Scale, and training information.	48.4% had moderate to high compassion satisfaction. 51.6% reported moderate secondary traumatic stress (compassion fatigue). Psychological hardiness and education in coping skills was a predictor of compassion fatigue and burnout. Psychological empowerment in the organization and tools for psychological wellbeing increased feelings of compassion satisfaction. Lack of palliative care education was the largest predictor of compassion fatigue.	The cross-sectional design does not indicate causality, only relationships.	Tools to increase feelings of empowerment and emotional wellbeing can decrease burnout and compassion fatigue. Specifically palliative care education may reduce compassion fatigue.
Kase, S. M., Waldman, E. D., & Weintraub, A. S. (2019). A cross-sectional pilot study of compassion fatigue, burnout, and compassion satisfaction in pediatric palliative care providers in the United States. *Palliative & Supportive Care*, *17*(3), 269–275. https://doi.org/10.1017/S1478951517001237	The objective is to find the relationship between burnout, compassion fatigue, and compassion satisfaction.	Cross sectional survey. Pediatric palliative care providers. Respondents included physicians (201), nurses/nurse practitioners (43), chaplains (2), psychologists (2), and family life specialists (1). Level 4	No intervention. The Compassion Fatigue and Satisfaction Self-Test for Helpers	Prevelances: compassion fatigue 18%, burnout 12%, and compassion satisfaction 25%	The cross-sectional design does not indicate causality, only relationships.	Gives a baseline for the number of providers who may be experiencing compassion fatigue, however, all providers worked with pediatric patients which may not be generalized to those working with adults or adults and pediatric patients.
Koh, M. Y. H., Hum, A. Y. M., Khoo, H. S., Ho, A. H. Y., Chong, P. H., Ong, W. Y., Ong, J., Neo, P. S. H., & Yong, W. C. (2020). Burnout and resilience after a decade in palliative care: What survivors have to teach us. A qualitative study of palliative care clinicians with more than 10 years of experience. *Journal*	The objective of the study was to determine factors related to burnout and resiliency from providers who have been doing palliative care for over 10 years.	Qualitative Study with semi-structured interview questions. All participants have worked in palliative care for more than 10 years. Sample included 5 doctors, 10 nurses, and 3 social workers. Level 6	Semi-structured face-to-face interviews were completed. The interviews were then analyzed for themes.	Cultural and team resilience is an important factor in individual resiliency. The major themes that emerged were struggling, changing mind-set, adapting, and resilience. Intervening factors that emerged were self-awareness, reflection, and evolution. The overarching theme of intervention was the palliative care providers had to go through a	There was a small sample size of 17 participants. All interviews were done with people who chose to stay in the field of palliative care for greater than 10 years.	The article has a diagram with the ongoing efforts for transformative growth. This article provides information on how palliative care providers can become more resilient and specific items which block resilience or contribute to burnout.

of Pain & Symptom Management, *59*(1), 105–115. https://doi.org/10.1016/j.jpainsymman.2019.08.008				transformative growth before they achieved resiliency.		
Labrague, L. J., & de Los Santos, J. A. A. (2021). Resilience as a mediator between compassion fatigue, nurses' work outcomes, and quality of care during the COVID-19 pandemic. *Applied Nursing Research: ANR*, *61*, 151476. https://doi.org/10.1016/j.apnr.2021.151476	The aim was to find the relationship between resilience with compassion fatigue and job satisfaction and turnover.	Cross sectional design. The study included 270 front line nurses in the Philippines. To be eligible, the nurses had to have been working the past 6 months during the pandemic.Of those eligible, the survey was sent to 300 random nurses. Level 4.	Four surveys were sent to the nurses: The 13 point Compassion Fatigue Scale, the 4-item Brief Resilience Coping Skills, the Job Satisfaction Scale, and intention to leave their current position. They were measuring current level of compassion fatigue, resilience, job satisfaction, and intention to stay in current position	Results showed that 38.5 of the nurses were experiencing moderate to high levels of compassion fatigue. Higher levels of compassion fatigue were associated with higher levels of job dissatisfaction, poorer quality of care, and turnover intention. Related to resilience, it was found that resilience decreased effects of compassion fatigue on job satisfaction and turnover intention	The cross-sectional design does not indicate causality, only relationships.	This study provides evidence that compassion fatigue (CF) can affect the safety of patients with nurses reporting poorer quality of care when experiencing CF. CF also contributes to lower job satisfaction and increased turnover rates. This study provided evidence that resilience can counteract effects of compassion fatigue.
Magtibay, D., Chesak, S., Coughlin, K., Sood, A. (2017). Decreasing stress and burnout in nurses: Efficacy of blended learning with stress management and resilience training program. Journal of Nursing Administration, 47(7), 391-395. https://doi.org/10.1097/nna.0000000000000501	The aim is to find the effectiveness of a stress management and resilience training program on nurses.	Quasi-experimental. 50 transplant and nurse. Cohort with no control group. leaders. Level 2	Intervention of the SMART program. Participants had the choice to complete the education on-line, educational materials, or facilitated discussion.	Findings showed statistically significant, clinically meaningful decreases in anxiety, stress, and burnout and increases in resilience, happiness, and mindfulness.	Small sample size. No control group.	This study provides evidence that resiliency training can improve resilience in health care workers in high stress positions.
Mueller, K., Prins, R., & de Heer, H. (2018). An online intervention increases empathy, resilience, and work engagement among physical therapy students. *Journal of Allied Health*, *47*(3), 196–203.	Find the impact of an online psychological wellness course on empathy, resilience, and engagement	Quasi-experimental.36 Physical therapy students at one school cohort who were starting internships. Level 2	Intervention of the "Called to Care" modules online. One group received immediate intervention while the other group received delayed intervention (during their second internship). Pre and post intervention surveys of the Jefferson Scale of Empathy, Utrecht Work Engagement	Both the immediate intervention group and the delayed intervention group had a significant increase in both empathy and resilience after receiving the training. The initial group maintained their level of empathy and resilience for 10 weeks after the intervention was complete.	Small sample size. Empathy scores started high.	The timing of training is less significant, delayed education may delay resilience and increased empathy, but in the end both groups had equal resilience and empathy. Empathy and resilience were maintained for 10 weeks after training.

			Scale, and GRIT scale for resilience completed.			
Novak, B. K., Gebhardt, A., Pallerla, H., McDonald, S. B., Haramati, A., & Cotton, S. (2020). Impact of a university-wide interdisciplinary mind-body skills program on student mental and emotional well-being. *Global Advances in Health and Medicine*, *9*, 2164956120973983. https://doi.org/10.1177/216495612097398 3	The aim was to determine the impact of a 9-week mind and body skills education on resilience, empathy, and burnout.	Quasi-experimental. Students from 10 different colleges were recruited per email. Potential participants had to complete a one paragraph essay describing why they wanted to participate. Control and experimental group. Level 3.	Pre and post surveys were done. The survey was done again after 1 year. Surveys used: Perceived Stress Scale, Positive affect Negative affect schedule, Brief Resilience Scale, PROMIS for depression, anxiety, fatigue, and sleep disturbance, Five Facet Mindfulness Questionnaire, Interpersonal Reactivity Index, Maslach Burnout Inventory. Education included information on improving self-awareness and self-care.	Initial survey results showed statistically significant change in resilience, empathy, and perspective taking. There was no change in the control group. At the 1 year follow up, the increased measures of resilience, empathy, and perspective taking returned to baseline.	There was a small sample size for the 1 year follow up.	Longitudinal study showed no sustained increase in resilience or empathy. Mind and body skills education can make a positive influence, at least short term, on resilience, empathy, and perspective taking.
Ostadhashemi, L., Arshi, M., Khalvati, M., Eghlima, M., & Khankeh, H. R. (2019). Social workers' resilience: preventing burnout and compassion fatigue in pediatric oncology. *International Journal of Cancer Management*, *12*(7), 1–7. https://doi.org/10.5812/ijcm.61376	The aim is to explore ways that pediatric nurses alleviate compassion fatigue and burnout.	Qualitative study. 19 social workers from a specialized children's cancer center participated. Level 5	No implementation. Data was collected using semi-structured interviews. Data was then synthesized using word analysis.	Four main themes emerged related to decreasing compassion fatigue. The themes include: being worthy, self-care, professional growth, and establishing boundaries.	The majority of the participants were female. All participants work in a specialized hospital and are social workers, so results may not be able to be generalized.	This provides evidence as to resources that can help health care professionals decrease compassion fatigue.
Pehlivan, T., & Güner, P. (2020). Effect of a compassion fatigue resiliency program on nurses' professional quality of life, perceived stress, resilience: A randomized controlled trial...ESMO 2019 conference, Barcelona, 27 September–1 October 2019.	The purpose was to see if either a short or long-term resiliency program had an effect on compassion in oncology nurses.	Randomized control trial. There were 125 oncology nurse participants. There were 2 intervention groups and one control group. Both of the intervention groups received 10 hours of resiliency training. One group received	Implementation of a short term and long-term program for compassion fatigue resiliency. This was compared to a control group of no resiliency program.	Both intervention groups had a statistically significant increase in mean compassion satisfaction scores compared to the control group. However, there was no statistical difference between either of the intervention group or the control group related to compassion fatigue, burnout, perceived stress, and resiliency.	Several nurses changed positions and were not available for 1 year follow up. Political policy changes occured in the country during the 1 year follow up which affected staffing levels negatively	The study showed that there was statistically no difference between the group that received high intensity education and the group that received training over 5 weeks. The intervention had no effect on multiple items including resiliency and compassion fatigue, but it did increase

Journal of Advanced Nursing, *76*(12), 3584–3596. https://doi.org/10.1111/jan.14568		training over 2 days, the other group over 5 weeks. Level 2			which could have affected outcomes.	feelings of compassion satisfaction.
Powell, M. J., Froggatt, K., & Giga, S. (2020). Resilience in inpatient palliative care nursing: A qualitative systematic review. *BMJ Supportive & Palliative Care*, *10*(1), 79–90. https://doi.org/10.1136/bmjspcare-2018-001693	The purpose is to describe resilience for inpatient palliative care and hospice nurses.	Qualitative systematic review. The subjects were palliative care and hospice nurses Level 5	Eight studies were identified. There were no interventions. Outcome measures that were being targeted in the systematic review were resilience. Studies that focused on burnout were excluded.	Three main themes of resilience were identified including stressors, coping, and exposure to death. Within the major themes there were 10 sub-themes. Sub-themes within stressors is all nursing work is stressful, too close to home, and some patients are more challenging than others. Sub-themes of coping include relational care, emotional expression, giving and receiving support, maintaining a work-life balance, and making a different mindset. There are no sub-themes in exposure to death.	Resilience is a poorly defined concept, so some studies may have been missed if they were not self identified as related to resilience.	This study can be used to make decisions on interventions that will be implemented based on what palliative care and hospice nurses determine to be relevant factors of resilience.
Samson, T., & Shvartzman, P. (2018). Secondary traumatization and proneness to dissociation among palliative care workers: A cross-sectional study. *Journal of Pain and Symptom Management*, *56*(2), 245–251. https://doi.org/10.1016/j.jpainsymman.2018.04.012	The purpose of the study was to find if there is an association between a provider's level of secondary traumatic stress (compassion fatigue) and dissociation from stressful events.	Cross-sectional self-report survey. Study included 144 physicians (47) and nurses (97) working in a hospital or home-based palliative care program. Level 4	There was no intervention. Surveys completed: Peritraumatic dissociative experiences questionnaire. disassociation and ProQOL scale measuring compassion satisfaction, secondary traumatic stress, and burnout. Utrecht work engagement survey. Death anxiety scale	Results showed a low level of disassociation, but those that did have disassociation had a high level of secondary traumatic stress. Secondary traumatic stress was negatively correlated with compassion satisfaction. Compassion satisfaction had a strong positive correlation with engagement.	The cross-sectional design does not indicate causality, only relationships.	Clinicians who are not prepared to cope with working with patients who are very ill may become disassociated and develop secondary traumatic stress. Engagement and compassion satisfaction counteract the disassociation and help clinicians to cope.
Silver, J., Caleshu, C., Casson-Parkin, S., & Ormond, K. (2018). Mindfulness among genetic counselors is associated with increased empathy and work engagement and decreased burnout and compassion fatigue. *Journal of Genetic Counseling*, *27*(5), 1175–1186. https://doi.org/10.1007/s10897-018-0236-	Aim of study is to assess associations between mindfulness and key professional variables, including burnout, compassion fatigue, work engagement, and empathy	Cross-sectional quantitative design. Data was collected via an anonymous, online survey that included validated measures of mindfulness and these key professional variables. 441 Genetic Counselors, ½ of the participants	Half of the study participants engaged in mindfulness activities such as yoga, meditation, or breathing exercises.	Mindfulness was positively correlated with work engagement and empathy (measured by perspective taking, empathetic concern, fantasy, and personal distress). Mindfulness was negatively associated with compassion fatigue and burnout. There was a significant, but weak, correlation between mindfulness and empathy as 2 of the areas were positively	Potential bias of people interested in mindfulness in study samples. Did not use a formal mindfulness training	The integration of mindfulness will likely improve professional morale and well-being, and promote workforce retention.

6		engaged in mindfulness exercises. Level 4		correlated and 2 were negatively correlated. There was moderate negative correlation between mindfulness and empathy fatigue. Mindfulness was positively correlated with work engagement.		
Sleeman, K. E., Cripps, R. L., Murtagh, F. E. M., Oluyase, A. O., Hocaoglu, M. B., Maddocks,M.,Walshe, C., Preston, N., Dunleavy, L., Bradshaw, A., Bajwah, S., Higginson, I. J., & Fraser, L. K. (2022). Change in activity of palliative care services during the Covid-19 pandemic: A multinational survey (CovPall). *Journal of Palliative Medicine*, *25*(3), 465-471. https://doi.org/10.1089/jpm.2021.0315	The objective was to determine the workload of palliative care and hospice providers during the pandemic.	Cross-sectional self-report survey. Study completed in the UK. Palliative care and hospice organizations were recruited for the survey.The respondents were directors of the unit. Level 4	Surveys were sent to participants. There was no intervention. Survey question if they are more busy since the pandemic.	Most agencies were more busy than they previously were. The home based services expanded their services the most during the pandemic providing care to more patients, and more complex patients.	The cross-sectional design does not indicate causality, only relationships.	There is an increased workload on providers in many areas of health care since the pandemic. Some areas are more adaptable to the increased workload than others.
Stanton, M. P., Houser, R. A., Riechel, M. E. K., Burnham, J. J., & McDougall, G. (2015). The effect of transcranial direct current stimulation (tDCS) on resilience, compassion fatigue, stress and empathy in professional nurses. *Advances in Research*, *5*(2). https://doi.org/10.9734/AIR/2015/16842	The aim of this study was to determine if transcranial direct current stimulation (tDCS) had an effect on resilience, compassion fatigue, stress, and empathy.	Quasi-Experimental design. Recruitment fliers were sent out to find participants. Nurses had to have worked in a high volume direct care site for the past 5 years, indicate that they felt overwhelmed or stressed in their current position, and be medically cleared for the study. A total of 7 nurses, 6 female and 1 male, were in the study. Level 3	Participants received 18 treatments of tDCS over 6 weeks. Pre and post intervention surveys were conducted using: The Resiliency Scale, the Compassion Fatigue Scale, the Perceived Stress Scale, and the Empathy Assessment Index.	There was no change in resilience, compassion fatigue, stress, or empathy from the treatment. They did find evidence that there was a slight difference in empathy using different amps of tDCS.	Small sample size.	tDCS has been successful in treating several chronic disease conditions such as anxiety, depression, and stroke.
Stoliker, B. E., Vaughan, A. D., Collins, J., Black, M., & Anderson, G. S. (2022). Building personal resilience following an online resilience training program for BScN students. Western	The aim of this study is to determine the effect of a self-paced on-line resiliency program on student nurse.Effects	Quasi-experimental. Cohort design, no control group. 36 Bachelor level nursing students were included in the study. Level 2.	Students were given an on-line self-paced resilience education. The Resiliency Scale for Adults was used to rate resiliency.	The study showed a significant improvement in resilience. Although there was an improvement in coping, anxiety, and depression these results were not statistically significant.	Multiple students did not complete all study elements including pre- and post-survey leading to a small study sample.	Resilience training improved resilience. Although not statistically significant, it had a positive impact on coping, anxiety, and depression; more research will need to be done to find the

Journal of Nursing Research, 44(8), 755–764. https://doi-org/10.1177/0193945921101724 0	of resilience, coping, anxiety, and depression were measured.					significance of these results.
Wang, C., Grassau, P., Lawlor, P. G., Webber, C., Bush, S. H., Gagnon, B., Kabir, M., & Spilg, E. G. (2020). Burnout and resilience among Canadian palliative care physicians. *BMC Palliative Care*, *19*(1), N.PAG. https://doi.org/10.1186/s12904-020-00677-z	The aim of this study is to determine the degree of burnout versus resilience in Canadian Palliative Care doctors.	Cross-sectional self-report surveys. Canadian Palliative Care doctors. Level 4	Doctors in Canada who were members of the Canadian Society of Palliative Care Doctors were sent electronic surveys which tested their level of burnout and resilience.	38.2% of respondents scored at a high level of burnout. Resiliency average score was 74 on the Connor-Davidson Resilience Scale which puts them in the 25th percentile. Higher burnout was correlated with lower resiliency scores.	There was a low response rate of 29%. The cross-sectional format does not predict causality.	Resilience and burnout are negatively correlated. Increased resiliency may decrease burnout.
Wells-English, D., Giese, J., & Price, J. (2019). Compassion fatigue and satisfaction: Influence on turnover among oncology nurses at an urban cancer center. *Clinical Journal of Oncology Nursing*, *23*(5), 487–193. https://doi.org/10.1188/19.CJON.487-493	The purpose of this article is to examine the relationships between secondary traumatic stress (compassion fatigue), burnout, and turnover intention among oncology nurses.	Cross-sectional self-report study. In-patient oncology RNs in a for-profit facility. Empathy fatigue and intention to leave current position were measured using a self-reported scale. Level 4	There was no intervention. Measurements of 3 dimensions of compassion fatigue were recorded as well as intention to change positions.	Number of months of oncology nursing was not correlated with compassion fatigue. There was a correlation between compassion fatigue and feelings of burnout with turnover.	Moderate sample size. Limitation with its cross-sectional design and its use of convenience sampling.	The results of this study indicate that burnout significantly predicts turnover intention. Compassion satisfaction indicated a significant lack of turnover intention in this sample
Werneburg, B. , Jenkins, J., Friend, J., Berkand, B., Clark, M., Rosedahl, J., Preston, H., Daniels, D., Riley, B., Olsen, K., Sood, A. (2018). Improving resiliency in healthcare employees. American Journal of Health Behavior, 42(1), 39-50. https://doi.org/10.5993/AJHB.42.1.4	The aim is to find the result of a 12-week resiliency program on resiliency and health behaviors.	137 healthcare workers were given resiliency training. Results on resiliency and health behaviors were recorded pre-intervention, post-intervention, and at 3 months. Cohort study. Level 4	Intervention of a 12-week resiliency program.	Research showed statistical improvement in resilience, perceived stress, anxiety level, quality of life, and health behaviors and both immediate intervention post-survey and at 3 months.	Cohort study. No randomization of participants.	This study provides evidence that a resilience program can improve resilience and health behaviors in healthcare workers. The results showing sustained improvement at 3 months provides evidence that a resilience program may have long-term effects.
Zanatta, F., Maffoni, M., & Giardini, A. (2020). Resilience in palliative healthcare professionals: a systematic review. *Supportive Care in Cancer*, *28*(3), 971–978. https://doi.org/10.100	Review of quantitative studies on palliative care providers on resilience.	Systematic review. Six articles met inclusion criteria. Four of the six studies were done on palliative care nurses, two had subjects of	All studies had different interventions (or no intervention for cross-sectional survey) related to resiliency and different measurement	Anxiety over death, emotional exhaustion, secondary traumatic stress, lack of hope, and low self-esteem were negatively related to resilience. Two studies had interventions which showed that resilience	Small number of studies included in the review.	Palliative care providers are exposed to death and grief on a regular basis. Resilience is an important factor in the provider's psychological functioning.

7/s00520-019-05194-1		nurses, doctors, and social workers. Level 1	scales.	training increased compassion satisfaction, decreased burnout, and feelings of stress. One study validated a measurement on resilience on palliative care providers.		Resilience training was shown to improve resilience and decrease negative psychological factors related to providing care to palliative patients.

Levels of Evidence from Melnyk and Fineout-Overholt (2011, p. 10)

Level I: Evidence from a systematic review of all relevant randomized controlled trials (RCT's), or evidence-based clinical practice guidelines based on systematic reviews of RCT's

Level II: Evidence obtained from at least one well-designed Randomized Controlled Trial (RCT)

Level III: Evidence obtained from well-designed controlled trials without randomization, quasi-experimental

Level IV: Evidence from well-designed case-control and cohort studies

Level V: Evidence from systematic reviews of descriptive and qualitative studies

Level VI: Evidence from a single descriptive or qualitative study

Level VII: Evidence from the opinion of authorities and/or reports of expert committees

Appendix C

Gap Analysis Diagram

Current State	Desired State	Identified Gap	Gap due to knowledge, skill and/or practice	Methods used to Identify Professional Practice Gap
Lack of knowledge on resilience as the palliative care unit does not have an educator and there are no links/ education available for resiliency training. Individual offices with no unit. No dedicated space for telemedicine visits and difficulties with technology. Increased workload secondary to COVID-19. Change and increase in job requirements. No onsite lab or imaging for one of the clinics.	Multiple easy to access resources available and an increase in knowledge about resiliency. Increased resiliency. Decreased compassion fatigue. Decreased staff turnover.	No educational resources readily available for resilience. Lack of priority on wellness by the organization. Staff turnover. Staff stress with changes in job requirements and no weekend coverage.	Knowledge- No mandatory or voluntary education and no easily accessible resiliency resources. Inability to recruit an additional physician creating a staff shortage. No chief wellness officer.	Interview with the department head of the palliative care unit in which she indicated that there was no specific educator for the unit and the lack of resources on resilience. No educational material available on the wellness page for the organization.

Appendix D

SWOT Analysis Diagram

Compassion Fatigue and Resilience on the Palliative Care Unit Level

Strengths	**Weaknesses**
● Emerging global concern for compassion and increasing number of resources. ● Diverse population in the community increasing acceptance of changes and new thoughts or ideas. ● The organization allows project coordinators to attend team meetings to assess needs. ● Low cost of the project. ● The unit director is supportive of the project. ● Strong in-patient team cohesion of the palliative care department. ● Openness of palliative care clinicians to participate. ● Project coordinators are enthusiastic about the project and working with the palliative care department. ● Project coordinators have previous experience working with palliative care. ● Project coordinators work for the same organization in which the project is being completed.	● National, state, and unit deficit of palliative care providers. ● Recent staff turnover and difficulty recruiting palliative physicians. ● Lack of resources on compassion fatigue and resilience at the organization. ● Recent changes in job responsibilities. ● Technology issues with telemedicine visits. ● The work area in the in-patient department does not allow for unit discussions. ● Time demand of palliative clinicians to complete the project. ● Unknown level of compassion fatigue and resilience of clinicians on the unit. ● Clinicians involved in project work in different areas including home health, in-patient, and out-patient creating different needs for compassion fatigue and resilience which will all need to be addressed by project developers.
Opportunities	**Threats**
● Contribute to knowledge currently available on compassion fatigue and resilience if this is published. ● Plan to share the project as a wellness program of resiliency for all employees of the organization at the end of the project. This could increase resilience and decrease compassion fatigue in the organization and community. ● Improve patient care and increase patient and family satisfaction of	● COVID-19 pandemic ● Large organization that does not put in effort for wellness or resilience. ● Lack of Chief Wellness Officer at the organization. ● Difficulty in determining how to share organizational wide information on wellness. ● Organization that makes frequent changes to technology and staff expectations. ● Organizational pressure for the

services. ● Potential for decreased staff turnover and increased productivity which would decrease organizational costs. ● Potential for increased job satisfaction for clinicians who complete the resilience training. ● Increased resiliency and reduction of compassion fatigue of palliative care providers.	palliative care unit to expand. ● Staff change with unknown date of new hire. ● Small department in which the project is being completed.

Appendix E

Gantt Chart

Task Name	Duration	Start Date	End Date	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov
1. Planning	278 Days	1/18/22	10/22/22											
1.1 Develop PICOT	14 Days	1/18/22	1/31/22											
1.2 Secure site	42 Days	1/18/22	2/28/22											
1.3 Literature Review	49 Days	1/18/22	3/7/22											
1.4 Secure Mentor	79 Days	2/28/22	4/7/22											
1.5 Develop SMART Goals and Objectives	70 Days	2/12/22	4/22/22											
1.6 Organization assessment	22 Days	4/1/22	4/22/22											
1.7 Develop theoretical framework	22 Days	4/1/22	4/22/22											
1.8 Develop and find surveys	30 Days	6/14/22	7/24/22											
1.9 IRB Approval	58 Days	7/1/22	8/27/22											
1.10 Develop educational materials	122 Days	6/1/22	10/17/22											
2. Implementation	61 Days	8/29/22	10/30/22											
2.1 Go Live Date	1 Day	8/29/22	8/29/22									X		
2.2 Email pre-survey	6 Days	8/29/22	9/4/22											
2.3 Email educational materials	49 Days	9/5/22	10/23/22											
2.4 Email post-survey	6 Days	10/24/22	10/30/22											
3.Analysis	27 Days	11/1/22	11/27/22											
3.1 Analyze survey information	20 Days	11/1/22	11/20/22											
3.2 Report Findings	6 Days	11/21/22	11/27/22											
3.3 Project completion	1 Day	11/27/22	11/27/22											X

Appendix F

Work Breakdown Structure

Planning

1. Develop PICOT
2. Secure site
    a. Email site director introduction
    b. Meet to introduce project
    c. Receive confirmation on ability to do project in that department
3. Literature review
    a. Create graph
    b. Review literature
    c. Synthesize literature for themes and analysis
4. Secure Mentor
    a. Obtain recommendation from unit director for mentor
    b. Contact potential mentor per email requesting meeting
    c. Meet with potential mentor and introduce project
    d. Obtain signature from mentor for Projected Approval Form
5. Develop Smart Goals and Objectives
6. Organizational Assessment
7. Determine Theoretical Framework
8. Develop and/or obtain surveys
    a. Research valid and reliable surveys for resilience
    b. Research valid and reliable surveys for compassion fatigue
    c. Develop survey for reporting job position
    d. Develop survey for weekly educational material
9. IRB approval
    a. Fill out required forms
    b. Have all surveys ready
    c. Obtain permission from project chair
    d. Submit request to IRB board for approval
10. Develop educational materials
    a. Research areas and methods of increase resilience
    b. Develop easy to read and visually attractive weekly educational material
    c. Add recommendations of skills to practice for weekly education
    d. Attach a weekly survey to educational material using QR code.

Implementation

1. 100% of participants will complete the pre-intervention survey within one week of receiving.
    a. Determine recipients
    b. Obtain email addresses
    c. Develop email introduction

    d. Attach survey to email
    e. Check if participants have completed the survey on day 5
    f. If 100% participation has not been achieved, re-email the survey to participants.
2. 100% of participants complete weekly education material as evidenced by completion of the attached survey within one week of receiving.
    a. Create seven weeks of educational materials related to resilience based on evidence based practice and research
    b. Email educational material to all participants who received the pre-survey
    c. Survey attached with QR code
    d. Check survey results weekly
3. 100% of participants will complete the post-intervention survey within one week of receiving.
    a. Email survey to all participants who received the pre-survey
    b. Check if participants have completed the survey on day 5
    c. If 100% participation has not been achieved, re-email the survey to participants.
4. Increase resilience and decrease compassion fatigue after 8 weeks of education training program on resilience.
    a. Pre and post survey
        i. Find reliance and valid survey on each resilience and compassion fatigue
        ii. Email surveys to participants
        iii. Compile results in google sheets
        iv. Analyze data using Intellectus
    b. Distribute educational materials on resilience

Evaluation

1. Analyze survey information
    a. As survey results are obtained, enter results into google sheet.
    b. Transfer results to Intellectus
    c. Run paired t-tests for mean pre and post test
    d. Run ANOVA analysis to look for relationships
2. Report findings
    a. Include statistical analysis in paper
    b. Take steps to publish paper in journal

Appendix G

DNP Project Charter/Action Plan

Project Title: Compassion Fatigue and Resilience in Palliative Care Providers

Project Members: Michelle Baker and Sara Kalis

Project Organization/Agency: CentraCare

DNP Project Approval From Link:

Project Champions (2 required, include initial contact date): Kasy Omann (4/7/22), Michelle Jaskolka (1/25/22)

Project Start Date: 1/18/2022

Projected Date of Project Completion: 12/18/2022

Project Charter: The purpose of this document is for students, faculty chair, and stakeholders.

Contact Information

Team member Name	Location/Time Zone	Phone Number	Email/Tweet	Communicate Best Via	Project Lead Role
Sara Kalis	Sauk Rapids, MN	612-345-1003	skalis@css.edu	text	Co-lead
Michelle Baker	Avon, MN	320-267-7608	mbaker9@css.edu	text	Co-lead

Ground Rules

1) The team will communicate via group text, email, google documents, and Zoom meetings (see chart above).
2) Assignments will be completed by individual or group-decided deadlines (see chart below).
3) If any issues arise with deadlines, it must be communicated with all team members. ("Communication is Key")
4) The designated Project Leader will be the sole person to submit the team assignment before/on submission due date.
5) The Project Leader for each project will rotate each semester to allow multiple students to experience the lead role responsibilities.
6) The Project Leader will initiate contact, delegate tasks, and assign team roles for their assigned project.
7) Team members will keep each other accountable and on task via weekly communication via text message in a respectful and considerate manner.
8) If any issues arise, team members will address this directly via email, zoom, tweet or text to allow for open communication between all members and to help each other out when needed.

Further issues can be discussed as a team with the professor for additional guidance and feedback.

9) Team members will recognize each other's strengths and weaknesses (included in pre-project table below) and will understand and use these skills accordingly to work together to complete team projects.
10) Team members will recognize each other's strengths and weaknesses (included in the post-project table below) and will appreciate the evolution of individual growth.
11) Upon project completion each student will reflect on strengths and weaknesses that have evolved throughout the project work.
12) Feel free to explore materials and resources outside the ones provided in this course to develop your project and leadership skills.

Leadership

As you embark on your DNP project you will evolve into a "transformational leader", you should aim to inspire confidence, respect and trust into your project communications to assure an optimal project outcome. Role clarity is key with a group or team as it increases adaptation of team members through interdependence, integrity and relational growth all of which contribute to the achievement of identified common goals (Reavy, 2016). If you have determined that you will pursue an individual project, the team leader "will be you"! For a group effort of multiple students working on a single project, a team leader will need to be identified upon determining your project team. Determining the individual strengths and weaknesses of each team member will aid in identifying which team member may lead a specific project component.

Individual/Team Strengths/Weaknesses (pre-project): Soon after the formation of your team, enter your impression of your own strengths and weaknesses, then of your entire team's strengths and weaknesses collectively, if applicable. This can be related to individual skills, leadership qualities or any other unique contributions for carrying out a large project.

Project Member's Name	**Strengths**	**Weaknesses**
Michelle Baker	Organized, Plans ahead, Communication	Can get bossy and take over group assignments.
Sara Kalis	Flexible, Team Player, Communication	Needs deadlines
Entire Team	Determined, enthusiastic, think outside of the box, proactive in getting assignments done	Lack insight in the department in which we are completing the project.

Communication Table

Add Individual and Team-Decided Deadlines, as well as Project Member Expectations. Students will be required to update this DNP Project Action Plan prior to meeting with your Project Chair as this document will serve as an informational guide to the project process through its evolution. (Deadline dates and or revisions can vary/change as needed with proper group communication)

The executing co-lead will make individual assignments for each task, but both members are expected to participate in all of the activities and to proofread all the completed work. Therefore, assignments within the task are not listed as both students will be working on all tasks.

Project Development (Follow the DNP Project Checklist	**Planning** Identified Project Task	**Executing/Revisions** Identified Lead & Component Deadlines	**Monitoring & Controlling** Proposed Group Deadlines & Revisions Dates	**Closing** Submission/Due Date
8201	PICOT and Problem Statement PowerPoint Presentation Scholarly paper 8201a Goals and SMART objectives Literature Review Table Paper 8201b Project Presentation Paper 8201C	Michelle Baker Sara Kalis Michelle Baker Sara Kalis Michelle Baker Sara Kalis Michelle Baker Sara Kalis	1/29 2/7 2/9 2/26 3/5 3/23 4/11 4/20	1/31 2/9 2/11 2/28 3/7 3/25 4/13 4/22
8206	Paper 8206a Project Pitch & 3MT TedTalk GANTT Chart, WBS & Comm Matrix, Budget Logic Model Paper 8206b Methodology and Data Analysis Project Proposal IRB process and application Final ProjectCharter Action Plan Paper 8206c	Michelle Baker Sara Kalis Michelle Baker Michelle Baker Sara Kalis Sara Kalis Sara Kalis Michelle Baker Michelle Baker Sara Kalis Michelle Baker	5/27 5/29 5/29 6/5 6/16 6/17 6/20 7/4 8/6 7/25 8/20	5/28 5/31 5/31 6/7 6/18 7/1 6/21 7/5 8/8 7/30 8/25
8207	Writing educational newsletters Formatting educational newsletters Paper 8207a Communication with participants (emailing education and surveys)	Michelle Baker Sara Kalis Michelle Baker Sara Kalis	Weekly by Thursday Weekly by Sunday 9/15	Email out Mondays x7 9/18 As needed

	Placing pre-implementation survey results into Google sheets	Michelle Baker	9/12	9/15
	Abstract	Sara Kalis	10/17	10/19
	Paper 8207b	Michelle Baker	10/25	10/30
	Interpretation of survey results	Sara Kalis	10/25	10/31
	Placing post-implementation survey results in google sheets	Sara Kalis	11/7	11/10
	Poster	Sara Kalis	11/7	11/13
	Interpretation of data	Michelle Baker	11/21	11/27
	3MT	Sara Kalis	11/21	11/27
	Paper 8207c	Michelle Baker	11/25	11/27

Project Communication Matrix

Stakeholder Communication Sheet Link - Communicate with project stakeholders twice per semester minimally. See these meeting guidelines for agenda formation.

Team Members: Michelle Baker and Sara Kalis

Project Chair: Rhea Ferry

Project Title: Compassion Fatigue and Resilience in Palliative Care Providers

Date	Purpose/Objectives	Method Of Communication	Frequency	Recipients	Person Responsible	Notes
2/28	Establish clinical site	Webex	once	Michelle Jaskolka	Michelle and Sara	Okay from director
3/13	Connect with mentor	email	once	Michelle Jaskolka	Michelle and Sara	Michelle Jaskolka will talk to Kasy Omann regarding being a mentor for the project.
3/13	Establish shadowing dates	Email	Twice	Michelle Jaskolka	Michelle and Sara	These were established and both Sara and Michelle completed shadowing of both in and outpatient providers in April.
4/7	Meet clinical mentor and update her on the project	In-person	Once	Kasy Ohmann	Michelle and Sara	Established Kasy as mentor. She is willing to provide any assistance needed. Discussion and Michelle and Sara attending staff meetings. Kasy will get it arranged for Michelle and Sara to be invited to these meetings.

4/30	Gain permission to perform the study with home health palliative care nurses	In-person	Once	Kristi Husen and Marian Seliski	Michelle	Permission was obtained from both Kristi and Marian to include palliative care home health nurses.
5/10	Provide update to Project Mentor	In-person	Once	Kasy Ohmann	Michelle	Discussion on where the project is in the planning process.
5/27	Collaboration of projects.	Telephone	Once	N/A	Sara & Michelle	Discuss elements of the project and the incorporation of those elements into the scholarly paper.
6/16	Go over the project with the new project chair and discuss IRB.	Zoom	Once	Dr. Ferry & Dr. Starr	Sara & Michelle	Project coordinators to look at various elements of the project in more detail and adjust scholarly paper accordingly.
6/22	Collaboration of our clinical project.	Telephone	Once	N/A	Sara & Michelle	Discussed our clinical project moving forward focusing on feedback from Dr. Ferry and Dr. Starr. Split areas of the paper that we are each going to initially update then will proofread each other's sections. Also discussed editing needs of the paper.
6/27	Collaboration of our clinical project	In-person	Once	N/A	Sara and Michelle	Review powerpoint presentation assignment. Discussed plan for moving project ahead toward IRB and revisions needed in paper.
6/27-8/22	Collaboration of our clinical project	Texting	Ongoing	N/A	Sara and Michelle	Coordinating information for paper and IRB submission.
9/13	Meeting with Project Mentor on educational material and current survey results.	Telephone	Once	Kasy Ohmann	Sara and Michelle	Discussed initial survey results (75%). Asked mentor for feedback on educational materials sent so far. Mentor to bring up the project at morning huddle and send any suggestions via email.

9/13	Meeting with Project Chair	Zoom	Once	Dr. Ferry	Sara and Michelle	Discussed current status on project and scholarly paper. Discussion on implementation of educational materials and how surveys were progressing.
10/31	Meeting with Project Chair	Zoom	Once	Dr. Ferry	Sara and Michelle	Talked about completion of resilience education and post-survey due date. Discussed plan for analysis of all results.
12/2	Meeting with Project Chair	Zoom	Once	Dr. Ferry	Sara and Michelle	Discussed final assignments that need to be completed. Dr. Ferry will have the paper ready for revisions by Sunday. Sara is going to finish the poster by Sunday. Michelle will do final revisions of the paper and then submit it to a repository. Final project completion form is to be sent to Dr. Ferry when the paper is re-submitted with revisions.
12/14	Dissemination of results at Palliative care meeting	In person	once	Palliative care clinicians	Sara and Michelle	

Project Evaluation

Post Project, toward the end of 8207, reflect on your own strengths and weaknesses and then your entire team's strengths and weaknesses collectively. This can be related to individual skills, leadership qualities or any other unique contributions that you feel was beneficial for carrying out a large project.

Project Member's Name	**Strengths**	**Weaknesses**
Michelle Baker	Writing and data analysis	Technology
Sara Kalis	Technology, creativity	Data analysis
Entire Team	We have found that our strengths and weaknesses compliment each other nicely. Overtime, we started assigning tasks based on our strengths instead of	We do not critique each other's work enough and could have given each other more positive feedback on tasks within assignments.

	always going in order of every other assignment for being the lead.	

Write a comprehensive yet concise reflection (toward the end of 8207) by answering the following questions. *Each team member is to write a reflection.* See how to write a reflection.

1. How have strengths & weaknesses evolved from the beginning of your project to the end project?
2. What high and/or low points will help you move forward in any future leadership endeavors?

Name: Michelle Baker Reflection: Sara and I had a general idea in the beginning about our strengths and weaknesses, but overtime working together we got to know them much better. Knowing our strengths and weaknesses changed how we assigned tasks and which tasks were assigned to each of us. This was primarily because of our strengths that emerged. We communicated with each other, and problem solved how to best move forward with the project. The lessons I learned from this project will help me with future leadership endeavors. The low point of being told that our paper was not at the expected level and that additional work was needed was not something I wanted to hear, but in the end led to a lot of personal growth. Being able to take constructive criticism and improve myself is something I hope to continue to do as a leader. Additionally, my high point of creating quality resilience education is something I will also bring with me. This was something neither Sara or I had done before. It was more challenging than expected, but we were able to go out of our nursing box and create interesting and visually appealing materials. This will give me confidence to try new things and look outside the nursing world for answers when needed.
Name: Sara Kalis Reflection: In the beginning we had a general idea of our strengths and weaknesses, overtime we were able to easily determine which person would be the best lead for certain portions of the project. The amount of hard work we put into the project over the course of a year was a lot along with our other classes. I know there were points in the middle of and toward the end of the project that I felt worn out and overwhelmed. Having good communication with Michelle showed me that the extra support I received from her kept me actively engaged and motivated in regards to our project. This lesson of the importance of good communication & support is something I will bring to my future leadership endeavors.

Part of a team/Group? Complete the DNP Group Project Peer Evaluation form (make copy visible to Chair only). Place a link to the form here, titled with your name.

Michelle Baker:

Michelle Baker DNP Group Project Peer Evaluation Form

Sara Kalis:

Copy of DNP Group Project Peer Evaluation Form

Project Chair Recommendations

Date of Meeting	Topic of Discussion	Action Recommended	Date to be actioned by	Action Completed X
2/17/22	Project progress	Determine project feasibility and learn department needs.	2/28/22	X
		Secure location or change to a different department	2/28/22	X
4/7/22	Project planning progress	Continue to learn about the department by going to unit meetings and shadowing.	5/1/22	X
6/16/22	Project planning and progress.	Scrutinize multiple elements of the project in order to be ready for IRB	7/3/22	X
6/16-8/22	Communication per email- project planning, paper, and IRB	Multiple revisions of paper and IRB submitted. Communication in comments within the paper and IRB form with the goal of IRB submission.	8/26/22	X
8/22/22	IRB and paper	IRB package has been submitted. Awaiting approval from IRB board. Once this is approved, include all information in the paper and submit the paper as soon as possible. Include a short explanation of the intervention plan in the paper.	8/26/22	X
9/13/22	Educational Materials	Recommendation from Project Chair to write in scholarly paper how educational material and surveys are going.	10/31/22	X
10/31/22	Survey results and Analysis	Suggestions by Project Chair to give participants adequate time to complete post-survey and to send out a reminder email. Also, recommended to involve Project Mentor in the acquiring of post-survey responses.	11/27/22	X
12/2/22	Final completion of the project.	Submit the final paper to a repository after the final revisions have been made.	12/16/22	X

Appendix H

Logic Model

Inputs/ Resources ⇒	Activities ⇒	Outputs ⇒	Short-term Outcomes (1 month) ⇒	Mid-term Outcomes (2 months) ⇒	Long-term Outcomes (3 months)
Time from staff to read resiliency information and complete surveys. Support from department management for conducting activities. Access to email providers in order to receive information. Time and energy from the graduate students Michelle Baker and Sara Kalis. Time and energy from faculty members Lisa Starr, Melissa Skoff, and Rhea Ferry.	Biweekly newsletter with resiliency education and intervention. Educate staff on resilience and resiliency techniques Utilization of work email as primary communication on resilience.	Educational materials sent out. Staff survey responses on educational materials. Staff survey response on resiliency and compassion fatigue.	Increase in knowledge on resiliency.	Decrease in compassion fatigue and burnout. Increase in resiliency skills.	Increase in resiliency resources available to agency staff. Increase in staff resiliency. Decrease in staff turnover.

Appendix I

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 *last 30 days*.

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.

Appendix J

TABLE 1. 25-Item Resilience Scale

		Disagree						Agree
1.	When I make plans I follow through with them.	1	2	3	4	5	6	7
2.	I usually manage one way or another.	1	2	3	4	5	6	7
3.	I am able to depend on myself more than anyone else.	1	2	3	4	5	6	7
4.	Keeping interested in things is important to me.	1	2	3	4	5	6	7
5.	I can be on my own if I have to.	1	2	3	4	5	6	7
6.	I feel proud that I have accomplished things in my life.	1	2	3	4	5	6	7
7.	I usually take things in stride.	1	2	3	4	5	6	7
8.	I am friends with myself.	1	2	3	4	5	6	7
9.	I feel that I can handle many things at a time.	1	2	3	4	5	6	7
10.	I am determined.	1	2	3	4	5	6	7
11.	I seldom wonder what the point of it all is.	1	2	3	4	5	6	7
12.	I take things one day at a time.	1	2	3	4	5	6	7
13.	I can get through difficult times because I've experienced difficulty before.	1	2	3	4	5	6	7
14.	I have self-discipline.	1	2	3	4	5	6	7
15.	I keep interested in things.	1	2	3	4	5	6	7
16.	I can usually find something to laugh about.	1	2	3	4	5	6	7
17.	My belief in myself gets me through hard times.	1	2	3	4	5	6	7
18.	In an emergency, I'm someone people generally can rely on.	1	2	3	4	5	6	7
19.	I can usually look at a situation in a number of ways.	1	2	3	4	5	6	7
20.	Sometimes I make myself do things whether I want to or not.	1	2	3	4	5	6	7
21.	My life has meaning.	1	2	3	4	5	6	7
22.	I do not dwell on things that I can't do anything about.	1	2	3	4	5	6	7
23.	When I'm in a difficult situation, I can usually find my way out of it.	1	2	3	4	5	6	7
24.	I have enough energy to do what I have to do.	1	2	3	4	5	6	7
25.	It's okay if there are people who don't like me.	1	2	3	4	5	6	7

Appendix K

Clinician Satisfaction Survey

1. I am satisfied with the time it took to complete resiliency and empathy fatigue training?

- ◯ 1 - Strongly Disagree
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5- Neutral
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9
- ◯ 10- Strongly Agree

Appendix L

Implementation of Materials Survey

1. Please rate the educational materials on a scale of 1 (not useful) to 5 (useful).. 0

- ◯ 1 (not useful)
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 (useful)

2. Please provide feedback on one item you plan to implement in your life. 0

Appendix M

Clinician Survey

1. Which describes your position best (a) physician, (b) CNP or APRN, or (c) nurse or spiritual care

◯ (a) Physician

◯ (b) CNP or APRN

◯ (c) nurse or spiritual care

Addendum N

Survey Cover Letter and Informed Consent

Hello palliative care clinicians,

You have previously provided consent to participate in a DNP quality improvement project on resilience and compassion fatigue. Attached you will find a link for a survey money. The surveys will take approximately 15 minutes to complete. Please complete the surveys by (1 week from date this email is sent). Starting on (date previously stated) you will receive weekly educational materials. Please complete the surveys prior to starting the education. We look forward to working with you on this project. Completion of the questionnaire is an indication of your voluntary consent to participate in this project.

Study Purpose

The purpose of this project is to determine the effects of resilience education on compassion fatigue and resilience in palliative care clinicians. The majority of research involving compassion fatigue up until now has focused on hospice or dialysis care providers and nurses; relatively little research has investigated specifically palliative care providers and physicians, APRNs, and CNPs.

Study Procedure

If you agree to participate in this study, you will receive all information per your CentraCare email. You will first receive a questionnaire related to compassion fatigue and resilience. You will then receive weekly educational material on resilience for seven weeks. In each educational email there will be items to think about and work on related to resilience, and feedback will be requested. After the seven weeks of educational materials, you will receive another questionnaire related to compassion fatigue and resilience.

Risk of Study Participation

The pre and post questionnaires will take approximately 15 minutes. Each weekly educational material will also take approximately 15 minutes to read.

There is a violation of the expectation of normal everyday life of taking extra time and mental effort required to complete the surveys and education when other activities would normally be scheduled. There is an inconvenience of time given the length of time requested for participation in the project. There may be psychological risks associated with reassessment of resilience and compassion fatigue.

Benefits of Study Participation

Participants may receive the benefit of increased resiliency knowledge with increased resiliency and decreased compassion fatigue, but this is not guaranteed. This project, if published, may

also be used to add to scientific knowledge on resilience training on resilience and compassion fatigue. Feedback will also be used to improve the educational materials to be used with other employees of the Central Minnesota agency.

Alternative to Participation

While you may learn useful information about your resilience and compassion fatigue from participating in this study, you can choose to not participate in the study.

Research Related Injury

There are no research related injury concerns.

Confidentiality

The records of this study will be kept private. Survey responses are anonymous. In any publication or presentations, we will not include any information that will make it possible to identify you as a subject. Data will only be reported in grouped or aggregated form, and individual responses will not be reported or available. All data collected will be stored in a locked filing cabinet and/or on a password protected computer. To these extents, confidentiality is not absolute. Your consent form and data will be retained securely for five years after which time it will be destroyed.

Voluntary Nature of the Study

Participation in this study is voluntary. Your decision whether or not to participate in this study will not affect your current or future relations with CSS, the Department of Nursing. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Contact and Questions

The researchers conducting this study are Michelle Baker and Sara Kalis. You may ask any questions you have now, or if you have questions later, you are encouraged to contact the principal investigators at 320-267-7608 or 612-345-1003 or by email at mbaker9@css.edu or skalis@css.edu**.**

If you have any questions or concerns regarding the study and would like to talk to someone other than the researcher, you are encouraged to contact the following individuals:

- Research Advisor – Rhea Ferry at 218-791-5052
- School Dean and Department Chair - Sheryl Sandahl at 218-723-6390
- Chair of the Institutional Review Board - Nicole Nowak-Saenz, Ph.D., at nnowaksaenz@css.edu

You may also contact any of the above-named individuals in writing or in person at The College of St. Scholastica, 1200 Kenwood Ave, Duluth, MN 55811.

Thank you for your time in completing the surveys,
Michelle Baker and Sara Kalis
The College of St. Scholastica
Doctorate of Nursing Practice Students

Addendum O

Resilience Logo for Newsletters