Compassion Fatigue Among Rural Intensive Care Nurses

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COMPASSION FATIGUE AMONG RURAL INTENSIVE CARE NURSES

by

Sarah Beatrice Smith

A DNP Project Submitted to the Faculty of the

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As members of the DNP Project Committee, we certify that we have read the DNP project prepared by Sarah Beatrice Smith entitled "Compassion Fatigue Among Rural Intensive Care Nurses" and recommend that it be accepted as fulfilling the DNP project requirement for the Degree of Doctor of Nursing Practice.

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Final approval and acceptance of this DNP project is contingent upon the candidate's submission of the final copies of the DNP project to the Graduate College.

I hereby certify that I have read this DNP project prepared under my direction and recommend that it be accepted as fulfilling the DNP project requirement.

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STATEMENT BY AUTHOR

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SIGNED: __Sarah Beatrice Smith_________________

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Last but not least, I would like to extend my deepest gratitude to my family and friends for their unconditional love and understanding. Thank you for embarking on this wild adventure with me, and for loving me every step of the way.

DEDICATION

To my dad, Austin:

You stood by me through life's trials and tribulations. You taught me how to be strong and to love unconditionally. To make you proud has always been my biggest aspiration and greatest accomplishment. You are the reason of what I become today.

To my love, Jonathan:

I love you to the moons babe. Forever and ever.

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ABSTRACT

Purpose: The purpose of this project was to conduct an educational workshop among ICU nurses working in rural areas, to reduce risk of compassion fatigue.

Background: Compassion fatigue is a job-related hazard unique to professionals in caring professions such as nursing. Rural ICU nurses represent a population that may encounter unique triggers for the risk of compassion fatigue due to professional isolation, less resources and more risk of knowing the patient as a community member. A review of literature reveals limited research related to compassion fatigue development in *rural* ICU nurses.

Method: Two educational workshops were conducted among rural ICU nurses (N=3). Workshop content included discussion about symptoms, triggers, and outcomes of compassion fatigue, as well as positive coping strategies. Participants journaled physical and emotional responses to situations such as ethical or moral dilemmas, boundary issues, and aspects of self-care. Each workshop included time to discuss the educational content and participant experiences; the resulting narratives were analyzed for commonalities.

Findings: Universally, burnout was viewed as inherent to the profession. All participants recounted past traumatic patient encounters that preoccupies their thinking when in similar situations. Symptoms identified as compassion fatigue included chronic, constant, generalized pain, symptoms of depression, isolation, withdrawal and lack of interest in enjoyable activities. Triggers were prolonged patient hospitalizations due to lack of resources, lack of supporting services, lack of leadership support, unexpected patient loss, witnessing patient trauma and grief, caring for patients who did not seem to really need ICU, social situations surrounding patients and floating to different departments. Increased alcohol intake, sarcasm, and venting were the most reported mitigation strategies among participants.

Implications: Compassion fatigue negatively impacts the lives of rural ICU nurses on many dimensions, although it is perceived as inherent to the profession. These participants desired support from nursing leadership and a supportive work environment. Participants expressed they continued to feel compassion, despite experiencing the phenomenon described as compassion fatigue. A less stigmatizing term might better capture the phenomenon now labeled as compassion fatigue.

INTRODUCTION

The shortage of nurses in the United States is not a new concept within in the nursing profession. In fact, the American Health Care Association began talking about a nursing shortage eight years ago and since then the need for nurses has only increased; the projected number of job openings due to growth and replacements is estimated to be 1.05 million by the year 2022 (American Association of Colleges of Nursing, 2014). Why then are nurses leaving the profession at an alarming rate? A leading cause of nurses leaving the profession is *compassion fatigue* (CF) (Cimiotti, Aiken, Sloane, & Wu, 2012; Johnson, 2013). CF is the summation of negative outcomes encountered in professions that provide care to others. CF can manifest at different stages of one's career, and often goes unrecognized, unacknowledged and untreated. The phenomenon of CF has shown to be influenced by resilience and nursing specialty but there is limited research on the perceptions and experiences of the vulnerable population of rural intensive care nurses (Gillespie, Chaboyer, Wallis, & Grimbeck, 2007; Robertson, Cooper, Sarkar, & Curran, 2015).

Background

A relationship between hospital characteristics, nurse staffing, nurse burnout and hospital-acquired infections shook the healthcare world when it was recognized (Cimiotti et al., 2012). It was estimated that a 30% reduction in burnout would produce an annual cost savings of $28-$69 million dollars (Cimiotti et al., 2012). The terms burnout and compassion fatigue are often used interchangeably, which has created a research challenge.

CF is a job-related hazard unique to professionals in caring professions such as nursing. CF often results from unrelieved traumatic workplace experiences, from which clinicians suffer physical and emotional consequences. Symptoms of CF include mental and physical exhaustion, anger, depression, frustration, insomnia, feelings of being afraid, frequently having images of an upsetting event, avoiding things reminiscent of the event and insomnia (Ray, Wong, White, & Heaslip, 2013). Those with unresolved CF may be mentally distracted, which could even impair their ability to make clinical decisions and raise the risk of medical errors.

Unresolved CF leads to unwanted recollection of traumatic or disturbing events with psychological effects of inadequacy, detachment, isolation and exhaustion (Circenis & Millere, 2011; Ray et al., 2013). Those with CF report physical symptoms in varying degrees. Some professionals report sleep disturbances, headaches, total body pain and gastrointestinal disruptions (Showalter, 2010). Irregular heartbeat, chest pressure and rapid heart rate have also been reported (Lombardo & Eyre, 2011).

Nurses working in the Intensive Care Unit (ICU) are a population vulnerable for CF due to the nature of their work. For example, ICU nurses provide care for the most complex and critically ill patients. These nurses, sometimes moment by moment, navigate an emotional rollercoaster. The ICU nurse may be juggling care for the patient transitioning to death while providing intensive care for a patient recovering from a lifesaving surgery. The nurse is expected to be compassionate in providing support to the dying patient while being uplifting and encouraging to the recovering patient. The rollercoaster can be difficult to navigate and extremely exhausting.

In rural settings where community hospitals provide care for the acutely ill, chronic illness often drives many hospital admissions. Prevalence of chronic illness among adult populations is more prominent in rural settings when compared to the urban counterpart

(Winters, 2013). Nurses working in these rural settings who see the same patients' multiple times, often develop interpersonal relationships with the patients and even their family members. When nurses also fail to utilize professional or clear boundaries, their risk of CF may increase. Additionally, rural ICU nurses often function with insufficient social resources that are sparsely located, which complicates disease management; this also increases the burden for nurses who feel a sense of responsibility to find solutions (Warren & Smalley, 2014). For this project and paper, rural is defined as a city with less than 50,000 in population (Health Resources & Services Administration, 2017). The purpose of this project is to conduct an educational intervention to address compassion fatigue among ICU nurses working in rural areas.

Significance

The necessity and presence of nurses in the dynamic healthcare industry cannot go unnoticed. Yet, the shortage of nurses continues to worsen despite the rising demands (American Association of Colleges of Nursing, 2014). Retaining existing nurses in the profession should be of utmost importance, not only to assist in meeting the healthcare needs of the country but also to foster the growth of new nurses entering the profession. The decision to leave the nursing profession is multi-factorial, however literature shows that CF is the main reason nurses choose to leave the profession (Cimiotti et al., 2012; Johnson, 2013). Additionally, literature shows that nurses are considering leaving the profession within their first five years of practice due to the phenomenon of CF (Beck & Gable, 2012; Sung, Seo, & Kim, 2012).

The national average turnover rate for nurses is currently 14.6%; the turnover rate among critical care nurses exceeds this average. (Nursing Solutions, 2017). It is estimated that over the past year, approximately 17% of critical care nurses have 'turned over' or left one or more positions within the specialty (Nursing Solutions, 2017). The cost of turnover per registered nurse (RN) ranges from $37,000- $58,000 resulting in an average loss of $5.2M- $8.1M (Nursing Solutions, 2017). Because CF causes long-lasting and devastating psychological effects (Johnson, 2013) and often precipitates turnover, it can negatively impact entire departments and health care institutions.

The prevalence of CF, burnout, and secondary traumatic stress among ICU nurses is significant. As many as 70% of ICU nurses report CF, with 40% experiencing symptoms of burnout and 38% experiencing symptoms of secondary traumatic stress (Van Mol, Komanje, Bakker, & Nijkamp, 2014). Further, when compared with nurses working in oncology, emergency department, or nephrology units, medical ICU nurses face higher risk of CF (Hooper et al., 2010).

Local Problem

The shortage in the nursing workforce is not projected to affect the US healthcare industry for the next 10 years (Nursing Solutions, 2017). When the impact of the nursing shortage hits, Arizona will face one of the worst nursing shortages in the country. While some speculate that nurses are merely retiring, the more likely explanation is that nurses are leaving the profession prematurely, due to CF (Toh, Ang, & Devi, 2012). If the trend of CF, turnover and premature exiting from the profession continues, the well-being of Arizona residents, patients and nurses will further deteriorate (Nursing Solutions, 2017). To alleviate the consequences of CF, retain nursing professionals and improve the functioning of exiting nurses, it is vital to gain an understanding of ICU nurses' experiences and perceptions surrounding CF.

Purpose and Aims

The purpose of this DNP project was to conduct a quality improvement project among rural ICU nurses who are at risk for CF. Aims included: 1) describe the symptoms, triggers, and outcomes of CF among rural ICU nurses, 2) provide a focused educational intervention to decrease CF, and 3) provide self-care techniques to reduce further risk.

Conceptual Framework: Professional Quality of Life

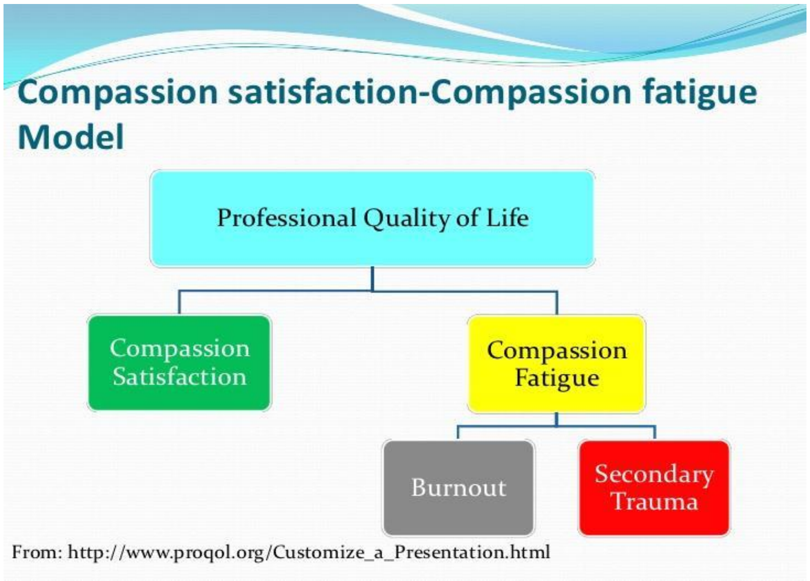
The theoretical approach that served as a guide for this DNP project is the Professional Quality of Life (ProQOL). The ProQOL is a conceptual model describing compassion fatigue, with an associated tool that measures the risk of compassion fatigue (Sheppard, 2015). The ProQOL has developed through the works of Stamm, Figley, and Pearlman (Stamm, 2010). The ProQOL conceptualizes that positive and negative aspects of one's life contribute to the development of CF, which can be quantitatively or qualitatively measured (Stamm, 2010).

Compassion satisfaction is described as the pleasure or sense of fulfillment derived from work (Stamm, 2010). In nursing, this fulfillment is enhanced by perceived positive contributions one witnesses or makes while rendering care for patients. Compassion satisfaction is further described as the gratification one feels from caregiving (Ray et al., 2013). The level of compassion satisfaction is dampened from the negative aspects of caring, secondary traumatic stress and burnout.

Secondary traumatic stress and burnout together make up what is widely known as compassion fatigue, which has negative impacts on compassion satisfaction (Stamm, 2017). Secondary traumatic stress is characterized by preoccupying thoughts of people one has helped (Stamm, 2017). Caregivers with secondary traumatic stress report sleep disturbances, inability to delineate one's private and professional lives, and avoiding activities to avoid reminders of witnessed trauma of someone they have cared for (Stamm, 2017). It occurs when individuals become traumatized by vicariously experiencing traumatic events of patients or co-workers, or witnessing the grief of others (Figley Institute, 2012). The onset can be unpredictable and acute, often with symptoms nearly undistinguishable from those of post-traumatic stress disorder (Ray et al., 2013). Secondary traumatic stress manifests with feeling of being afraid, frequently having images of an upsetting event, avoiding things reminiscent of the event and insomnia (Ray et al., 2013).

Burnout is defined by as a reaction to chronic stressors associated with the job (Leiter & Maslach, 2004). It is characterized by the negative feelings of being disconnected, insensitive, and unhappy with the work environment resulting from prolonged involvement in emotionally demanding situations, and causing a state of emotional, physical and mental exhaustion (Letier & Maslach, 2004). Typically, these feelings have a gradual onset and can be reflective of an unsupportive work environment, heavy workload, or feelings that one's efforts make no difference. Burnout manifests in mental and physical symptoms such as exhaustion, anger, depression, frustration and being overwhelmed, which makes it more difficult to complete one's job effectively (Ray et al., 2013).

The ProQOL can be used to gain a better understanding of the components of CF and to understand and quantify the risk of developing CF. Figure 1 outlines the conceptual model. The ProQOL was used to guide the DNP project by developing an educational intervention that targets elements of CF. The knowledge may lead to more effective interventions that reduce the risk of compassion fatigue and decrease nursing attrition.



Compassion satisfaction-Compassion fatigue Model

Professional Quality of Life

Compassion Satisfaction

Compassion Fatigue

Burnout

Secondary Trauma

From: http://www.proqol.org/Customize_a_Presentation.html

FIGURE 1. Professional Quality of Life (ProQOL) Conceptual Model

SYNTHESIS OF EVIDENCE

CF is described as occurring within most if not all nursing specialties (Dominguez-Gomez & Rutledge, 2009; Sung, Seo, & Kim, 2012). Despite the abundance of evidence that CF exists, there is still a gap in understanding symptoms, triggers, and outcomes of unresolved CF. Generalizing findings that contribute to future development of nursing scholarship is challenging without better understanding. This synthesis summarizes the available literature regarding the varying conceptual definitions, CF research among various nursing populations with emphasis on fields of critical care, differences and similarities in outcomes, and discusses weaknesses, strengths and gaps in research.

A search of existing literature was performed in various databases in attempt to utilize a systematic approach and yield relevant research studies. Databases used include PubMed, PSYCHinfo and CINAHL. Keywords used were compassion, fatigue, intensive care and nursing. The initial search yielded 45 results in CINAHL, 164 in PubMed and 13 in PSYCHinfo. To further narrow the search, I sought articles that were published within the last 10 years, written in English and describing or discussing humans. The studies included in this evidence synthesis were obtained between November 2015 and June 2017.

Variation in Conceptual Definition

The phenomenon of CF consists of many terms that are important when describing the phenomenon appropriately. These terms include compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress. Throughout my review of literature, I encountered noteworthy variance of definitions.

Compassion Fatigue

Of the selected articles, not all utilized the term CF to describe the phenomenon. Of those that did, the definition of CF had slight variance among three selected articles but referenced early works in their description. CF was described as an offshoot of burnout, and the natural consequent resulting from knowing about a traumatizing event (Sabo, 2011). CF was viewed as a stress caused by the activity of helping others in need (Sung et al., 2012). Lastly, CF was defined as a combination of emotional, physical, and spiritual exhaustion associated with caring for patients in significant physical distress and emotional pain (Lombardo & Eyre, 2011). Further contributing to a discrepancy of conceptual definition, CF and burnout were previously described as separate and distinct phenomena (Lombardo & Eyre, 2011). In the ProQOL, the most widely used conceptual model of CF, it is defined as an accumulation of negative effects of caring; burnout and secondary traumatic stress increase while compassion satisfaction decreases (Stamm, 2010). Throughout my search of existing literature, I was unable to locate any specifically relating to the population of rural nurses in the United States.

While variations of CF exist in literature, I found one example of research utilizing the ProQOL among critical care nurses. The ProQOL was to describe the correlation of CF with caring abilities among critical care nurses in Iran (N=253) (Mohammadi, Peyrovi, & Mahmoodi, 2017); this researched identified that most critical care nurses experienced moderate levels of CF (Mohammadi et al., 2017). CF negatively impacted the nurses' knowledge, patience and courage (Mohammadi et al., 2017).

Burnout

Burnout is described by the three dimensions of exhaustion, depersonalization and sense of inefficacy (Hooper et al., 2010). It causes an emotional and behavioral impairment that results from the exposure to high levels of occupational stress (Van Mol et al., 2014). Burnout has variant ranges among healthcare professionals from 0 to 70% (Fumis, Junqueira Amarante, de Fátima Nascimento, & Vieira Junior, 2017). In the ProQOL, burnout is defined as feelings of hopelessness and difficulties in doing one's job effectively and dealing with work (Stamm, 2010).

There is inconsistency with how burnout is defined. In a study of critical care nurses (N=116) burnout is described as a tri-dimensial phenomenon resulting from chronic interpersonal job stressors (Fumis, Junqueira Amarante, de Fátima Nascimento, & Vieira Junior, 2017); in their study 28% (N=116) of those surveyed reported severe burnout, which was linked to more working hours per week and working night shift.

Burnout is reported to vary in frequency among different nursing specialties. Estimates are that upwards of 34% of Iranian rural nurses experience moderate to severe burnout (Bijari, & Abassi, 2016). Burnout is further delineated as vocational burnout, described as a result of chronic exposure to job stressors with symptoms of frustration, anger, cynicism, exhaustion and feelings of failure or inefficiency (Bijari & Abassi, 2016). For rural providers, feelings of being overloaded with various responsibilities, differences in work environment, lack of rewarding feedback, and differences in managerial procedures increased the risk of burnout (Bijari & Abassi, 2016).

Secondary Traumatic Stress

While the variations of burnout and compassion fatigue were easily found within the literature, definitions of secondary traumatic stress were sparse. In the ProQOL (2010) secondary traumatic stress is defined as a negative feeling driven by fear and work-related trauma. Effects of secondary traumatic stress include fear, sleep difficulties, intrusive images, and/or avoiding reminders of the person's traumatic experiences (Stamm, 2010).

The concept of secondary traumatic stress has been investigated in nursing research. In the Mohammadi et al. (2017) study of critical care nurses (N=253), more than 50% of the ICU nurses experienced secondary traumatic stress; secondary traumatic stress had minimal correlation with the nurses' patience but was highly correlated with a sense of courage. Descriptions of secondary traumatic stress among rural nurses are sparse, and unfortunately, I was not able to locate any works specifically relating to rural nurses.

Compassion Satisfaction

I found two articles that discussed compassion satisfaction. This central term to the ProQOL conceptual model, is described as the positive effects to providing care (Stamm, 2010). Similarly, compassion satisfaction was defined as positive aspect of caring that aids in balancing out the negative aspects of working with traumatized or acutely ill persons (Hooper et al., 2010).

Compassion satisfaction was also defined as the benefits or feelings of success that members of a helping profession experience when working with suffering or injured people. In a study of ICU nurses (N= 253), high compassion satisfaction was reported in 55% (Mohammadi et al., 2017). In this sample, nurses who reported higher compassion satisfaction also self-identified as providing better and even more effective nursing care (Mohammadi et al., 2017).

Triggers of CF

Compassion fatigue appears to be triggered by a variety of experiences and events. Witnessing painful or traumatic events, caring for patients who died unexpectedly, or working in a difficult environment all triggered some symptoms of CF (Beck & Gable, 2012; Hooper et al., 2010). Among ICU nurses, artificially prolonging life, receiving inadequate support at work, experiencing staffing challenges or working in a negative environment all raised the risk of CF (Sung et al., 2012; Van Mol et al., 2014).

Reduction Strategies for CF

Resilience is frequently mentioned as a protective factor; those with more resilience may experience lower rates of CF. Resilience interventions have been used to improve mental health and well-being among nurses with CF (Robertson et al., 2015). In the Robertson at al. (2015) study among nurses from various specialties (N=29), reduction of stress, depression, anxiety, and negative mood/affect/emotion were particularly sensitive to resilience intervention. Resilience is strongly associated with coping, or the ability to deal with change, thus increasing compassion satisfaction and lowering compassion fatigue (Gillespie et al., 2007).

Additional strategies that emerged through research and were shown to have an effective impact on compassion fatigue were different work schedules, improving communication skills and relaxation methods (Van Mol et al., 2014). Awareness of the phenomenon through education has impacts on reducing the negative effects of CF (Mohammadi et al., 2017; Van Mol et al., 2014). Awareness of CF enhances the ability of compassion satisfaction growth, positively influencing the overall professional quality of life (Mohammadi et al., 2017).

Outcomes of CF

I sought articles that discussed outcomes related to CF. Numerous physical symptoms of CF are described, including sleep disturbances, headaches, total body pain, and gastrointestinal disruptions (Showalter, 2010). In a study of 94 neonatal ICU nurses who may have been experiencing CF, nervousness and tiredness were highly reported (Skorobogatova, Zemaitiene, Smigelskas, & Tameliene, 2017). Feelings of inadequacy from unresolved CF lead to detachment, isolation and exhaustion (Circenis & Millere, 2011; Ray et al., 2013). Ultimately, unresolved CF caused some nurses to prematurely leave their profession (Beck & Gable, 2012; Sung et al., 2012).

Literature Strengths

The rate of compassion fatigue, burnout, and secondary traumatic stress is consistently present amongst many different disciplines of nursing (Dominguez-Gomez & Rutledge, 2009; Hooper et al. 2010). Throughout the literature, compassion fatigue and burnout are extensively discussed and well described, despite a variance of terminology and definitions. Another strength of the literature is the consistency of characteristics reported to lower CF risk. Resilience was effectively shown in numerous studies to be associated with lower CF risk and rate. The evidence strongly supports that unresolved CF predicts nurses prematurely leaving their current position or even the nursing profession.

Literature Weaknesses

The most notable weakness identified in the literature search and review is the lack of consistency among definitions relating to the phenomenon of compassion fatigue. This inconsistency suggests that the phenomenon is not well understood academically or clinically. The use of conceptual models was not consistently reported in the literature. In fact, most of the articles did not discuss a guiding theoretical framework. Only three studies utilized the ProQOL (2010) to guide their methodology (Mohammadi et al., 2017; Sabo, 2011; Sung et al., 2012). A reason for this may be that current conceptual models do not adequately characterize compassion fatigue amongst nurses.

Literature Gaps and the Need for this Project

While much of the current literature focuses on identifying the presence of compassion fatigue, few pieces of literature consider the perceptions and experiences of nurses. Research on compassion fatigue is not yet well developed, therefore weaknesses and gaps in research are inherent. A significant gap that emerged from the literature search is a lack of data specific to specialized nursing units. Although I located articles describing aspects of CF among ICU nurses, I was not able to locate any literature with the specific target population of ICU nurses within rural hospitals. While resilience was consistent in a reducing rate/risk of CF, there was a lack of interventions studied to reduce CF prevalence or risk. Lack of literature and studied interventions serve as justification for clinical scholarship and future research.

METHODS

Design

Quality improvement projects can be challenging and problematic. A method that seeks to understand the process for change with relation to the participants' experiences, and accelerate proposed change is The Institute for Healthcare Improvement's (IHI) Model (2017) for improvement. The model for improvement consists of two parts; the fundamental questions and the plan-do-study-act cycle (PDSA cycle).

The model asks three fundamental questions, which can be approached in any order seen fit by the researcher. These questions are meant to guide the researcher through the process of change by encouraging effective interventions with measurable outcomes (Institute for Healthcare Improvement, 2017). The first question the model poses is, "What are we trying to accomplish?" This aids in the task of setting aims. Aims for projected change should be time-specific, measurable and define the specific population that will be affected. The second question asks, "How will we know that a change is an improvement?" This question ensues that quantifiable measures are established which allows researchers to determine if a specific change actually leads to an improvement (Institute for Healthcare Improvement, 2017). Finally, the third question asks, "What change can we make that will result in improvement?" The final step in the model proposes drawing ideas for change from those who work in the system or those who have had experience of successful improvement. After these questions have been addressed, researchers may guide the project to the next step of the model, the PDSA.

The PDSA cycle is utilized in various facets of healthcare to improve process, outcomes and accelerate change (Institute for Healthcare Improvement, 2017). The PDSA cycle is part of the improvement process that allows quality improvement teams to identify, plan, try, observe, and refine change implemented on a small scale. This process is repeated until the change generates optimal results, and change is then implemented on a larger scale. (Institute for Healthcare Improvement, 2017). The IHI's PDSA cycle provides a practical approach for instituting and measuring the impact of change within the complex systems.

Intense planning for this project was conducted in collaboration with three other DNP scholars conducting the same project amongst different nursing populations: new graduate bachelors of science degree nurses, transplant nurses and travel nurses. Collaboratively, the group developed the purpose, aims, methodology of project, and intervention for this project utilizing the PDSA as the backbone. During the planning phase of the project, the questions posed by the IHI model for improvement were answered. The educational intervention aimed to reduce CF was condensed from a formal eight-week intervention (Sheppard, 2015) to one that could be delivered in two workshops. Throughout the planning stage, the four DNP scholars along with the project chair met frequently to refine and solidify the plan. If the intervention is successful, nurses will have awareness of the triggers, symptoms, and known factors contributing to CF with potential abilities to mediate the outcomes.

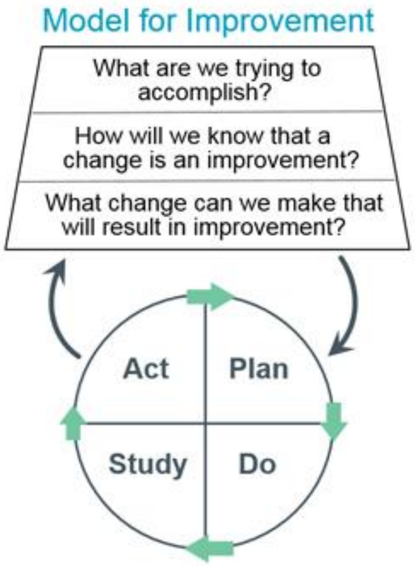


FIGURE 2. Institute for Healthcare Improvement PDSA Cycle Participants

Rural ICU nurses were sought for participation in this project. Inclusion criteria consisted of those actively working as a registered nurse, with at least six months of ICU experience in a rural area, not currently working in another specialty and who were in fluent in English. For purposes of this project, rural is defined as a city with less than 50,000 in population. Participation was voluntary and the discussions that occurred within the workshops were kept confidential. A colleague was provided a recruitment flyer and asked to assist in increasing awareness to interested individuals. Snowball sampling was used in the recruitment of participants. After receiving approval from the University of Arizona's Institutional Review Board, flyers were posted on community bulletin boards in public locations such as grocery stores and banks. Interested participants were asked to share the recruitment flyer with others.

Setting

The setting for this project was northwestern Arizona. Data was collected in the central city of Lake Havasu City, Arizona; however, any nurse who received the flyer and met inclusion criteria was able to participate. No one was excluded from participating due to gender, ethnicity, or age.

Intervention (The “Do” Phase)

Two separate one-hour workshops conducted over the course of approximately three weeks, were delivered, and I led both sessions. A mutual time of 9:00 AM was decided amongst participants and were held in a private room of a restaurant. The sessions were audio recorded and transcribed by Landmark associates for analysis. At the beginning of the first workshop, informed consent and simple demographic data via demographics form was obtained. During the first workshop open ended questions were posed to discover participant perceptions and experiences relating to CF, along with participant triggers, symptoms, responses and outcomes of CF. This discussion lasted approximately 45 minutes and was followed by a 15-minute educational session. The education included emotional and physical symptoms of CF, and how unhealthy boundaries and additional known risk factors contribute to CF. Lastly, I discussed strategies to mitigate CF such as kind self-talk, social engagement and self-reflection. Participants were asked to maintain a brief journal to discuss physical and emotional responses to triggered situations such as when their boundaries were pushed, and when moral or ethical dilemmas were encountered. The journals were not collected but were kept by the participants. I encouraged everyone to make a brief notation in the journal daily and after every workday, or when aware of physical, emotional or mental discomfort.

Two weeks later, the same participants returned for a second workshop. Again, open-ended questions were posed to discover participants’ experience of CF with regard to triggers, moral or ethical dilemmas, emotional and/or physical responses, outcomes of CF and issues setting boundaries. The educational piece of the second workshop included a discussion of skills and techniques to reduce risk of compassion fatigue, such as reaching out to a colleague, engaging in self-care, maintaining healthy boundaries and disconnecting from electronics for at least one hour once a week.

Data Analysis

Transcripts of each workshop were analyzed using content analysis for commonalities such as emotions, triggers, experiences and outcomes of compassion fatigue by the DNP scholar conducting the project. The findings section of this paper outlines these commonalities and more about the workshops themselves. Although it is beyond the scope of this DNP project, the long-range goal is to evaluate the data from all four DNP projects collectively, to ascertain any underlying commonalities and explore the differences.

Ethical Dimensions

Consideration for ethical dilemmas arising from research involving humans or animals must be addressed. Ethical dilemmas can arise when the desire for rigor conflicts with ethical considerations (Polit & Beck, 2012). I attempted to address the principles of beneficence, justice and respect for human dignity to minimize risk and maximize benefit of participants.

Beneficence is defined by Polit & Beck (2012, p. 152) as “a duty to on researchers to minimize harm and maximize benefits.” This project was reviewed and approved by the Internal Review Board (IRB) of The University of Arizona to maximize beneficence. Justice describes the participants’ right to privacy and fair treatment (Polit & Beck, 2012). In data collection, no identifying information was collected or reported. Maintaining anonymity of participants following was a great concern to maintain privacy. The right to fair treatment concerns equitable distribution of benefits and burdens of research (Polit & Beck, 2012). After voluntary consents, participants could at any point in the study's data collection voluntarily withdrawal. The right to self-determination ensues that participants can ask questions, refuse to give information and voluntarily decide whether to take part in a study without risk of prejudicial treatment (Polit & Beck, 2012). No monetary or materialistic rewards were given for participation, nor threats or penalties for declination of participation. Light refreshments and beverages were provided as reasonable compensation for attending each group workshop.

Trustworthiness

In qualitative studies, where numerical based data cannot be captured, researchers discuss trustworthiness to evaluate the quality of a study (Polit & Beck, 2012). The concept of trustworthiness was first described by Guba and Lincoln (1981), and has become the hallmark criteria for evaluating the quality of qualitative data. Trustworthiness contains the dimensions of authenticity, confirmability, credibility, dependability and transferability when conducting qualitative research (Lincoln & Guba, 1994; Polit & Beck, 2012). Authenticity refers to the extent to which researchers faithfully and fairly show a range of realities (Polit & Beck, 2012). I employed authenticity throughout this DNP project by describing CF verbatim from participant responses during workshops. Authenticity is achieved when the reader is able to understand the lives of the participants with respect to mood, feeling, language, and experience (Polit & Beck, 2012). Polit and Beck (2012, p. 585) describe confirmability as objectivity, "the potential for congruence between two or more independent people about the data's accuracy, relevance or meaning." I established confirmability by transcribing the group sessions audio in text verbatim with citations from the sessions in the findings of the project. Credibility refers to the confidence that data and interpretations are truthful (Lincoln & Guba, 1994; Polit & Beck, 2012). Within the concept of credibility is two aspects: conducting the research in a way that enhances the believability of the findings and actions to demonstrate such credibility (Lincoln & Guba, 1994; Polit & Beck, 2012; Lincoln & Guba, 1985). This project attains credibility by utilizing written script in each workshop, and transcription of each workshop without interpretation. Dependability refers to the reliability of data over time and conditions (Lincoln & Guba, 1994; Polit & Beck, 2012). Transferability refers to the potential for findings to be applied, or transferred, to other settings (Lincoln & Guba, 1994; Polit & Beck, 2012). While beyond the scope of this project, future clinical scholarship work will analyze the findings of this project along with the findings of the three other DNP scholars conducting CF research in other populations. The collaborative project seeks to determine the transferability of CF interventions amongst different nursing populations.

FINDINGS

The purpose of this DNP project was to conduct an educational intervention among rural ICU nurses at risk for CF. While the presence of CF among ICU nurses is described in literature, perceptions and experiences surrounding the subspecialty of rural ICU nurses has not been synthesized. The ‘do’ phase of this project consisted of two separate workshops, in which an educational intervention was executed. The intervention delivered in this project focused on the aims of: 1) describing the symptoms, triggers, and outcomes of CF among rural ICU nurses; 2) providing a focused educational intervention to decrease CF risk among rural ICU nurses; 3) outlining techniques to reduce further risk of CF among rural ICU nurses.

Participants and Demographics

Three rural ICU nurses volunteered to partake in this DNP project. Ages of participants ranged from 36 years old to 55 years old. Two participants had greater than 10 years nursing experience, and one had less than five years. Reported length of time as ICU nurse varied amongst all participants, ranging from 1-7 years. Highest level of education for all participants was an associate degree of nursing. All participants work night shift and have children with ages ranging from 11 to 33.

TABLE 1. *Demographics*

	Participant 1	**Participant 2**	**Participant 3**
Gender	Female	Female	Male
Age (Years)	55	36	44
Ethnicity	Caucasian	No response	Caucasian
Years of experience as RN	12	14	2.5
Education	Associates degree	Associates degree	Associates degree
Martial status	Single	Married	Married
Number of children	1	2	3
Shift worked	Night	Night	Night
Length of time as ICU nurse	7 years	1 year	2.5 years

Commonalities Related to Compassion Fatigue

Symptoms: Physical, Mental and Emotional

Workshop one began with a discussion of compassion fatigue and compassion satisfaction. Participants were asked to describe their satisfaction in their role as a rural ICU nurse. The overall response was positive, especially when compared to nursing work on other units. Participants felt that the ICU was perhaps the best department of the hospital. The workshop dialogue progressed into what participants described as “symptoms” of nursing. Participants identified physical symptoms of chronic complete body pain, sore legs, generalized body aches, headaches and backaches as responses to the physical demands of caring for patients within their role as a nurse. They agreed that this is inherent to the role in their specialty because patients often are not able to move themselves, so nurses are tasked with the job of assisting them. Participants described the emotional stress of having to solve challenges of moving obese patients in addition to physical stress of moving them. This stress was experienced every two hours in anticipation of having to repeat these movements. Mental stress derived from situations manifested in physical symptoms such as continuous physical pain.

Psychological effects much like compassion fatigue symptoms were believed to be more frequently encountered as a result of moral distress and exposure to grief. A sense of responsibility to provide emotional and spiritual support for patients was felt by participants. In the absence of family member presence, participants felt they were the sole support systems for patients. This sense intensified during night shifts, when participants felt the burden of providing both intensive nursing care and emotional support. A participant captures this sentiment in a statement,

> *"There's no distractions. They're sitting there in the dark, feeling lonely, and they either get frustrated, or they want us to sit there and talk to them. You don't have the time, 'cause you got—so you're caught between what you would like to do, and what you absolutely have to do to keep going."*

In response to the stressors of ICU, participants reported increased anxiety with anticipation of entering a work environment of uncertainty. Anxiety was heightened when participants left their home environment to travel to their work environment. Anxiety was expressed frequently as a symptom of their CF, which stemmed from feelings of uncertainty. They questioned if their work environment would be filled with chaos, if they would be required to float to another department or whom they would be working with. If there was no relief upon entering the work environment, the CF went unresolved and their symptoms progressed from anxiety to frustration.

The discussions of uncertainty and anxiety led to further discussion of emotional and psychological symptoms experienced outside the work environment; the emotional and psychological symptoms were accompanied by physical symptoms such as total body aches. Once home, participants described symptoms of social isolation, cynicism, depression and irritability. The participants assumed their peers were incapable of relating to their experiences, causing them to further withdrawal and isolate themselves from family and friends. This perception of being alone heightens the risk of CF among this population.

Participants reported a heightened occurrence of psychological symptoms when working multiple uninterrupted shifts. Consecutive shifts resulted in insufficient time for participants to cope, increasing the risk and prevalence of CF. Further increasing this risk is the experience of a traumatic event at the beginning of multiple consecutive shifts. Participants describe the inability to recharge after working consecutive shifts, due in part to working night shift. They felt their first day off was a loss because the afternoon was spent resting to transition to a normal sleep schedule. A participant captures this in a statement:

> *"'Cause yeah, if you get three off, good, but if you work two, then you get two off—you can't recharge. Especially at nights, because you—the first is a burn, and you get one. It's just not allowed. And you just get your own tasks done, and then you're back at it again."*

Dialogue amongst participants fostered the progression of symptomology of CF into contributing factors, and triggers they have experienced.

Triggers

The workshop discussions exposed a variety of experienced symptoms, influences and outcomes of CF in the rural ICU nurse. Participants reported increased CF due to a perceived disconnect between the ideal of nursing and the reality nursing. Some participants did not experience effects of this perception, however they felt that nurses entering the profession did. Common perceptions of the profession of nursing was to make patients feel better, to take care of them, assist in recovery from medical conditions and to provide emotional and spiritual support to patients. For some participants, the reality of nursing is that not all patient recover, and some conditions such as chronic disease or traumas may significantly alter the patients' quality of life. When these situations arose, participants felt that by providing ICU they were all too often prolonging the patient's suffering.

Organizational Factors

Participants described lack of staff, repeated requests to work, lack of respect for time off, and pressure for taking on additional patients as contributing to their CF. In some cases, a nursing colleague offered to take part of a shift in order to meet staffing needs. When this offer was declined by administration and all nurses on the shift experienced the burden of being under-staffed, it was a source of frustration or even that administration did not care about the nurses. One participant described her experience wanting to help the team but facing challenges:

> *"If you said yeah, you know, I can give you um, six hours, I can come in at, you know, 9:00 and-and get through this, maybe help with some-some baths. No, we need a nurse for a full shift. [response from staffing coordinator] It's like well, I can't do that. And they're not willing to accept the split shifts. Other places are. I've worked at other places. They'll take four hours. They don't care."*

Inadequate staffing levels contributed to an overall feeling of anxiety and concern for patient safety amongst participants. Participants describe having to take mental preparations in anticipation of their shift. One participant reports early arrival to work to allow time to cope with experienced anxiety. Furthermore, without a monitor technician or unit secretary, participants felt constant worries about their patients' safety. They describe a sense of neglecting other patients when all unit resources are allocated intermittently to one patient. A participant captures this response in a statement,

> *"It take four to move 'em, and there's only three on the unit and nobody's to watch the patients where you're all in there for 20 minutes trying to get 'em from the bed to the chair. That's the other frustrating is when-when you have to do so many people in one room, yet, somebody really needs to be out to answer the other call lights and watch the monitor, in case somebody else is you know."*

Participants described frequent supervisor requests for them to work extra shifts, which often left the participants feeling that their personal lives do not matter. They described receiving multiple requests from different people within the organization, leaving them feeling that there was no communication within the organization. They expressed this as a frustration and ultimately feeling as though they were "viewed as a phone number and less as a person." The perceived lack of communication elicited participant responses of withdrawal and anger towards the organization. One participant described a time in which she was contacted by six different individuals requesting her to pick up a shift; with each phone call she felt increasingly frustrated and angry and subsequently began to emotionally withdraw.

Another shared that she was contacted while on vacation. She recalled that her vacation time was clearly outlined on the schedule, so receiving calls from her supervisor left her feeling that her personal needs were being ignored or did not matter. Another participant stated that she elects not to carry her phone with her on her days off, but if she realizes the unit is busy and understaffed, she feels guilty for not taking the extra shift.

Patient assignments were often a source of stress or added pressure. Specifically, some described feeling pressure to take new patients, especially right after their previous patient died; there was no time to grieve or collect one's thoughts. Often, self-care activities such as lunch or even bathroom breaks were lost to a new assignment. In some cases, the participant felt that patient assignments were made based on who had the worst shift thus far, and all too often assignments did not feel balanced or fair.

Participants described the dynamics of the team members as a trigger to CF. A positive working relationship amongst peers was important to participants, providing them with a sense of support when they were able to work with certain team members. Alternatively, if a participant dreaded working with certain colleague, the participant felt disappointment and resentment in anticipation of the shift to come. A participant captures this experience in a statement,

> *"Different personalities are obviously more difficult to deal with. Sometimes it's you know, your coworkers, not the patients. It's the surrounding people…If one person's there you're like [sigh] this is gonna be rough. Because you know, it only takes the one person."*

Rural ICU nurses describe a work environment that is dependent on a functioning team and utilization of teamwork. A participant described a scenario in which four nurses were needed to assist one patient to reposition, and outlined the challenges they faced when asking for assistance in non-emergent situations. As the discussion of teamwork flourished and progressed from personality challenges of colleagues, one participant described her positive experiences of teamwork within her work environment,

> *"Because, you know what, in the end, there's nobody now that won't cover your back. If you call I need some help in here, everybody will be there."*

Participants identified connections with colleagues to be multi-faceted, resulting in either increased CF or increasing compassion satisfaction.

Patient Factors

Situations surrounding the patient were a significant factor contributing to CF for participants. The length of hospitalization, personal relationship with patients, expectations of care and family dynamics were commonalities that emerged through discussion. Extended hospitalizations resulted in blurred professional boundaries, increased moral conflicts and ultimately increased risk of CF. Participants described increased personal connections with their patients during a prolonged hospitalization. Caring for the same patient repeatedly created emotional challenges for participants as their professional boundaries were blurred. Participants described increased emotional responses to situations in which they were introduced to the patients grown children, or heard stories about the patient. One participant expressed her challenge in caring for patients during extended hospitalizations,

> *"That's the hardest piece for me, coming from EMS, it was treatable. Fixable. Get them to the ER. Done. Repeatedly, but it's still only two, three hours at a shot. When we get them now, we get them for longer periods of time and all the connections start being made."*

The participants related that living in a small town, they frequently knew their patients and even had a personal relationship with the patients or family; this personal knowing often increased the emotional difficulty especially when the health outcome was less than optimal. Often these prior relationships caused the participants to want to emotionally disconnect or distance themselves. Participants reported increased anxiety, withdrawal, and moral distress when end of life discussion and decisions are to be made about patients they personally knew. One participant captures this experience,

> *"To me, that was very traumatic, because I knew him personally, and I really had to step away from that whole situation and say I don't want—I don't want to take care of him, because I've known him for so long. I've lived here forever, and I*

> *know these people. It's really hard when he was my driver ed teacher and I'm having to call their kids and saying you know, we're-we're calling end-game right now. This is not well. And so, I think that's a little more of an issue that I have, because I've been in this town for so long. So many of those people I know, and I've known forever, and I know their kids."*

The perceptions of patient perceptions emerged as a risk factor for CF. Participants described a disconnect between what the patient expected from surgery and the reality of what the patient actually experienced. Often the patient expected a hospitalization or surgical procedure to be pain-free and without complications. When the patient's expectation was different from the experience, the participants often felt disappointed or even like he or she was somehow to blame. Participants also described the pressure of hospital scoring and patient expectations to contribute to feelings of anxiety. They expressed organizational pressure to provide hospitality services and emotional support in addition to nursing services to increase hospital scoring. They further described frustration when they did not have time to provide these services.

Participants expressed a lack of patient teaching and education prior to elective surgeries and when making informed decisions for advanced directives, as a frequent source of frustration. This intensified when patients appeared unwilling to cooperate with treatments or recommendations. Often the participants felt like they had expended effort and energy to help a patient follow treatment plans, and when the plans were rejected or ignored, the participants felt very frustrated and like their work was futile.

The workshop discussion revealed deeper concerns for lack of patient understanding concerning their care. Participants expressed concern of monetary motives to surgical procedures. Participants describe moral dilemmas when caring for patients who were in poor health prior to elective surgeries. Coupled with the education factor, these moral dilemmas notably increased the risk of CF among participants. One participant describes her experience in a statement,

> *"Is it a matter of greed? Or is it a matter of true medical care? And that's a—that's a tough one for me. Because are they signed up to do something that they're totally not expecting? Just for that? Or, do they really understand what they're in for?"*

The level of family involvement was discussed. Lack of family involvement was described as a source of frustration. However, participants also voiced feeling pressure of family dynamics to either increase expectations for patient care or increase patient dependence for emotional support from the nurse. Situations in which patient family members were overly involved left nurses feeling as they had a standard to meet. Alternatively, when there was a lack of family involvement, participants felt as if they were left being the sole support for the patient. Participants expressed frustration when the demands of nursing care superseded the emotional needs of the patient. The desire to provide emotional support but inability to do so due to nursing tasks created internal conflict. A participant statement captures the feelings of participants,

> *"The families leave at night, and we're left there being the sole support for the patient. The wife's not there, the kids aren't there. There's no distractions. They're sitting there in the dark, feeling lonely, and they either get frustrated, or they want us to sit there and talk to them. You don't have the time, 'cause you got—so you're caught between what you would like to do, and what you absolutely have to do to keep going."*

Witnessing Trauma and Grief

Perhaps the greatest factor that caused emotional distress is that of witnessed trauma and grief. All participants offered that witnessing the grief associated with patient death was depressing. Participants described that seeing one patient die unexpectedly often caused them to fear losing another patient. Often, caring for a subsequent patient with similar symptoms or diagnosis caused the participants to fear another unexpected death. One participant discussed a situation that began with a patient coughing, ultimately leading to the patient's unexpected death. She describes fear and unwanted recollection of past events anytime a patient develops a cough. In addition to unexpected loss, participants identified that the patient's age often contributes to their anxiety. Participants describe emotional responses to poor patient outcomes in patients under aged 60 and associated these outcomes among younger patients with increased risk of CF.

Participants expressed strong emotions when discussing past events. For example, participants felt emotionally connected to the parent who lost a child; witnessing the parents' grief also felt devastating to the participants. All participants volunteered that they had kids, so they shared that witnessing a parent's loss of a child was one of the greatest sources of their own emotional distress. In recalling an event that occurred over five years ago, one participant describes her experience in a statement, "I can still hear parents screaming to this day."

Unwanted recollection of events from traumatic experiences was described by participants as causing both physical and emotional consequences. Participants reported irritability, anxiousness, nervousness and feeling withdrawn in response to re-experiencing the trauma. If experienced on the first of consecutive shifts, the traumatic event had devastating impact. One participant described insomnia, replaying of events and uncertainty if she had rendered the best possible care. She further expressed that the effects of this event persisted through the next three consecutive shifts, which also negatively impacted her sense of any subsequent compassion satisfaction. A participant recounts her experiences in a statement,

> *"It—it really just depends, or like I did that four, but the first day was Max [patient reference] and it was traumatic and I didn't sleep, all I did was think about it over and over in my head and what should I have done differently. The traumatic events, they wipe out everything else. It doesn't matter. You can do 100 good things."*

Lack of Resources and Leadership Support

Participants had many examples of how lack of resources impacts their experiences of CF. They shared examples such as case management, ancillary departments and post hospital facilities. The lack of these resources contributed to their frustration and discouragement when they observed prolonged patients' hospitalization, hindering utilization of necessary services, and ultimately increasing patient morbidity and mortality. Participants described their experiences with insufficient resources. One participant recalled an experience in which the patient was hospitalized for two additional days due to inability to obtain placement on a Friday; once the weekend arrived, there was no follow-up due to lack of case management staff. Participants expressed their reluctance to assist some patients out of bed following prolonged immobilization because patients had not yet been evaluated by physical therapy. Feeling as if they were further contributing to the degradation of patient muscles, participants expressed guilt for not moving patients but were fearful of consequences if the patients fell.

In addition to the impact of ancillary support, the participants expressed strong feelings with regards to lack of support from their nursing leaders; this was seen to be a source of incredible frustration. Some shared frustration at the inconsistency regarding enforcement of standards amongst their peers. The inconsistent enforcement resulted in feelings of anger, frustration and irritability amongst participants. One participant described a situation in which she was required to remain on the job for over thirteen hours, due to her reliving nurse forgetting to set her alarm; the participant felt frustrated and mentally exhausted. Participants further describe their perceptions of feeling unimportant and insignificant. Participants expressed that they felt unsupported by their leaders in situations where they were personally impacted, such as when their peers failed to meet department standards and leaders failed to enforce disciplinary policies. The outcomes of leadership inconsistencies are reflected in the practices of the unit. Recurrent tardiness and failing to complete daily tasks were identified behaviors that caused feelings of frustration. They proposed that without the support of nursing leadership, the responses to these situations go without resolution.

Participants shared their experiences of moral dilemmas stemming from perception of utilization of healthcare services. Participants offered some examples of ethical conflict such as caring for patients of advanced age following elective operations or during recurrent and prolonged hospitalization; they experienced these conflicts with anger. Participants expressed feelings of resentment towards elder patients receiving elective surgeries, especially when they while children being denied much-needed surgeries they need.

Outcomes

When asked how unresolved CF might feel, the group outlined many physical and/or psychological consequences. Isolation and withdrawal were a common psychological manifestation of participants that emerged through discussion. Participants describe their experiences with social isolation as not wanting to see or communicate with anyone. Pushing them further into isolation was the perception that friends and family were incapable of relating to experiences of the participants. Participants also described feeling much less tolerance towards their patients, and then they felt guilty about their intolerance. One participant shared an example of this that she believes impacted her care:

> *"I'm just gonna keep giving him Ativan [reference to patient situation], cuz I can't [take] anymore."*

Another commonality was the thought or intent to leave ICU nursing. Participants expressed at some point they have considered transferring to different specialties. While they were not actively pursuing a transfer, participants describe the emotional effects from CF as reason they desired change. They had the perception that while the physical effects of CF might be found in any type of nursing, the emotional burden may diminish in other specialties. Sentiment of this outcome was captured in a participant statement,

"I think I'm ready for hospice. I'm tired of torturing people."

Reflections on the Workshop

At the second workshop, participants were asked to refer to their journals in reference to questions of experienced or witness triggers resulting in physical or emotional symptoms. On multiple accounts, participants gave examples of using the coping skills presented in the first workshop. For example, when discussing healthy boundaries, the participants talked about not calling to check on patients when "off" work, and all had made a change in this behavior. Additionally, participants recalled not intentionally remembering past patients' names. By the end of the second workshop, the participants expressed that they felt more equipped to cope with the triggers, symptoms and outcomes of CF. They described attempts to increase compassion satisfaction as a means to mediate CF, such as increasing self-care practices and positive self-talk. Participants recognized the high prevalence of CF in the nursing profession and through discussions they came to realize that they were not alone in their experiences with CF.

DISCUSSION

ICU nurses provide specialized care to patients and their families; patients frequently are critically ill and the nurses deal with death and dying constantly. ICU nurses are exposed to loss, trauma, and often unexpected events. In the rural setting, these nurses run a higher risk of knowing the patients on a personal level, encountering patients with extended hospitalizations and are armed with less resources and support. The summation of the negative impacts from providing care can raise the risk of CF in rural ICU nurses. Participants described various symptoms and influences associated with CF, which result in detrimental outcomes personally and professionally. Additionally, participants acknowledge the impact of interventions to mitigate CF among rural ICU nurses.

The purpose of this project was to describe symptoms, triggers, and outcomes of compassion fatigue among rural ICU nurses. Interpersonal interaction with this population brought to light influences of CF not yet described. The interventional workshops revealed some risk factors that have not yet been discussed in nursing literature. Descriptions of existing literature compared to workshop findings are further discussed here.

Symptoms of Compassion Fatigue

Physiological and psychological symptoms of CF are reported throughout literature, varying in degree from headaches to social isolation. Physiologically nurses with CF are burdened with symptoms of total body pain, malaise and headaches (Circenis & Millere, 2011; Lombardo & Eyre, 2011; Showalter, 2010). The participants in this project are no different; they all described their physical symptoms of CF including headache, body aches, and fatigue.

The physical effects can be acute or chronic consequences of CF. Psychologically nurses may encounter involuntary, disturbing memories of upsetting events. In response to recollection of these events, nurses may experience impaired thought processing and mental clarity as a result (Circenis & Millere, 2011). In instances of unexpected patient loss, feelings of inadequacy, depression and insomnia are reported, leaving those affected questioning their impact on the outcome of their patient (Circenis & Millere, 2011). Unresolved, CF can progress from feelings of inadequacy to guilt for ICU nurses. Nurses experiencing or witnessing traumatic events encounter psychological effects such as avoidance of reminiscent events, irritability and detachment. The participants in this project reported similar feelings of inadequacy following witnessed trauma in the ICU. In days and weeks following the event, the unresolved CF manifested psychologically and physically in participants; they described the inability to sleep, as they replayed the event repeatedly in their mind, and always with feelings of inadequacy. As a result, just as described in the literature, (Circenis & Millere, 2011 Ray et al., 2013) these participants began to feel depressed and self-isolated even from family and friends.

The participants described that when patient care situations felt highly emotional, external demands such as inadequate staffing heightened their physical symptoms of irritability, anxiety, total body pain and aches. In situations where all focus was directed to one patient, they felt conflicted and mentally exhausted worrying about their inability to monitor their other patients. Such conflicts resulted in irritability, anxiety and guilt among participants. Participants described that their symptoms of anxiety and worry might begin the minute they started planning a task such as moving a morbidly obese patient. They described their symptoms as total body pain, aches and anxiety. Interestingly, one participant described the impact of his symptoms as dependent on his underlying level of CF. In instances where his CF was low, he was able to recuperate from psychological and physical symptoms more rapidly than if his CF was high. Participants were able to recognize and identify symptoms of CF, and employ coping strategies. However, while all participants could recognize CF among their colleagues or peers, universally they chose to be silent rather than discuss CF with their coworkers. In a search of the current literature, I have not found this reported anywhere.

Triggers

Contributing factors to CF may vary by individual and possibly work setting. Known triggers include the work environment, witnessing an unexpected death or inadequate support to staffing challenges (Beck & Gable, 2012; Hooper et al, 2010; Sung et al., 2012). Literature among ICU nurses describes artificially prolonging life along with inadequate support as significantly contributing to CF (Van Mol et al., 2014). While many triggers described by participants' parallel what is described in literature, the workshop discussions reveal triggers that are more complex and in depth than what is described. Participants described the risk of personally knowing patients from their community; they felt this heightened their risk of CF. Participants described that having personal relationships with patients or their families often inhibits their caring abilities and can even create moral distress by knowing personal information about their patients. Participant expressed their intentional avoidance of caring for patients they personally knew, as a means of protection from CF and for their own self-preservation. Participants also described a heightened risk of CF from caring for patients during prolonged or repeated hospitalizations. For participants, a sense of connectedness developed from these repeated interactions. Participants describe a growing closeness between self, patient, and family. Repeated exposure to the same patient and family impaired the ability of the nurse to maintain professional boundaries. Encountered moral dilemmas during these situations, resulted in feelings of detachment and guilt. The resulting blurred professional boundaries increases the sense of personal responsibility to the patient ultimately increasing the risk of CF.

Participants associated prolonged patient hospitalizations with a shortage of support services. Inadequate support services increased the sense of responsibility among participants thereby increasing their risk of CF. Participants expressed guilt when incapable of fulfilling the acquired responsibilities, even when physically not possible. Additionally, a lack of guidance and involvement from nursing leaders significantly contributed to the development of CF for participants. Participants describe inconsistencies in enforcement of department policies and standards leaving them feeling unimportant, insignificant while subjecting them to extended shifts. Perceived lack of communication among nursing leaders resulted in repeated requests for staff to work additional shifts, occasionally being contacted by six different individuals for the same request. Resulting in feelings of disrespect for their time off and being viewed less of a person and more as a number on a list. In addition, participants expressed a sense of disrespect when requests to work were made during approved vacation time. Despite the demand to work extra shifts, participants reported declination of offering partial shift work. This was viewed as unwillingness by the organization to assist nurses during staffing crisis. These experiences are examples of burnout, which is well-documented in nursing literature (Hooper et al., 2010; Van Mol et al., 2014).

One commonality that was not discussed in current literature is the clash between what nurses expected their role to be and what their role actually is. In every case, this clash caused frustration and disappointment. As several discussed, during nursing school they believed the role of nurses was to help and support patients throughout illness. Not imagining prolongation of medical illness without hope for return to functional quality of life. Contrary to their ideals, the reality for these participants is that,

> *"They [patients] die. We make people hurt. We do. We torture people in a lot of ways. Sometimes totally unnecessarily."*

Interventions

Interventions to reduce CF vary in efficacy and approach throughout literature. Resilience training, education programs on coping, and communication have all demonstrated success in reducing CF (Gillespie et al., 2007; Robertson et al., 2015; Van Mol et al., 2014). Participants expressed attempts to mediate symptoms of CF by utilizing positive and negative coping skills. Positive coping skills reported were venting to either their peers or spouses, maintaining healthy boundaries inside and outside of the workplace, and prioritizing social activities. An unhealthy coping technique that the participants described is depersonalizing their nursing care by not remembering the names of their patients. Additionally, participants recognized and agreed that contacting patients and patient family members on social media was an unhealthy boundary that they avoided. Participants expressed the importance of scheduling social activities with their families to preserve relationships. Discussion of positive coping skills revealed that participants learned these skills over time, without formal coaching.

Negative coping skills described by participants were increased alcohol intake and inappropriate sarcasm. All participants recounted increased alcohol intake since entrance into the nursing profession. While recognizing this unhealthy coping mechanism, none desired changed behavior. Throughout the discussion, participants were observed laughing during conversations of poor patient outcomes. Participants recognized this coping mechanism, expressing the sarcasm is often view negatively by those not personally involved in situations. Participants express the use of sarcasm as method to depersonalize situations and maintain boundaries. These negative coping techniques are also well-described in the literature (Gillespie et al., 2007).

Outcomes

Outcomes of unresolved CF are well documented, including physical and psychological effects. The outcome of greatest concern is the intent to prematurely leave the nursing profession (Circenis & Millere, 2011). The workshop participants did not desire to leave nursing yet, but all expressed desire to change their nursing specialty. In the face of an impending nursing shortage, relocation and/or departure of nurses is particularly worrisome.

Reflections on the Workshops

Participants stated that the education from both workshops helped increase their awareness of CF and may help them to prepare to address the symptoms. All expressed relief at realizing they were not unique in their experiences of CF, and one stated, "It's a real thing, it's not just me."

Participants were very responsive to the dialogue of the workshops. Throughout the discussions, utilization of an established script promoted the flow of dialogue flow amongst participants. Initial disappointment of a low attendance rate among interested participants was overlooked when discussions seemed to positively impact participants.

Leadership, Policy and Clinical Implications

CF is a significant contributing factor for nursing turnover, and ultimately the impending nursing shortage. Additionally, CF has health risks for nurses, patients and community. CF results in depression, withdrawal, isolation, chronic pain, insomnia and impairs mental clarity. Several clinical and leadership implications can be inferred from the data obtained during this project. Perhaps the most important from this project is the need for support services for rural ICU nurses. Although spiritual or social support can help nurses who witness grief or trauma

(Gillespie et al., 2007; Robertson et al., 2015), none of the participants in this project were aware of or had access to any such support. Only one participant in the study was aware of available counseling services for First Responders and Police Officers; this Critical Incident Stress Management (CISM) program is also available to nurses. One participant outlined that paramedics are actually required to attend debriefings, and he wondered if it should be required for nurses. For rural ICU nurses or nurses in general, no such mandate exists. Proactive efforts for CF risk reduction may reduce occurrence and help nurses find resolution to unresolved CF. Ultimately proactive efforts may reduce the destructive outcomes of CF. As an advanced practice nurse and DNP, I am perfectly positioned to lead this change, especially in my rural community.

Leadership Support

Participants commented repeatedly about how a lack of support from leadership is frustrating and probably contributes to their risk of CF. Pressure for participants to accept another patient following the unexpected loss of another, challenges with staffing and lack of leadership support were all triggers that surfaced through this project. Nursing managers, supervisors and leaders including chief nursing officers can help impact the phenomenon of CF by creating policies that allow adequate time for staff to use coping mechanisms following a patient loss, before another patient assignment is to be assumed. Additionally, the burnout aspect of CF was impacted by lack of ancillary and nursing staff. The responsibilities of ancillary services were assumed by the rural ICU nurse, increasing their stress and risk of CF.

Lastly, participants expressed significant impact of inconsistent standards from nursing managers as a source of frustration and burnout. For example, enforcement of department rules were inconsistently enforced, with some participants having to stay on the job for more than 13 hours. Participants viewed these situations as unsupportive, and they felt overlooked or invalidated.

Trustworthiness

Trustworthiness establishes rigor for qualitative studies and is utilized to evaluate the quality of the work. Trustworthiness contains the dimensions of authenticity, confirmability, credibility, dependability and transferability for quality evaluation (Lincoln & Guba, 1994; Polit & Beck, 2012). Authenticity for this project was captured by direct quotations from participants. When the reader is able to understand the feelings, moods, and experiences of participants, authenticity is achieved (Polit & Beck, 2012). In the context of confirmability, each workshop followed a written script and all participant responses were audio recorded, transcribed verbatim. This not only ensures authenticity; it also enhances confirmability (Lincoln & Guba, 1994; Polit & Beck, 2012). Descriptive information is provided in this project, allowing the reader to make extrapolations of the findings to other settings (Polit & Beck, 2012). This individual project is challenged in the concept of transferability by a small sample size and single population, however application of the entire group project demonstrates the element of transferability.

Limitations

I sought to recruit 4-8 participants for this project, however only successfully recruited three. Many other rural ICU nurses expressed interest in attending educational workshops, however due to staffing needs they were unable to actually get the time off. All participants worked the same night shift, which may be considered a project limitation. This project was the first quality improvement project I personally have been involved with. The entire process was a learning process, and I realize in retrospect that I could have utilized a more effective method to recruit participants, and better timeline planning would have yielded additional data.

Dissemination and Directions for Future Research

Dissemination of this project will commence after the final DNP defense. An abstract of this project was submitted for a conference symposium in conjunction with the other DNP scholars partaking in the larger project. Final work of this project will be shared with participants, and they have been invited to the public portion of my DNP defense. It is my hope to share my findings with nurse leaders and bedside nurses to increase CF awareness and make strides in CF mitigation. After completion of my DNP, I plan to further analyze findings with the DNP scholars that delivered the same project amongst different populations. Lastly, I plan to submit a manuscript to the American Association of Critical Care Nurses for publication. Dissemination illustrates the final piece of the PDSA, act. After the results have been studied, the next step for the team is to act by either returning to the planning stage or implementing the planned change on a larger scale. The nature of the PDSA is to repeat the cycle, until the desired change results.

Concluding Remarks

Compassion fatigue is a financial, physical and emotional consequence to those who provide care to others. Findings from this project further contribute to our understanding of CF including symptoms, triggers and outcomes of CF, and more specifically by describing perceptions and experiences of rural ICU nurses. Rural ICU nurses note that the grief of their practice coupled with inadequate support and resources places them at a higher risk of unresolved CF. This vulnerable population is at increased risk of effects from the approaching nursing shortage. Actions to reduce CF must be taken to halt the voluntary transfer of nurses out of the ICU and departure of nurses from the profession (American Association of Colleges of Nursing, 2014; Cimiotti et al., 2012; Johnson, 2013).

APPENDIX A:

EDUCATIONAL INTERVENTION WORKSHOP SCRIPT

Educational Intervention Workshop One and Two

Educational Intervention Workshop Script

- Welcome everyone!
- My Name is Sarah and I'd like to begin by thanking each of you for coming today and being willing to participate in this project.
- The reason we're here today is to seek your thoughts about experiences you may have had with compassion fatigue while practicing as an ICU nurse.
- I will be leading our discussion today and I will be asking you questions and then encouraging an open discussion among our group. Then I will lead us through an intervention designed to provide additional education and awareness of risks associated with compassion fatigue.
- This is a confidential discussion and your names will not be included in any feedback or research documentation. Hopefully, this sets a tone of openness and encourages you to speak freely about your experiences and feelings associated with our discussion topic. I ask that you also keep what we discuss today confidential.

To allow our conversation to flow more freely, I'd like to go over some ground rules.

- Please allow only one person to speak at a time. This will help me as I create a written transcript of our conversation, and will allow for others to hear what is being shared in the discussion.
- Please place your cellphones on vibrate to prevent disruptions.
- Please avoid side conversations.
- And… I would like you to know this workshop will be tape recorded. However, the identities of all participants will remain confidential. The recording will allow me to revisit our discussion for the purposes of developing my research documentation
- Finally, I hope that we will be able collectively enjoy our time together!
- Each session should last approximately 1 hour. I will be posing a series of questions, in addition to making any necessary comments to keep everyone on task. Everyone will have the opportunity to answer each question; however, you may choose to not answer any of the questions.
- Are there any questions?
- You will notice a couple of documents at your seat that includes an disclosure and informed consent, and a brief demographics survey. The disclosure gives you information, including exclusion and inclusion criteria, risks, benefits, and numbers to call should you have any concerns now or after the study is complete. If you would like to proceed and participate in the study, I will have you sign the consent which I will collect.
- The demographic survey will allow me to gather brief information so that I can report the number of focus group participants. Again, your name will not be placed on these forms to ensure anonymity with this project.

- I am interested in hearing about your perspectives and experiences as nurses, so please do not share any patient personal information. Then we will spend about 30 minutes talking about compassion fatigue and ways that help reduce symptoms or risk of symptoms. Does anyone have any questions before we begin?

- Session 1: Discussion questions:
    - How satisfied are you with being a nurse? An ICU nurse?
    - What do you like about being an ICU nurse?
    - What do you know about the phenomenon of compassion fatigue? How would you define it?
    - What do you think about professional burnout? How does it feel and what causes it?
    - What do you think about secondary traumatic stress? How does it feel and what causes it?
    - Are there specific patient situations that affect it the most?
    - How do you think compassion fatigue affects you?
    - How have you observed others experience with compassion fatigue?
    - What are some triggers that you may recognize that increase your risk of compassion fatigue.
    -
- ***Allow time for participant responses…..***

Education:

- The next segment of our focus group involved education, an intervention and strategies on increasing awareness of compassion fatigue.

- The most commonly used definition of compassion fatigue include the negative factors of burnout, secondary traumatic stress, and positive factors of compassion satisfaction among health care providers.

- Burnout is defined as the frustration, exhaustion, anger and depression related to the work environment. Burnout causes emotional exhaustion, depression, reduced sense of accomplishment, and feelings of anger and hopelessness among nurse. *I will provide an example here.*

- Secondary traumatic stress is a physical or emotional response experienced through second hand exposure of patient grief, trauma, or tragic loss. It can be triggered by even one event when witnessing the painful and traumatic experiences of others. *I will provide an example here.*

- Compassion satisfaction is defined as the pride and satisfaction a professional helper such as a nurse gain from a job well done. In nursing, the positive satisfaction gained from nursing and caring for others serves as a protective shield for the nurse.

- The positive effects of compassion satisfaction help to balance the negative effects of burnout and secondary traumatic stress that leads to compassion fatigue.

- Possible signs and symptoms of compassion fatigue can vary among individuals; however common manifestations may include the following:

    - Physical manifestations: pain, headaches, muscle tension, GI and digestive upset, fatigue,
    - Mental changes: confusion, inattention, memory loss, and sleep disturbances,
    - Emotional mood swings: anxiety, depression, restlessness, frequent crying,
    - Spiritual: loss of faith, questioning of beliefs, guilt, apathy, and fear,
    - Work/Social behavior: isolation, withdrawal, missed events, increased sick days

- Compassion fatigue impacts personal and social settings, as well as impacting performance within the work environment. Possible outcomes of compassion fatigue can include increased errors, diminished job performance, calling off sick more frequently, difficulty with completion of tasks and personal effectiveness, low self-esteem, impaired functioning, and disappointment with the nursing career, resulting in job changing within the unit, outside of the unit, and for many, choosing to leave the profession of nursing.

- To understand how you experience compassion fatigue, it is important to self-reflect, or take time to think critically, about how you are feeling, physically and emotionally, after a new or even stressful experience on the floor. Ask yourself, did this event put me in a situation where my personal boundaries, morally or ethically, were crossed? For some, these questions can be answered by thinking, other need to write or talk to others for support.

- Self-reflection is your ability to understand how your emotional mood impacts your physical state of being. Think about a time where you were very nervous, how did you feel physically? Perhaps your hands were sweating or your heart was beating very fast, maybe you felt dizzy? Compassion fatigue manifests both emotionally and physically, there is a connection between our mind's emotions and our physical well being. Some experience headaches or nausea when asked to come into work or after a stressful event on the floor. When you feel as if your boundaries have been pushed or crossed by a work situation, ask yourself, how do I feel emotionally and physically; this can help you to recognize symptoms of compassion fatigue early.

Healthy Boundaries:

- ❖ Examples of healthy boundaries are:
    - ▪ Taking breaks
    - ▪ Not saying yes every time you are asked to work
    - ▪ Not calling into work on days off to check on ‘your’ patients
    - ▪ Not adding patients/families on social media

- ❖ Journal directions:

- ❖ After work daily, what should be recorded:
    - ▪ Discuss any situations of the day
    - ▪ Did these situations trigger any physical/emotional symptoms
    - ▪ How did you feel?
    - ▪ When/if your boundaries were pushed, how did it make you feel?
    - ▪ Both physically and mentally/emotionally
    - ▪ Do any ethical or moral dilemmas stick out from the day?
    - ▪ How did you feel physically and emotionally when dealing with the dilemma?

Session 2:

Experiences/Events:

- ❖ Does anyone have any situations that stick out to them from the week that they would like to talk about?
    - Ethical/moral dilemmas
    - Were boundaries pushed

- ❖ In the last two weeks what were two or three specific triggers that either you witnessed in another nurse or that you experienced first hand that resulted in increased symptoms of compassion fatigue?

- ❖ In relation to those triggers, what physical and/or emotional symptoms did you recognize that may be indicators of being at risk for compassion fatigue? How did you handle the onset of those symptoms?

- ❖ In what ways did the education from two weeks ago allow you to understand compassion fatigue as you experience it? Please explain.

Protective Strategies:

- Coping strategies that nurses report utilizing that are unhealthy include working longer shifts and fewer days shifts, smoking, alcohol use, increased food intake, isolation, or choosing temporary positions, and poor peer or personal relationships in order to increase their sense of personal control. Remind yourself to use positive coping strategies every day.

- Utilize kind positive self-talk. Instead of focusing on the areas of the shift that did not go well, focus on all the things that you did do right. Remind yourself that nursing is a tough job, and that your compassion and caring made a difference today.

- Journal every day after work, even if it is for five minutes. Journaling reduces not only physical illness such as cold and flus, but helps to decrease emotional pain and stress. Realize you are human, as such your experiences will have an impact on you. Write about the human experience of nursing.

- Practice self-care through deep breathing and self-guided imagery. Finding a happy place is more than just a saying. Research indicates that mentally focusing upon a happy memory, or memorable peaceful location, can actually lower blood pressure. Although this technique is simple, it can be a powerful instant remedy to reduce the impact of stress.

- Find ways to bring humor and laughter into challenging situations. It is known that laughter can release tension, boost the immune system, and relieve stress. When humor is not appropriate in the moment, a smile can relax head and neck tension, while relaying empathy and kindness that support compassionate care.

- Remember that there is a connection between your mind’s emotions and your physical well-being. Self-reflect and ask yourself, how do these positive or negative feelings impact the way I’m feeling physically; your ability to understand your body is a great way to know how and when to intervene when situations that cause compassion fatigue are experienced.

Conclusion:

- Thank you for your participation in this quality improvement project. With the number of nurses that are leaving the nursing profession, I hope these techniques provide relief from compassion fatigue. I care about you and hope that you remain in a profession that deeply needs you.

APPENDIX B:

LITERATURE SYNTHESIS TABLES

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Beck & Gable/ A Mixed Methods Study of Secondary Traumatic Stress in Labor and Delivery Nurses.	Qual: Descriptions of traumatic experiences Quan: Variables: Gender,education, Ethnicity, primary position, primary clinical focus RQ: 1-What are the prevalence and severity of secondary traumatic stress in L&D nurses due to expo- sure to traumatic childbirth? 2-What are the experi- ences of L&D nurses who are present at traumatic childbirths?	Stamms CS-CF model	Mixed Methods	464 L&D Nurses; obtained from national survey. The small sample size is reflective of low response rate.	Qualitative: Survey with open ended question with purpose to describe indirect exposure to traumatic events. Quantitative: Secondary traumatic stress scale, likert-type scales.	RQ 1- 63% of participants had some degree of STS. 35% moderate-severe STS. 26% met criteria for PTSD due to exposure to their patients who are traumatized. No demographic variables significantly impacted the total STS score. RQ2- Content analysis revealed six themes -Situations intensify exposure to trauma -Distressing emotions during trauma -Feelings of powerlessness, helplessness and failure -Agonizing over what should have been -Mitigating after exposure to trauma -Replaying of traumatic events time and time again -Considering leaving the profession

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Dominguez-Gomez & Rutledge/ Prevelence of Secondary Traumatic Stress Among Emergency Nurses	Demographic variables: gender, age, ethnicity, education level, years in practice, typical work hours and primary employement position. Purpose: explore the prevalence of STS in a group of emergency nurses in Southern California.	Stamms CS-CF model	Exploratory comparative study	111 surveys dispursed to emergency room nurses, only 67 returned.	Secondary Trauma Stress Scale disbursed with return envelope and postage disbursed to nurses mailbox. Reminder postcards at 2 and 4 weeks.	63% response rate. High prevalence of STS amongst emergency nurses. Increasing awareness, symptom recognition and coping strategies may decrease or prevent STS. 78% female 75% white ethnicity 43 years old average age 58% ADN 82% primary postion providing direct patient care 14 years average work experience. 46% report thoughts about work with clients without intention 27% reminders of work with patients upset them 43% experienced emotional numbing, diminished activity More than half easily annoyed, difficulty sleeping

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Gillespie/ Resilience in the operating room: developing and testing of a resilience model.	Demographic data Scales of perceived competence, collaboration, control, self-efficacy, hope, coping and resilience. Aim of study: examine the relation of perceived competence, collaboration, control, self-efficacy, hope, coping, age, experience, education and years of employment to resilience in OR nurses.	Hypothesized resilience model	Cross-Sectional survey	1430, 772 completed the questionnaire. 53.9% response rate	Questionnaires sent to the sample population, 772 returned.	Variables with significant correlation to resilience in OR nurses were hope, self-efficacy and coping. Collaboration, age, education, experience and years of employment were not correlated with resilience.

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Hooper/ Compassion Satisfaction, Burnout, and Compassion Fatigue Among Emergency Nurses Compared With Nurses in Other Selected Inpatient Specialties	Demographics Variables: Compassion satisfaction, burnout, compassion fatigue Hypothesis that ER nurses are at greater risk than MICU, oncology and nephrology nurses.	Stamms CS-CF model	Cross Sectional survey	138 surveys disbursed, 114 returned. Response rate 83%	Survey consists of the following instruments: Pro-QOL; distributed to nurses mailboxes, and disbursed after one month with instructions to complete if not previously submitted.	No significant difference in risk of ER nurses for burnout and compassion fatigue than nephrology, MICU and oncology nurses. ER nurses high risk for low compassion satisfaction, oncology nurses high risk for compassion fatigue and MICU nurses demonstrated a high risk for burnout.

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Mealer/The presence of resilience is associated with a healthier psychological profile in intensive care unit (ICU) nurses: Results of a national survey	Demographics Variables: Anxiety, depression, PTSD, emotional exhaustion, depersonalization and personal accomplishment. Hypothesis: The presence of resilience in ICU nurses is associated with a lower prevalence of symptoms of posttraumatic stress disorder and burnout syndrome that is potentially mediated through the presence of problem focused coping mechanisms and adaptive responses.	Resilience conceptual framework	Cross sectional survey	3500 surveys disbursed, 1239 returned. Response rate 35%	Mailed survey from random population from American association of critical care nurses. Survey consists of the following instruments: The Connor–Davidson Resilience Scale The Posttraumatic Diagnostic Scale The Hospital Anxiety and Depression Scale The Maslach Burnout Inventory	22% ICU nurses highly resilient, associated with lower prevalence of PTSD, burnout and symptoms of anxiety and depression. Resilience was independently associated with lower precelence of PTSD and burnout syndrome in ICU nurses.

Author / Article	**Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question**	**Theoretical Framework**	**Design**	**Sample (N)**	**Data Collection (Instruments/tools)**	**Findings**
Robertson, Cooper, Sarkar, & Curran/ Resilience training in the workplace from 2003 to 2014: A systematic review.	Research question: Locate resilience interventions and to synthesize their effects on personal resilience and four broad categories of dependent variables: (1) mental health and subjective well-being outcomes, (2) physical/biological outcomes, (3) psychosocial outcomes, and (4) performance outcomes.	Not mentioned	Systematic review	14 papers that met criteria for inclusion	Literature search of MEDLINE, PsychINFO and Cochrane Central Register of Controlled Trials.	Among multiple studies following intervention: Consistent decrease in mental health and subjective well being outcomes. Consistent decrease in physical/ biological symptoms (exhaustion, fatigue, cortisol) Consistent increases in psychosocial outcomes (hope, optimism, self-efficacy, motivation, calmness, coping) Consistent increase in post intervention performance

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Sabo/Reflecting on the Concept of Compassion Fatigue: Identifying the Prevalence	Compassion fatigue; secondary traumatic stress Occupational stress Vicarious traumatization	Stamms CS-CF model	Cross sectional survey	23	Survey consists of the following instruments: ProQOL	Lack of theoretical clarity underlying compassion fatigue has led to a number of questions ranging from the role of empathy and empathic response in the development of compassion fatigue to the possibility of a continuum of stress. High risk for low compassion satisfaction, high risk for compassion fatigue and a high risk for burnout.

Author / Article	**Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question**	**Theoretical Framework**	**Design**	**Sample (N)**	**Data Collection (Instruments/tools)**	**Findings**
Sheppard, K/ Compassion fatigue among registered nurses: Connecting theory and research	Demographics Perceptions of compassion fatigue by nurses. Compassion satisfaction; burnout; secondary traumatic stress Hypothesis: Current model does not adequately encompass compassion fatigue.	ProQOL; hybrid model of concept development	Phenomenological interviews	16	Qualitative interview with open ended question.	Four themes identified: Life is unfair Endless suffering Unable to let go Wanting support but pushing away Burnout likely was not a significant factor in the development of compassion fatigue, and that the existing conceptual model did not adequately represent compassion fatigue among nurses The term "compassion fatigue" was seen as stigmatizing, and by accepting the label the nurse feared that he or she may even be compromising his or her employment.

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Sung, Seo, & Kim/ Relationships between Compassion Fatigue, Burnout, and Turnover Intention in Korean Hospital Nurses	Demographics Compassion fatigue Burnout Turnover Aim: identify relationships between compassion fatigue, burnout, and turnover intention in Korean hospital nurses	N/A	Cross sectional survey	142	Survey consists of the following instruments: MBI CS-CF self test for helpers Turnover intention measurement adapted from Mobley's employee turnover tool	Significant correlation between compassion fatigue and burnout, and turnover intention. Compassion fatigue accounted for nearly 30% of turnover intention.

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Van Mol, Komanje, Bakker, & Nijkamp/ The Prevalence of Compassion Fatigue and Burnout among Healthcare Professionals in Intensive Care Units: A Systematic Review	Demographics Aim: evaluate the literature related to emotional distress among healthcare professionals in the ICU, with an emphasis on the prevalence of burnout and compassion fatigue and the available preventive strategies.		Systematic review	40	Systematic literature review using Embase, Medline OvidSP, Cinahl, Web-of-science, PsychINFO, PubMed publisher, Cochrane and Google Scholar	Range of intervention strategies such as different work schedules, education programs on coping with emotional distress, improving communication skills and relaxation methods emerged from the review. Reported rates of burnout in the ICU ranged from 0 to 70%, compassion fatigue from 7%-40% and secondary traumatic stress ranging from 0 to 38%.

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