

COMPASSION FATIGUE AMONG ARIZONA TRANSPLANT NURSES

by

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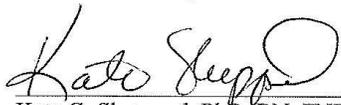
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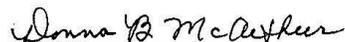
THE UNIVERSITY OF ARIZONA
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As members of the DNP Project Committee, we certify that we have read the DNP project prepared by Tamara D. Sharp entitled "Compassion Fatigue Among Arizona Transplant Nurses" and recommend that it be accepted as fulfilling the DNP project requirement for the Degree of Doctor of Nursing Practice.



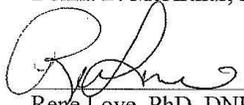
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Final approval and acceptance of this DNP project is contingent upon the candidate's submission of the final copies of the DNP project to the Graduate College.

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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Date: November 14, 2017

STATEMENT BY AUTHOR

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SIGNED: Tamara D. Sharp

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DEDICATION

To my parents, brother, sister-in-law, and precious nieces:

Thank you for inspiration, prayer, and teaching me the power of unconditional love.

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ABSTRACT

Purpose: To conduct an educational intervention to reduce compassion fatigue among Arizona transplant nurses.

Background: Burnout, secondary traumatic stress, and loss of compassion satisfaction raise the risk of compassion fatigue. Transplant nurses support the patient continuum of life and death, and often experience emotional and physical exhaustion and grief when dealing with poor outcomes or patient loss. When patients disregard the value of their new organ or are non-compliant with medications, nurses may feel conflicted. There is a paucity of research as to how those situations are experienced among transplant nurses.

Method: Two workshops were conducted to reduce the risk of compassion fatigue among transplant nurses (n=7) through the delivery of educational and skills training. Education included symptoms, perceptions, triggers and outcomes of compassion fatigue. Skills to reduce compassion fatigue were outlined, such as self-reflection, mindfulness, healthy boundaries, and reaching out. Discussion content was analyzed for commonalities.

Findings: Participants reported an overall high level of personal satisfaction within their specialty, relating this to the improved quality of life for patients who otherwise faced terminal illness or imminent death. Burnout and secondary traumatic stress experiences were deemed as inherent within this nursing practice. Symptoms of headaches, nausea, joint pain, and extreme fatigue were described as occurring in times of increased stress. Triggers reported for these symptoms included poor teamwork, lack of management support, and high nurse-to-patient care ratios. Ethical and moral dilemmas were unanimously reported as causing the highest levels of stress and professional dissatisfaction.

Implications: Burnout among transplant nurses is perceived as inherent to this specialty due to associated challenges with a life and death continuum of patient care. Participants asserted that the nurse-to-patient relationship remains rewarding, which helps to prevent the onset of compassion fatigue. Participants conveyed that the term compassion fatigue is viewed as negative and does not accurately represent compassion levels when feeling fatigued from providing patient care.

INTRODUCTION

Exceptional performance is the hallmark of healthy and engaged nurses who often identify innovative evidence-based practice standards to optimize patient care, collaborate to establish clinical practice policies, and diligently seek to elevate the practice of nursing (DiCenso, Guyatt, & Ciliska, 2005). However, the demands of caregiving can take a psychosocial and physical toll known as the phenomenon of compassion fatigue (CF). This places nurses at risk of experiencing unhealthy, disengaged and diminished levels of performance (Beaumont, Durkin, Martin & Carson, 2016; Finley & Sheppard, 2017; Flarity, Gentry, & Mesnikoff, 2013; Sheppard, 2015).

Compassion fatigue often affects caregivers such as nurses who incur the constant depletion of physical, mental, emotional, and spiritual resources (Van Mol, Kompanje, Benoit, Bakker, & Nijkamp, 2015). Nurses working within high stress environments, such as in intensive care units (ICU), have a 40% greater risk of CF due to the increased emotional and physical demands in those work environments (Van Mol, Kompanje, Bakker, & Nijkamp, 2014). Of even greater concern, 30-50% of all new registered nurses leave the nursing profession within the first three years of practice, citing overwhelming stressors that are manifested in varying forms of burnout and fatigue (MacKusick & Minick 2010).

Compassion fatigue has been defined as a state of burnout, as evidenced by emotional, physical, and mental distress or depression, and has been discussed in literature as having a significant impact that may be recurring within the nursing practice and health care arenas (Figley, 2015; Stamm, 2010). Because the CF phenomenon has been understudied among various nursing populations, influences and triggers affecting job satisfaction and nursing

performance may significantly differ throughout the practice of nursing. One unique nursing population known to face a patient continuum of life-and-death stressors is reflected in the specialty of transplant nursing (Kim, 2013). In the midst of grave illness, patients look to these specialized nurses for education, guidance, and hope, as they struggle to comply with intense medical regimens to sustain bodily functions, and await generous organ donors who will gift them with a second chance for life (Berg, Harshbarger, Ahlers-Schmidt, & Lippoldt, 2016; Kim, 2013). It is understood that nursing inherently employs mental, emotional, physical, and spiritual skills to meet challenging patient care demands. It remains understudied as to how those demands are perceived and experienced among transplant nurses. The purpose of this DNP project was to conduct an educational intervention among transplant nurses at risk for compassion fatigue.

Background

Compassion based care has been the hallmark of nursing practice ideologies put forth by Florence Nightingale, Jean Watson, and other nursing pioneers, in which empathy, kindness, and compassion are partnered with professional nursing skills to enrich the patient healing experience (Forrest, 2011). However, along with the personal rewards realized when delivering patient care, there may be a personal cost to caring (Boyle, 2011; Sheppard, 2015). Inherent within the complex demands of an empathic nursing practice is a personal toll experienced as physical, mental, emotional, and spiritual resources are depleted in order to meet the overwhelming needs of patient care (Boyle, 2011).

Compassion fatigue is a term that was conceptualized in the 1990's as a way to identify the psychosocial stress experiences unique to health care workers, whose involvement with the

care and suffering of others has been known to induce secondary traumatic stress disorders (Figley, 2015). Stamm (2010) partnered with Figley (1995) to study this phenomenon and defined this occupational related distress as compassion fatigue, where caregivers experience the loss of work-related satisfaction, a lack of wellness, and a sense of disengagement that is similar to post traumatic stress disorder (Stamm, 2010; Figley, 1995; Figley, 2015). It was suggested that while compassion fatigue reflects a depletion of personal resources, compassion satisfaction can echo a sense of appreciation and purpose among caregivers. Compassion satisfaction is seen as the ability for nurses as caregivers to receive gratification and a personal sense of meaning through the provision of patient care (Makic, 2015). Where compassion fatigue is considered to represent the depletion of nurturing abilities through the cumulative effect of prolonged and intense patient care, compassion satisfaction reflects the ability for nursing to mitigate compassion burnout through affirmative interactions, realizing a sense of purpose, and achieving self-gratification through the nurse-to-patient relationship (Makic, 2015).

Significance to Health Care and Nursing

Research has revealed that compassion fatigue and compassion satisfaction are more strongly related to the ongoing emotional investment with patients, rather than the wide-ranging demands and nursing tasks within the work environment (Sheppard, 2015). In our dynamically complex healthcare arena, the demands upon nursing continue to evolve and require greater innovation, flexibility and clinical resolve (Beaumont et al., 2016). Many health care organizations have recognized that the depletion of individual nursing reserves correlates with poor performance, higher absenteeism, greater risk for errors, and increased attrition rates as nurses seek respite from varying levels of nursing fatigue (Sabo, 2011). Although the concepts of

compassion fatigue and compassion satisfaction are accepted as generalizable, there is little data exploring this phenomenon within the population of transplant nurses.

Local Problem

A shortage of transplant nurses in Arizona has been projected to negatively impact the quality of care, patient safety, and health outcomes, as the demand for skilled nurses exceeds the available professional talent within the southwest region of America (Grant, 2016). The particular disciplines ascribed to transplant nursing demand specialized knowledge and skills, to provide care for critically ill patients suffering with terminal disease (Kim, 2013). Along with intense critical care demands, transplant nurses must carefully navigate patient and family dynamics while awaiting donors to actuate life-saving organ transplants (Berg et al., 2016; Grant, 2016; Kim, 2013). In fact, more than 33,000 organ transplants were accomplished in the United States during 2016, with more than 1,100 of those occurring in Arizona (United Network for Organ Sharing [UNOS], 2017). A unique knowledge set within the transplant nursing population elevates the provision of medication and treatment education to engage transplant patients in awareness and strict compliance with daily medication regimens in order to prevent organ rejection (Kim, 2013). Transplant nurses experiencing compassion fatigue may succumb to national attrition trends, which further jeopardizes the quality of patient care and health outcomes among organ transplant patients. Along with attrition and retirement impacting Arizona's nursing shortage, the empathy and quality of caregiving associated with this nurse-to-patient relationship may place this specific nursing population at greater risk for compassion fatigue (Grant, 2016; Kim, 2013).

Purpose and Aims

The purpose of this DNP project was to conduct an educational intervention among transplant nurses at risk for compassion fatigue. Aims included: 1) describing symptoms, triggers, and outcomes of compassion fatigue and compassion satisfaction among transplant nurses, 2) providing a focused educational intervention to decrease compassion fatigue risk among transplant nurses, and 3) outlining techniques to reduce further risk of compassion fatigue among transplant nurses.

Because transplant nurses have been understudied, experiences with compassion fatigue and compassion satisfaction have not been fully understood. To meet the outlined aims of this DNP educational intervention project, the objectives included the collection and assessment of scholarly research, and the conduction of two workshops that provided experience based descriptions of compassion fatigue among a small population of critical care focused transplant nurses. This DNP educational intervention project was developed in accordance with governing Institutional Review Board (IRB) guidelines, ethical considerations, and assurance of respect and confidentiality for all participants.

Conceptual Framework: Professional Quality of Life

Stamm (2010) developed *The Professional Quality of Life* (ProQOL) as a compassion based theory model and assessment tool to screen, assess, and research the concepts of compassion fatigue and compassion satisfaction among helpers affected by burnout and/or secondary traumatic stress. The ProQOL was selected as the framework for this DNP project, because it provided an application based model that could be leveraged to guide an unbiased

research process through workshop interviews and educational interventions, and in the analysis of findings.

The ProQOL is based upon the original and collaborative work of Figley (1988) and Stamm (1993) who determined that people who work in helping professions are significantly influenced by both the positive and negative components affecting their overall professional quality of life (Figley, 2015; Ledoux, 2015; Stamm, 2010). Together they developed a compassion fatigue and compassion satisfaction self-test that assesses the risk of these elements affecting professional quality of life (ProQOL) (Stamm, 2010). The ProQOL as a testing and research tool was modified by Dr. Stamm (2010) and has developed into a theoretical pathway to guide the assessment of influences and experiences within work, client, and person based environments. The assessment tool and the theoretical model provide a framework to understand how specific negative triggers can result in compassion fatigue, versus those positive aspects that lead to greater compassion satisfaction (Figley, 2015; Ledoux, 2015; Stamm, 2010). The ProQOL model outlines concepts that include burnout and secondary traumatic stress, which have been designated as two contributing factors strongly influencing compassion fatigue (Figley, 2015; Stamm, 2010). The complexities within this model are many because of the plethora of variants ascribed to individual workers, environmental influences, patient populations, personal experiences and exposure to traumatic events (Stamm, 2010). The application of the ProQOL framework within the DNP project workshop interviews and educational interventions, along with participant descriptions of triggers, symptoms and experiences, provided additional awareness of nuances that influence compassion satisfaction,

career retention, and that ultimately affects the quality of nurse-to-patient interactions among transplant nurses.

The ProQOL conceptual model of compassion fatigue has been discussed in literature as it relates to understanding the connection of theory and research (Kim, 2013; Sheppard, 2015). This model posits that both burnout and secondary traumatic stress combine to increase the risk for compassion fatigue (Kim, 2013; Sheppard, 2015; Stamm, 2010). However, it is seen as plausible that this ProQOL framework can reflect either burnout, or secondary trauma, as separate influencers toward compassion fatigue (Sheppard, 2015). Distress experienced by nurses within their work environment was more aligned with the caring and emotional investment of the nurse-to-patient connection, than to a secondary traumatic experience specific to patient trauma (Sheppard, 2015). Burnout, secondary traumatic stress, and compassion fatigue among liver and kidney transplant nurse coordinators not only impacts career satisfaction and quality of life assessments, but they also have correlation to the quality of patient care (Kim, 2013).

Through the guidance of the ProQOL conceptual model and compassion fatigue theory (Figure 1), data collected through workshops helped to identify ways in which nursing management and hospital administrators can implement innovative strategies to mitigate the effects of burnout and secondary traumatic stress among transplant nurses, develop effective coping mechanisms, and monitor compassion satisfaction perceptions that inspire quality patient care (Kim, 2013; Sheppard, 2015; Stamm, 2010). The ProQOL theoretical model is exemplified (Figure 1) as it pertains to the framework of compassion fatigue-compassion satisfaction (Stamm, 2010).

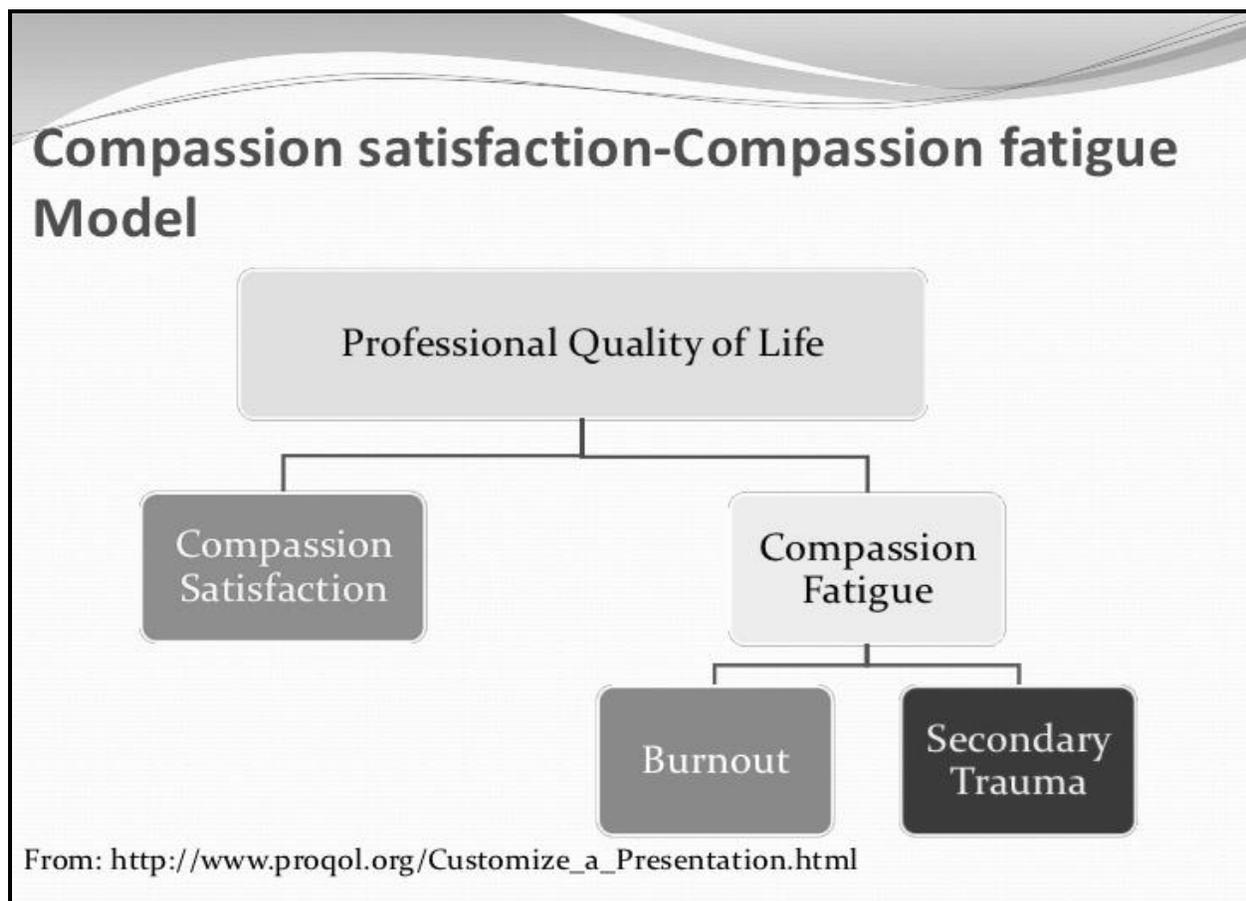


FIGURE 1. Professional Quality of Life (ProQOL) Conceptual Model

As a conceptual model, ProQOL provides the framework of compassion fatigue, burnout and secondary traumas as negative aspects, and compassion satisfaction as a positive aspect associated with personal assessment of professional quality within the nursing practice (Stamm, 2010). Although the ProQOL is not a diagnostic test, it serves as an instrument to guide the process of collecting self-reported data among transplant nurses, allowing for the assembling of clinical scholarship that may illuminate experiences and perceptions, and creating a compassion fatigue risk profile relevant to a compassion based professional nursing practice (Kim, 2013; Stamm, 2010).

SYNTHESIS OF EVIDENCE

A search of literature was conducted to further understand evidence associated with the phenomena of burnout, secondary traumatic stress, compassion fatigue and compassion satisfaction experienced among transplant nurses. It is understood that compassion fatigue remains an understudied phenomenon within the transplant nursing population. Despite the paucity of literature on this specialization, common compassion fatigue themes were researched and evaluated to reflect similarities among critical care, intensive care, palliative, forensic, and trauma related nursing specialties. Synthesizing the evidence provided insight into similarities and differences among literature that identified the themes associated with the clinical scholarship project (Bonnell & Smith, 2014). The purpose of reviewing and critiquing the literature was to extrapolate the various strengths and weaknesses that influenced the evidence, and provided a coherent flow of meaningful data to support project study goals, and to enhance the education of the audience reviewing the presentation (Bonnell & Smith, 2014). Synthesizing the evidence as a literature review process was also defined as “A critical summary of research on a topic of interest, often prepared to put a research problem in context” (Polit & Beck, 2012, p. 732).

A literature search was conducted using CINAHL, PubMed, COCHRANE, and Embase to search the evidence regarding the experiences, perceptions, and coping strategies employed to identify and mitigate compassion fatigue among nurses delivering critical care and trauma based patient support. The search was conducted using the primary term of compassion, along with secondary terms including care, fatigue, satisfaction, burnout, secondary stress trauma, mindfulness, resilience and, specific to this project, transplant nurses. Because it is known that

compassion fatigue and compassion satisfaction are an understudied area of interest among the transplant nursing practice, filters were limited only to literature published within the past five years, peer reviewed, and available in the English language. This allowed for a greater amount of literature to be reviewed for common themes, and statistical data associated with nursing specialties exposed to secondary traumas. It also allowed the author to consider potential generalizability to transplant nurses when common compassion fatigue and compassion satisfaction themes are indicated within the literature review (Appendix C). Thirteen articles were retrieved in COCHRANE, of which four were identified as sharing similar compassion fatigue and compassion satisfaction themes. There were a number (162) of articles located in CINAHL, of which more than 20 related to this project focus, with many articles published as global themes related to disaster recovery efforts, and to trauma outside the healthcare arena. PubMed yielded 272 articles, of which many were duplicate articles located within CINAHL, with at least 29 reflecting the compassion fatigue and compassion satisfaction theme, and with two articles directly related to compassion fatigue and compassion satisfaction among transplant nurses. Three out of 62 articles were selected from Embase due to a limited relevance with compassion fatigue and compassion satisfaction experienced among nurses, rather, a greater emphasis upon provider delivery of compassionate care with patient interaction. Of note, there were no clinical practical guidelines or nursing organizational guidelines retrieved through this search process.

A total of 21 peer reviewed articles were selected for synthesis of evidence in this literature review, and have been deemed as providing meaningful data that study nursing experiences, perceptions, feedback, and interventions as ways to identify and describe triggers

that influence compassion fatigue and compassion satisfaction that may be experienced among transplant nurses. The next section further describes commonalities within the literature.

Conceptual Definitions

As identified in the ProQOL conceptual model, the phenomenon of compassion fatigue is discoverable through experiences of burnout and secondary traumatic stress, with an objective of mitigating these negative outcomes to achieve compassion satisfaction as a positive outcome (Figley, 1995; Stamm, 2010). The terms compassion fatigue, burnout, secondary traumatic stress, and compassion satisfaction have varying interpretations in literature that are used to describe, define, and illuminate the experience of compassion fatigue among caregivers. Because of the paucity of literature directed toward the transplant nursing specialty, the variation of concept and definitions have been evaluated in this clinical project as they relate to critical and specialized trauma care nursing, which has been deemed to align well with the specialty skills practiced among transplant nurse populations.

Compassion Fatigue

Compassion fatigue is a term that was conceptualized in the 1990's as a way to identify the phenomenon of emotional, mental, physical, and spiritual fatigue uniquely experienced among care givers (Figley, 1995; Figley, 2015). Stamm (2010) partnered with Figley (1995) to explore this phenomenon and defined this occupational related distress as compassion fatigue, where caregivers experience the loss of work-related satisfaction, a lack of wellness, and a sense of disengagement that is similar to post traumatic stress disorder (Figley, 1995; Figley, 2015; Stamm, 2010;). Compassion fatigue is identified as being reflective of "Those who work with the suffering suffer themselves because of the work" (Figley, 2015, p. 5). In an educational

intervention project conducted among a trauma team of nurses, surgeons, and physician assistants (n=12), the most egregious stress triggers related to child and elderly abuse, multiple injuries within a family, and senseless death that resulted in emotional, mental, and physical symptoms that significantly increased the risk of compassion fatigue within their caregiving roles (Berg et al., 2016; Ledoux, 2015).

An exploratory study investigated these same stressors designed to assess the risk for compassion fatigue, and determined prevalence among 55 forensic nurses whose primary practice involved known vicarious traumatization and intimate examinations with most patient cases (Flarity, Nash, Jones, & Steinbruner, 2016). Within the scope of their practice, forensic nurses are impacted by hearing and seeing trauma, distress, and suffering among humanity that can significantly impact emotional, mental, and physical resiliency among nurses providing such care (Flarity et al., 2016). Despite being seasoned and skilled in this nursing arena, the cost of caring can be incapacitating, and “FN’s may need assistance to build resiliency and manage the negative effects of their work” (Flarity et al., 2016, p. 148).

This reflects a common theme when transplant nurse coordinators risk high levels of compassion fatigue from repeated exposure to medically traumatic patients, and from long-term assistance when helping family units through extremely stressful life and death events (Berg et al., 2016; Kim, 2013). As a practice, transplant nursing requires specialized skills when interacting with donor families, caregivers, and critically ill patients throughout the organ procurement and transplantation recovery process. An important aspect of this DNP project was to understand how the term compassion fatigue influences nursing perceptions of performance satisfaction. In a qualitative study conducted with registered nurses (n=18), nurses were reluctant

(in interviews) to report feeling compassion fatigue, for fear they would be stigmatized as not demonstrating compassion toward their patients (Sheppard, 2015). This is meaningful data for this DNP educational intervention project because it provided an opportunity to evaluate other terminology that nurses deem to be appropriate when describing feelings of compassion fatigue, burnout, and secondary traumatic stress within their compassion based roles.

Burnout

The concept of Compassion fatigue has been described as a unique state of burnout, as evidenced by emotional, physical, and mental distress or depression, and has been discussed in literature as having a significant impact that may be recurring within the nursing practice and health care arenas (Figley, 2015; Stamm, 2010).

A 2016 quantitative study examined the beliefs and experiences of student midwives (n=103) related to compassion toward others, self-compassion, quality of life and mental well-being associated with compassion fatigue and burnout (Beaumont, Durkin, Martin, & Carson, 2016). Data indicates that midwives who employed self-compassion and self-coping skills reported higher levels of professional compassion satisfaction. Conversely, those who judged themselves harshly reflected low self-compassion and poor coping skills, reported less compassion toward others, and indicated greater levels of burnout and a reduced overall sense of well-being (Beaumont et al., 2016).

A study of burnout and compassion fatigue among more than 650 Chinese oncology nurses indicated burnout and compassion fatigue to be higher in this critical care nursing population (Yu, Jiang, & Shen, 2016). This often equated with what the authors termed as “moral distress,” where ethical dilemmas intensified the nursing experience when caring for

critically ill and actively dying patients (Yu, Jiang, & Shen, 2016). This directly correlated with emotional, mental, and spiritual demands upon transplant nurses who often must navigate the patient and family emotions, and ethical concerns related to the death of a donor to provide life for the patient. As identified in oncology nurses, transplant nurses may have a greater risk of burnout and compassion fatigue because of the demand for overwhelming compassionate stress when caring for critically ill and dying patients (Finley & Sheppard, 2017; Kim, 2013; Yu, Jiang, & Shen, 2016). This risk also was seen in trauma nursing where secondary traumatic stress was frequently experienced as a result of exposure to others' traumatic events (Hinderer, VonRueden, Friedmann, McQuillan, Gilmore, Kramer, & Murray, 2014). Nurses responding to critical care and patient traumas reported increased irritability, inability to focus, intrusive and recurring thoughts, and sleep disturbances placing them at greater risk for burnout and compassion fatigue (Berg et al., 2016; Hinderer et al., 2014).

Secondary Traumatic Stress

Secondary traumatic stress is defined as vicariously experiencing the traumas of others. (Stamm, 2010). Health care givers, and especially nurses, are uniquely poised to experience psychosocial stressors that are considered as inherent when caring for the suffering of others, having a greater propensity to induce secondary traumatic stress disorders (Berg et al., 2016; Figley, 2015; Hinderer et al., 2014; Stamm, 2010).

Throughout this literature review, compassion fatigue and secondary traumatic stress were often used interchangeably by authors describing the phenomenon of compassion fatigue among various nursing populations. However, compassion fatigue can occur among nurses experiencing burnout from ongoing weariness and the depletion of personal reserves, and does

not require the added component of exposure to others' traumas to increase their risk for compassion fatigue (Hinderer et al., 2014). Regardless of the triggers, literature indicates that nurses caring for patients who are critically ill, dying, and/or have suffered a traumatic event, are at greater risk of burnout, secondary traumatic stress and compassion fatigue. These not only affect professional satisfaction, but often result in personal distress that influences attrition within the nursing profession (Berg et al., 2016; Hinderer et al., 2014; Kelly, Runge, & Spencer, 2015; Maiden, Georges, & Connelly, 2011). The commonalities found among these studies indicated that secondary traumatic stressors and burnout significantly affected the risk of compassion fatigue among intensive care, critical care, acute care, and trauma related nursing specialties. Secondary traumatic stress referred to the exposure of an individual to trauma or suffering, rather than to that individual experiencing a traumatic event themselves (Young et al., 2011). In addition, it is explained that secondary traumatic stress reflects similar symptoms associated with post-traumatic stress disorders (PTSD) such as avoidance, depersonalization, sleep disturbances and intrusive thoughts that can be debilitating and lead to compassion fatigue as a chronic condition (Flarity et al., 2016).

Consequences

Literature exposed the variability of perceptions related to the phenomenon of compassion fatigue among nursing specialties. Although burnout, secondary traumatic stress compassion fatigue and compassion satisfaction are defined within the ProQOL conceptual model, the nature of stress is that it has been determined as uniquely relevant to individual circumstances, experiences, coping mechanisms, education, training, and direct support (Stamm, 2010). Despite individual nuances and variability of stressors, outcomes of associated

compassion fatigue manifested in poor performance, medication errors, time off for illness, and increased attrition, which directly impacts the nursing shortage already problematic within the United States. The ramifications of not promoting education and/or interventions to mitigate compassion fatigue not only impact the nursing profession, but more importantly have a direct cause and effect relationship that may jeopardize patient safety and diminish patient health outcomes.

Evidence Related to Specific Population

The paucity of literature related to transplant nursing indicated limited data associated with burnout, secondary traumatic stress, compassion fatigue, and compassion satisfaction research within this practice specialty. However, literature provided available evidence of the ProQOL theory framework application among critical care and trauma nurses that, depending upon life and professional experiences, reflected similar nuances experienced among transplant nurses. The variants within literature provided comparisons with which to explore commonalities experienced among transplant nurses who may share similar career focus and patient support with critical care, palliative, and forensic nurses.

Synthesis of evidence indicated significant variation in outcomes related to experienced burnout, secondary traumatic stress, compassion fatigue and compassion satisfaction among critical care, emergency, trauma, forensic and transplant nurses. These variations were seen in how data were collected from participants, perceptions of administrative support, education and coping skills, experience within the profession, and of most important consideration, confidentiality with responses to prevent perceptions of lack of compassion with patient care. This information was also used to inform the dialogue within my DNP project workshops.

Many studies and peer-reviewed articles within this literature review shared common triggers experienced among critical care nursing specialties. These similarities included perceived absence of administrative support, lack of recognition, high patient acuity levels, challenging patient demands, exposure to traumatic events, terminal illness, and grief with patient loss. These triggers were identified as significantly influencing burnout and secondary traumatic stress, and further increasing risks associated with the onset of compassion fatigue.

Caregiver Experiences

Caregiver experiences reflect unique nuances within specific nursing roles. Similarities of experiences that may trigger compassion fatigue were centered upon patient outcomes, family connections, witnessed traumas and violence, life-saving encounters, and grief with loss when providing patient care. Collaborations with other healthcare members, a sense of purpose, and appreciation for effort and performance were seen as valuable contributors toward compassion satisfaction.

Education

The preponderance of literature encouraged educational interventions as a way to increase awareness of burnout, secondary traumatic stress, and personal triggers that influence the onset of compassion fatigue within the nursing practice (Jakel, Kenney, Ludan, Miller, McNair, & Matesic, 2016; Kelly et al., 2015; Makic, 2015; Yu et al., 2016). It is also notable that nursing subjects with higher education levels generally reported less overall compassion fatigue than those who are new to nursing or have higher patient acuity levels (Berg et al., 2016; Flarity et al., 2016). Among forensic and trauma nurses, acquiring self-coping skills coupled with a higher level of education, allows nurses to better mitigate stressors and recognize burnout,

secondary traumatic stress, and compassion fatigue within their daily trauma based nursing roles (Flarity et al., 2016; Hunsaker et al., 2015). Literature reveals that educational interventions have successfully improved resilience with post-traumatic stress disorders, and indicates that this type of resilience education is being explored to reduce the onset of burnout, secondary traumatic stress, and the risk for compassion fatigue (Flarity et al., 2013; Flarity et al., 2016; Hersch, Cook, Deitz, Kaplan, Hughes, Friesen, & Vezina, 2016). A common theme among the literature is that more compassion fatigue education and/or intervention based courses are needed to promote awareness, self-coping skills, and to improve resilience among all nursing populations.

Triggers

Triggers and nuances of burnout and secondary traumatic stress reflected similar themes among many varied nursing specialties where knowledge, skills, and work environments were strong influencers toward the willingness of nurses to seek help with coping-skills (Berg et al., 2016; Kim, 2013; Ledoux, 2015; Sheppard, 2015). Among trauma, critical care and transplant nursing, a similar theme is shared where perceptions of being stoic, or of being unaffected by traumatic events, is perceived as being expected and can result in a feeling of not being strong enough to do the job when faced with tragic patient events (Berg et al., 2016; Flarity et al., 2013; Flarity et al., 2016). A trigger theme recognized throughout numerous studies is that the onset of burnout, secondary traumatic stress, and compassion fatigue can be perceived as a personal weakness without supportive leadership or work environments that embrace awareness, education, and intervention tools that are designed to mitigate the onset of compassion fatigue (Berg et al., 2016; Kim, 2013; Finley & Sheppard, 2017).

Coping

Coping skills through the delivery of education and interventions are strongly encouraged throughout literature for all levels of caregivers. It is now widely recognized that there is a very real physical, mental, spiritual, and emotional toll, known as the “cost of caring,” that can elevate the risk of compassion fatigue among caregivers (Boyle, 2011; Sheppard, 2015). A randomized controlled trial among nurses of varying educational levels (n=104), was conducted across five northeast hospitals, to test a web-based compassion fatigue intervention tool that provided 24/7 accessibility to online self-coping skill modules (Hersch et al., 2016). The curriculum was easily accessible and provided a range of compassion fatigue mitigating alternatives, from breathing techniques to strategies that could be employed to alleviate grief with the loss of a patient (Hersch et al., 2016). Additional coping strategies of collaboration and conflict resolution became apparent in the literature, where it is reported that perceptions of unity, and support among peers and administration, further reduces the risk of compassion fatigue within high stakes, high stress critical care and trauma based health care environments (Berg et al., 2016; Flarity et al., 2016; Houck, 2014; Jakel et al., 2016; Sacco et al., 2015; van Mol et al., 2015).

Strengths of Literature

The strengths apparent within the literature review are identified with studies that administer self-assessment compassion fatigue tools, seek feedback, and garner ratings to understand experienced levels of burnout, secondary traumatic stress, compassion fatigue, and/or compassion satisfaction within the practice of nursing. Through the ongoing evaluations, discussions, and education of compassion fatigue and compassion satisfaction, nursing has the opportunity to elevate mindfulness and resilience that may contribute to more productive

collaboration with other health care members. Increased quality of professional and personal life, and improved performance due to greater mind-body wellness through the use of self-coping strategies can help to prevent compassion fatigue related impairment (Berg et al., 2016). Results from a 2016 qualitative study assessing burnout and secondary traumatic stress among trauma nurses (n=12) determined that awareness was the first step in identifying compassion fatigue triggers (Berg et al., 2016). The discussion based intervention allowed team members to share symptoms and experiences in a forum to increase awareness of compassion fatigue and compassion satisfaction. The outcomes included enhanced collaboration among peers to increase work environment support and the discovery of self-coping strategies to mitigate the risk of compassion fatigue within their dynamic nursing environment.

Literature indicates that awareness of compassion fatigue and compassion satisfaction among critical care and trauma-based nurses has increased through assessment and studies. Clinical scholarship has promoted the next level where compassion fatigue education and interventions should be considered as baseline within nursing curricula to promote self-coping skills that can enhance personal performance and career satisfaction, slowing the attrition of nurses due to burnout, secondary traumatic stress, and compassion fatigue experienced within the nursing profession.

Weaknesses of Literature

The most significant weakness identified within this literature review is the paucity of research available on compassion fatigue and compassion satisfaction among the transplant nursing specialty. One study in particular determined that the level of burnout and secondary traumatic stress experienced among liver and kidney transplant nurse coordinators (n=14) could

be reduced and significantly influence performance, job satisfaction, and overall quality of patient care (Kim, 2013). These research findings were evident in other critical care and trauma related nursing specialties where it was deemed that the lack of understanding and coping mechanisms related to burnout, secondary traumatic stress, and compassion fatigue would continue to diminish performance as the demands of patient care increased in the future health care arena.

Gaps in Literature and the Need for this Project

Gaps apparent within this literature review included a paucity of research among transplant nurses and minimal literature examining interventions to promote resilience among the varied specialties within the nursing practice. A lack of associated literature among transplant nurses has limited understanding of how burnout, secondary traumatic stress, compassion fatigue, and compassion satisfaction, specifically manifest and are experienced within a specialty practice that deals with life and death patient needs. Although literature addressed the high stress demands associated with trauma, critical care, and emergency nursing through ProQOL Likert-scale assessment tools, there is a gap in experiential evidence describing how mental, emotional, physical, and spiritual triggers manifest and influence compassion fatigue among critical care and transplant nurses. The reviewed literature supports resilience interventions. However, few studies have carried through on education and interventions following a compassion fatigue assessment or focus group study. This gap of education following compassion fatigue assessments has limited the opportunity for nursing to gain coping skills, increase resilience, and mitigate influencers to achieve greater compassion satisfaction within a dynamic nursing career. Given the current nursing shortage, bridging this gap with interventions that promote compassion

satisfaction may lessen nursing attrition rates that are directly related to burnout, secondary traumatic stress, and the onset of compassion fatigue experienced within this empathic profession.

Another commonality in the literature is that some nurses expressed concern for being perceived as a poor performers and that, by using or accepting the term, some nurses fear their employment might be compromised (Kim, 2013; Sheppard, 2015). Interviews with nurses indicated that while they continued to feel compassion for their patients, they also felt overwhelmed and saturated with the emotional and physical demands inherent within the nursing practice (Sheppard, 2015).

METHODS

This literature review supported the importance of describing nursing perceptions and experiences with compassion fatigue, and further highlighted the need to provide meaningful education and coping-skills training to influence a positive change toward compassion satisfaction within the practice of nursing (Figley, 2015; Flarity et al., 2016; Kim, 2013; Sheppard, 2015). Therefore, an educational intervention project approach was selected to guide the methodology of the DNP project aims that included; 1) describing symptoms, triggers, and outcomes of compassion fatigue and compassion satisfaction among transplant nurses; 2) providing a focused educational intervention to decrease compassion fatigue among transplant nurses; and, 3) outlining techniques to reduce further risk of compassion fatigue among transplant nurses. This educational intervention project focused upon individual responses that identified and described compassion fatigue and compassion satisfaction symptoms, triggers, and outcomes experienced through the lens of nurses caring for transplant patients.

Design

The Institute for Healthcare Improvement (IHI) framework was used to guide the planning, development, implementation and review of this project (IHI, 2017). This design applied the Institute for Healthcare Improvement (IHI) model using the *Plan-Do-Study-Act* (PDSA) cycle, intended to guide the initial identification and planning of expected outcomes (P), implementation of change (D), reviewing of outcomes to determine whether or not improvement was realized (S), and assessing for further improvement opportunities (A) (Institute for Healthcare Improvement [IHI], 2017).

This model for improvement asks three important questions that can be addressed in any order throughout the project life cycle. These include: 1) “What are we trying to accomplish”, 2) “How will we know that a change is an important improvement?”, and 3) “What change can we make that will result in improvement?” (Gillam & Siriwardena, 2013; IHI, 2017). All of these questions identify ways to guide and evaluate project initiatives (IHI, 2017).

The first question was answered when it was determined that the aims of this project included collecting feedback from transplant nurses to describe symptoms, triggers, outcomes and experiences associated with the risk for compassion fatigue among this specialty nursing population. Journals were handed out to participants at the end of workshop one so that they could record thoughts, insight, experiences, and observations that could be revealed in workshop two discussions. This collected data shared beliefs, perceptions, and insights from workshop one that answered the second question of knowing that change is an important improvement. The third question revealed a response aligned with a project focus of reducing the risk for the onset of compassion fatigue. Participants collectively shared that enhanced awareness of the

compassion fatigue phenomenon encouraged them to actively seek stress reduction strategies, make changes in behavior and personal practice, and seek positive results with an increase in strategies that improve personal and professional coping skills to mitigate the risk of compassion fatigue.

The design of this educational intervention project included interviews using scripted open-ended questions delivered to a transplant nurse focus group, administration of an educational compassion fatigue and compassion satisfaction intervention, journaling by participants during a 1-2 week post-intervention period, and follow-up interviews with scripted questions delivered to the same focus group participants during the second workshop. As the model for this DNP project, the PDSA was followed to design an engaging workshop, promote an educational intervention, and encourage change(s) to optimize results within the transplant nursing practice (Gillam & Siriwardena, 2013; IHI, 2017). The PDSA methodology (Figure 2) applied to this educational intervention project allowed for flexibility while progressing through the PDSA model to determine targeted outcomes, identify changes needed to improve resilience and mitigate compassion fatigue risks, and understand how participants would recognize improvement(s) (Gillam & Siriwardena, 2013; IHI, 2017).



FIGURE 2. Institute for Healthcare Improvement PDSA Cycle

The focus upon Arizona transplant nurses was part of a four doctoral candidate collaborative effort to complete a DNP educational intervention project that evaluated four different nursing specialties using the same project aims. The *Plan* phase of the PDSA included an initial on campus face-to-face meeting to establish project goals, timelines, and anticipated outcomes. Due to geographical constraints, frequent weekly meetings were accomplished via conference calls to review progress, challenges, constraints, and timelines associated with established project goals. Group conference calls were scheduled monthly with the committee chairperson to collaborate on the execution and delivery of project outcomes and goals, with frequent e-mail interactions allowing for timely direction and guidance on the completion of tasks for the *Do* phase of the project.

As part of the *Do* phase of the PDSA model, an educational intervention project approach was selected, allowing for the collection of data from four different nursing specialties including rural emergency department, mental health, post-baccalaureate, and transplant nurses. Scripted

questions (Appendix A) were developed, and delivered with a structured approach to ensure mirrored experiences among all workshops representing the different specialties. By delivering the same open-ended questions throughout the initial interview, sharing the same educational intervention and self-coping skills activity, and employing the same post-intervention follow-up questions, collected data revealed several commonalities associated with compassion fatigue and compassion satisfaction that aligned with reviewed literature and indicated areas of potential generalizability within the practice of nursing.

The *Plan-Do-Study-Act* cycle was repeated throughout the project timeline to address three foundational IHI PDSA model questions of “What are we trying to accomplish?” “How will we know that a change is an improvement?” and “What change can we make that will result in improvement?” (IHI, 2017). Employing this model allowed for assessment of outcomes and the identification of improvement opportunities to ensure consistency among the four doctoral candidates when facilitating the scripted interview questions and delivering educational interventions within the workshops.

Recruitment and Participants

Participants were recruited from Southern Arizona. Flyers were posted in public venues of two grocery store bulletin boards and on a public library announcement board. However, these postings did not garner participant response and a transplant nurse acquaintance was contacted to help facilitate a snowball sampling approach. Flyers were provided to this professional colleague and they were asked to share with others in an effort to seek interested transplant nurse participants for the educational intervention workshops. Per IRB guidelines for this project, instructions were provided to ensure no flyers were shared within a hospital or clinical

environment. The flyers provided details about the DNP project and interested participants were asked to contact me with questions or to volunteer for the workshops. Those interested were also given a recruitment flyer and asked to share the flyer with other potentially interested individuals (snowball sampling). The target sample size was five participants and seven transplant nurses agreed to volunteer as participants in both workshops. All participants were from Arizona, and had at least one year of patient critical care experience within the transplant nursing specialty. No participants were excluded due to ethnicity, age, years in nursing, or gender. All participants were required to be fluent in written and spoken English.

Setting

The setting of the focus group sessions was conducted in southern Arizona, at a centrally located non-medical location within the Phoenix metropolitan area. Participants were included in the decision to choose which days, times, and location area for the sessions. Sessions were held at a public location, but within a private room that ensured confidentiality with discussions in a quiet venue.

Educational Intervention

Upon receipt of the University of Arizona Institutional Review Board (IRB) approval for this DNP educational intervention project, participants were recruited, dates established for workshops, and consent forms were reviewed, signed and collected from each volunteer participant prior to involvement with each workshop. The *Do* Phase of the PDSA was accomplished through the delivery of educational interventions in two separate workshops, each lasting approximately one hour. The second workshop was held two weeks after the first and allowed participants to share observations and thoughts about compassion fatigue that they had

noted in their journals between workshops. Both workshops were recorded to allow for verbatim written transcription of participant discussions.

I led both workshop sessions. I began the first session by introducing the volunteer transplant nurse participants, addressing the recording of each workshop with anonymity assured for all participants, and establishing the expectation to maintain confidentiality and anonymity with all discussions. The DNP project topic and purpose of the workshops were explained and participants were provided the opportunity to decline participation before the workshop began.

I facilitated open-ended discussion sessions for the initial 30 minutes of each workshop that allowed participants to interact with one another and respond to scripted open-ended questions. The focus of this segment allowed participants to describe symptoms, triggers and influences that affected their risk for compassion fatigue. The delivery of an educational intervention defining burnout, secondary traumatic stress, and compassion fatigue, allowed for further interaction among the transplant nurse participants to share examples of how stressors influenced the risk for compassion fatigue within their nursing specialty. At the end of the first workshop, each participant received a small individual journal, and was asked to make entries prior to the second workshop that recorded thoughts, ideas, perceptions, influences, observations, and outcomes related to compassion fatigue and compassion satisfaction experiences following the educational intervention session. Resilience techniques and skills were included in the second workshop facilitation to promote mindfulness and self-coping skills as ways to reduce the risk of compassion fatigue among transplant nurses.

The *Study* portion of the PDSA cycle allowed for review and analysis of the participant feedback when engaged in the workshop discussions and educational interventions. Audio

recordings of the workshops were transcribed by a HIPAA certified transcriptionist producing a verbatim word formatted written transcript of participant interactions in both workshops. Written narratives were reviewed for commonalities of triggers, symptoms, observations and experiences associated with compassion fatigue and aligned with project aims that were reflective of participant engagement in discussions and educational interventions.

Analysis

All taped recordings were transcribed into verbatim written narratives that allowed for content analysis with the identification of like comments, common considerations, and experiences associated with burnout, secondary traumatic stress, and compassion fatigue. The collected data was analyzed at a basic level that included a descriptive account of what was said in response to scripted questions and educational intervention discussions. A higher level of analysis was performed with an interpretive review of commonalities, and the categorization of like responses that met the project aims of identifying and describing symptoms, triggers, and outcomes associated with compassion fatigue as experienced among transplant nurses.

In addition, the DNP committee chairperson reviewed the transcribed participant feedback to strengthen integrity, validity, and reliability with the analysis and reporting of data results. A further discussion occurred among the committee chairperson, myself, and the other three graduate students, with the intent of identifying commonalities among all four nursing specialties represented in this DNP educational intervention compassion fatigue project.

Ethical Considerations

This DNP educational intervention project engaged human beings as volunteer participants in an open-ended interview/discussion session, an interactive educational

intervention, and a follow-up discussion session that invited feedback on personal experiences related to burnout, secondary traumatic stress and compassion fatigue experienced within the specialty of transplant nursing. Beneficence guided the ethical principles to ensure that this principal investigator acted in the best interest of the participants to protect them from harm (Terry, 2015). Justice applied to this DNP educational intervention project considered fairness, equality, and confidentiality with the recruitment of participants, and no volunteer participant was coerced into participation, or excluded from participation in either workshops. Anonymity and confidentiality with all names and discussion topics were maintained to prevent any harm, even that of negative perception, to be experienced among the volunteer participants.

In each workshop, I established a tone of mutual respect and appreciation that encouraged participant willingness to share experiences, differences, ideas, and solutions that have been found to influence compassion fatigue among transplant nurses. The intent of this project was not to validate the views associated with compassion fatigue and compassion satisfaction, but rather to solicit honest feedback, without judgment, that allowed for the collection of data to identify how transplant nurses are at risk for compassion fatigue.

Trustworthiness

Within the context of research, quantitative studies employ standards of mathematical and scientific measures to ensure the reliability, rigor, and statistical validity of reported data (Morse, 2015; Polit & Beck, 2012). Qualitative research is conducted through the asking of questions that illicit narrative responses and does not capture numeric based statistical data. These responses are then interpreted and analyzed for similar themes and patterns that describe influences, perceptions, and ideological meanings associated with the area(s) of study (Birt,

Scott, Cavers, Campbell, & Walter, 2016; Morse, 2015; Polit & Beck, 2012). Where rigor is used as a term to explain the standards of measure associated with quantitative research, the term trustworthiness encapsulates the credibility, transferability, and dependability of collected data (Birt et al., 2016; Morse, 2015).

Within the qualitative framework, credibility, dependability, confirmability, transferability, and authenticity are five criteria incepted by Lincoln and Guba (1985; 1994) that elevate trustworthiness when conducting qualitative inquiry (Lincoln & Guba, 1985; Lincoln & Guba, 1994). Credibility refers to the confidence of the truth and interpretation of data. Dependability speaks to the reliability of the data experienced over time. Confirmability allows for participants to review their responses and ensure intended meanings remains accurate. Transferability reflects the applicability of the collected data to other similar groups and/or settings. Finally, authenticity refers to the tone of experiences relayed by participants so that the mood, feeling, and language of the narrative conveys the sentiments and context of individual experiences when reported in the data (Lincoln & Guba, 1985; 1994). To address trustworthiness, I utilized verbatim capture of participant responses during both workshops, member checking to validate statements and/or meanings, and committee oversight of reliability, validity, and ethical considerations.

FINDINGS

The purpose of this DNP educational intervention project was to describe the symptoms, triggers, and outcomes associated with the phenomenon of compassion fatigue as experienced among Arizona transplant nurses. Due to a paucity of literature, experiences with compassion fatigue and compassion satisfaction have not been fully understood within this nursing specialty.

The educational intervention focus of this project excluded a specific clinical question and instead focused upon the aims of: 1) describing symptoms, triggers, and outcomes of compassion fatigue and compassion satisfaction among transplant nurses; 2) providing a focused educational intervention to decrease compassion fatigue risk among transplant nurses; and, 3) outlining techniques to reduce further risk of compassion fatigue among this specialty transplant nurse population.

Two separate workshops provided a forum for volunteer transplant nurse participants to describe symptoms, triggers, and outcomes experienced with compassion fatigue, and share resilience strategies to reduce risks for compassion fatigue and enhance experiences with compassion satisfaction.

Participants and Demographics

Seven experienced transplant nurses volunteered as participants in this DNP educational intervention project. Diversity was well represented in this small group with four different ethnicities, of which three of the seven were experienced nurses in countries of India and the Philippines before engaging in their American nursing careers (Table 1). Gender affiliation of 71% female and 29% male further supported diversity, with an average age of 37.8 years, an 11.8-year average of career nursing experience, and between two to eight years of experience as a transplant specialty nurse. All participants work 12-hour night shifts at least three days each week, and 57% are currently in team leadership positions. Completed education levels ranged from associate to master's degree, with a newly graduated nurse practitioner as a participant in the project group. Of these participants, 71% reported pursuit of higher education, with two who spoke of entering nurse practitioner programs within the next two years.

TABLE 1. *Demographics*

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	
Characteristics:								Avg / %
Age (years)	46	34	35	29	53	33	35	37.8
Gender Affiliation	F	F	F	M	F	F	M	F=71% M=29%
Ethnicity Key: AA=African-American A=Asian C=Caucasian EI=East Indian	East Indian	African-American	Caucasian	Asian	Caucasian	Caucasian	Asian	AA=14% A=29% C=43% EI=14%
Relationship Status	Married	Married	Single	Divorced	Single	Single	Single	D=14% M=29% S=57%
Children	Yes	Yes	No	Yes	Yes	Yes	No	N=29% Y=71%
Ages of Children	13, 11, 9	5	-	6	35, 33, 33	16	-	-
Years as Nurse	20	10.5	9	5	16	9	13	11.8yrs
Years as Transplant Nurse	8	8	5	2	7	3	3	5 yrs
Transplant Type	Kidney, Liver, Pancreas	Heart	Heart, Kidney, Liver, Pancreas					
Shift Worked	Night	Night	Night	Night	Night	Night	Night	-
Hours per Shift	12	12	12	12	12	12	12	12 Hrs
Completed Education Level	MSN	BSN	BSN	MSN	BSN	ADA	BSN	ADA=14% BSN=57% MSN=28%
Current Academic Goal	N/A	MSN	MSN	New NP graduate	N/A	BSN	MSN	BSN=14% MSN=43% NP=14% N/A=29%
Leadership Experience	Team Lead	Team Lead	Team Lead	N/A	Team Lead	N/A	N/A	Lead=57%

Characteristics Unique to Transplant Nurses

It is known that on any given day up to 100,000 Americans are listed in the national directory and awaiting a life-saving whole organ transplant. Although there are many facets of transplant medication, whole organ is specifically identified as heart, liver, kidneys, pancreas, and lungs transplants. The role of transplant nursing is unique due to the known patient continuum of life and death stressors that patients loved ones, caregivers, and nurses experience

while awaiting an organ donor. In the midst of grave illness, transplant nurses offer education, guidance, and hope, as patients strive to comply with intense life sustaining medical regimens while they await an organ donor transplant.

Role Complexities

The role complexities of this specialty are many, as these nurses must acquire critical care experience beyond generalized nursing skills to support intensive care levels of patient illness. Although not mandated to become a transplant nurse, many of those in this specialty have accomplished the Certified Clinical Transplant Nurse (CCTN) national certification that represents a minimum of 24 months preparation, demonstrating a high level of competency and expertise in the whole organ transplant specialty. The added complexities of this role that are reported by participants in this project as contributing to burnout and secondary traumatic stress exposure are because of the inherent risk of severe illness and death associated with these patients.

Role Satisfaction

Participants in these workshops reiterated that role satisfaction in this field is frequently derived from the opportunity to contribute to the improved quality of life experienced with successful transplant procedures. They reported that personal satisfaction is elevated when they are part of a life-changing solution that impacts family, friends, and caregivers, as well as the patient. The consensus in these workshops reflected an overall high level of personal and career satisfaction within this specialty, relating to the improved quality of life for patients who otherwise faced imminent death.

Intervention: Workshops

Workshop one provided the opportunity for participants to become acquainted, review and sign IRB approved consent forms, complete the brief demographic survey, and discuss the purpose of the educational intervention DNP project. The first workshop included an initial 30-minute facilitation of scripted questions discussing transplant nursing perceptions and experiences with compassion fatigue. The final 30 minutes was dedicated to an educational intervention that further defined burnout, secondary traumatic stress, compassion fatigue and compassion satisfaction. Participants indicated a general awareness of burnout, secondary traumatic stress, and compassion fatigue, unanimously affirming that there is a stigma with the terminology for this phenomenon as having a negative connotation. They reported that they select other terms than ‘compassion fatigue’ to describe their symptoms and experiences, for fear others will perceive them as lacking compassion if they say they have compassion fatigue. All participants shared personal and professional examples associated with the phenomenon of compassion fatigue, but agreed that the most impacting contributing factors were physical, mental, and emotional symptoms of burnout and secondary traumatic stress, lack of support, high nurse-to-patient ratio challenges, and ethical/moral dilemmas related to the transplant process.

At the conclusion of workshop one, participants were provided with a personal writing journal to allow the capture of thoughts, triggers, symptoms, and observations experienced during the time between workshops. They were informed to return with their journals for workshop two to allow for further discussion of triggers, symptoms and outcomes related to compassion fatigue experienced among transplant nurses.

Workshop two began with a brief review of prior workshop focus related to burnout, secondary traumatic stress, compassion fatigue and compassion satisfaction. Participants returned with their journals and were well prepared to share observations and experiences associated with the phenomenon of compassion fatigue. Another 30-minute educational intervention was facilitated that was focused upon strategies to mitigate the risk of compassion fatigue among transplant nurses. These strategies included group discussions regarding resilience, mindfulness, and coping mechanisms to alleviate stress and enhance the outcome of compassion satisfaction in their nursing roles. The following discussion outlines commonalities of compassion fatigue experienced among transplant nurses.

Commonalities Related to Compassion Fatigue

Symptoms: Physical, Mental and Emotional

The educational portion of the workshop began with scripted questions asking how satisfied these participants were in their role as transplant nurses. One participant stated that,

“I think transplant is rewarding, but it is also probably – it’s challenging. It could be challenging. I’m fortunate to work in a position where I take care of other patients as well. I don’t know, if it were one hundred percent transplant patients if I could answer completely satisfied.”

This statement prompted a discussion exchange about the physicality of nursing. Participants shared symptoms of muscle and joint pain, headaches, neck and upper shoulder strain, and sore feet experienced as physical exertion is required to care for patients within this nursing role.

They agreed this was inherent to the nursing practice regardless of specialty, and that overhead lifts, Eva walkers, and other ambulatory devices assist in taking some of the physical strain off nurses. However, they pointed out that after time this takes a toll on the body, and that is why many nurses are seeking higher education so that they can move on to teaching, administration,

informatics, nurse practitioners, and other roles that don't require such a heavy physical engagement with patient care.

Mental and emotional tolls were deemed as the more frequent symptoms because of the life and death continuum of care with transplant patients. A participant identified how different each patient response is to the transplantation process stating that,

“I think that is specific to that specific patient I think there are some transplant patients who are – I don't know if easy is the right word, but they just – it flows really well for them. Their situation is optimistic and positive. There there's those challenging transplant patients.”

This statement launched further discussion about the challenges for transplant nurses when patients have complications with the transplant process. Not only are nurses responsible for the medical care of these patients, but they must also navigate the emotional and spiritual toll this takes upon patients, loved ones, and other caregivers as they try to reconcile with adverse outcomes. Group sentiment was captured by one participant who stated that,

“If we're talking about compassion fatigue, I think that's where that plays a major part. The post-op period where we take care of them, that is not the most challenging thing, but there are patients who stay for months awaiting rehab, like sometimes they have complications. Dealing with a patient, the family members, with the other co-workers whose dealing with them, that is very stressful.”

Another participant who specializes in heart transplants shared an observation that heart failure patients are usually coherent and able to engage in the learning process required for their transplant procedure. Other medical symptoms often prevent liver, kidney and pancreas patients from fully engaging in their learning process until they are healing after the surgical intervention. This places additional risk for mental and emotional stress upon the nurse who must repeatedly deliver educational information until the patient and/or their caregiver(s) grasp the importance of

medication adherence, and guideline compliance, to prevent organ failure. A participant emphasized this stating that,

“I think one thing I’ve noticed, especially with the livers, the heart people, they’re there for a long time, but they’re mostly coherent. They have heart failure, but they can understand your education. Then your liver patients have encephalopathy, and it’s like, they aren’t absorbing anything that your saying, and their caregivers are so focused on waiting for the transplant that I don’t know how much they absorb until after it happens.”

Group consensus is that this aspect of delivering important patient education for success with the transplanted organ adds a significant amount of mental and emotional stress upon the nurse. This educational effort is in addition to medical nursing duties, where the highest priority is appropriately placed upon the prevention of rejection with the newly transplanted organ.

Participants also revealed that grief with organ failure, or the loss of patients, is especially difficult within this specialty. In addition to the significant amount of time and energy committed to each patient’s plan of care, another person has donated their organ, or lost their life resulting in the organ donation, making the grief experienced in these events a derivative of secondary traumatic stress. When asked if they have experienced secondary traumatic stress, participants responded with affirmation, with one highlighting group sentiments by stating that,

“I have [experienced secondary traumatic stress]. Especially when you’re without resources. Most nurses have resources on the unit. When you’re in there helping that other nurse take care of the patient, when something happens, you feel like – like the other day... I was with a patient and he was young. He was around my age. He was going through a lot, and he had a little breakdown, and I got emotional about it. It wasn’t my patient, but I was there with him through some of the exams that he was getting and some of the things that he had to do for them. It impacts you.”

Triggers for Compassion Fatigue

Lack of Support

A significant contributing factor toward the risk for compassion fatigue was expressed as the lack of support from other nurses on the floor during shift, minimal administrative support, and medical staff unavailable during night shift hours to provide decisions needed to advance the care of the patient. Six of the seven participants are currently working night shift schedules and reported particular frustration with the perception that night shift nurses are not as busy as day shift nurses. The perception of this group is that night shift transplant nursing requires higher levels of critical thinking and resourcefulness because the attending physicians and primary surgeons have gone home, leaving the less experienced medical providers in charge. One participant expressed that,

“I just feel like sometimes at nights you’re struggling, struggling, struggling with an issue, and researching, researching, or maybe you know what the answer needs to be, and then it’s like, they have these resources. All of a sudden, it’s like, everything’s just – I went 12 hours really worried about that, and it was fixed in 15 minutes. Because all the resources were there and had the authority to say, here, yeah, go ahead, do that, run with it.”

Participants expressed frustration with this lack of support during night shift hours and the perception that they were not as strong in their nursing skills as those nurses who work the day shift schedule. The consensus with this issue is that senior medical providers and administrators are not going to work the night shift, so transplant nurses need to collaborate and support one another during each shift, to prevent the mental and emotional fatigue that happens when feeling discouraged after working so hard with challenging patients.

The aspect of support was also addressed as a benefit when participants seek mental and emotional support from co-workers, family members and friends as a coping mechanism to

prevent stress from becoming distress. When asked how they cope with these situations, participants shared thoughts and ideas such as talking with a partner, a colleague, or other nurses on the unit. One participant suggested that newer nurses might not have developed the rapport with other nursing colleagues, which she suggested might even be a reason that burnout and CF are more common among newer nurses. One nurse expressed that,

“The team. The players. It matters a lot. Personally, I don’t care how crazy my patients are as long as my co-workers and my team leaders are very supportive. Not necessarily that they are doing the work for me, but just being there. That I know when I fall, they will catch me.”

Group consensus expressed lack of support within the work environment significantly challenging because there was no outlet to release stress or collaborate with others for solutions. They identified that debriefing with other co-workers, family members or friends allowed them to vent and release stress that could otherwise evolve into physical symptoms and place them at greater risk for burnout and compassion fatigue.

Scheduling and Nurse-to-Patient Ratios

Several participants shared that scheduling of patient acuities and nurse-to-patient ratios made a significant difference in how much stress they felt during the shift. As they explained, severely ill patients require more time with care, making it especially difficult for even experienced nurses to handle the many nuances of patient care efficiently without additional support. Because four of the participants are team leaders, they were able to speak to the importance of leadership understanding the demands of each individual patient so that nursing ratios can be more evenly balanced. As they outlined, this assists the nurse with managing personal stress triggers, and it ensures greater patient safety because nurses are available to

support patient care needs. This issue was again addressed in workshop two with more specific examples of how this influences productivity and efficiency within the transplant nursing role.

Ethical and Moral Dilemmas

When discussing triggers and outcomes, participants began to discuss the ethical and moral dilemmas often faced with the procurement and appropriation of organs for transplant patients. They explained the very strict and regimented process in America that is governed by a national organization to ensure fairness and adherence to protocols prior to transplantation. However, participants described a difficult situation in which transplant guidelines have been met, organs have been acquired and transplanted, but the post-operative care of the patients reveal that they may not have been completely forthcoming in their initial transplant screening process. This is difficult for transplant nurses because they know all aspects of the organ procurement process and the risks associated with patient non-compliance after receiving the organ. Even entire elements of the transplant process were seen as emotionally challenging, especially when a patient received a second transplant after the first one failed due to non-compliance. Emotions were further challenged when the patient was perceived as lying to social workers about living situations or intentions. All too frequently, the participants experienced frustration at which patients were receiving the transplants, especially when it seemed that the recipients were not doing everything to optimize their wellness or worse, were undermining their own health. An example of the emotional reaction was offered by one:

“It’s just frustrating to know you’re gonna give an organ to somebody who may not truly appreciate the gift they are receiving when somebody else might value it and really take care of it. I just see it as a waste. Somebody else may die waiting, and they’re throwing it to the wind.”

This discussion was part of the educational intervention section of the workshop with a specific focus upon triggers that influenced the risk for compassion fatigue among transplant nurses. There were strong emotions and numerous stories shared among the group indicating that patients who don't appreciate the gift of their organ influence triggers of stress and ethical dilemmas among nurses who care for this patient population. Interestingly, the participant who specializes in supporting heart transplant patients indicated that there was generally an overwhelming appreciation with thorough preparedness and strong family support of those receiving transplanted organs. That raised the question among the group as to whether liver and kidneys are now considered easier to obtain and procurement of these organs is taken for granted. It is known that living kidney donors can continue to function well throughout their lifespan with only one kidney, and a donor who provides a resected lobe of their liver will achieve full rejuvenation within three months after being removed. There is a sense among these transplant nurses that some patients abuse the privilege afforded to them with an organ transplant. This results in strong emotional responses that are inappropriate to convey to patients because it casts a shadow of judgment that nurses are not supposed to have. This increases mental, emotional, and often spiritual stressors within their transplant nursing role.

Ethical and moral dilemmas were revisited again in the second workshop, but with a different focus. A majority of the group addressed challenges with medical team collaboration when ensuring confidentiality with patients who are minors. HIPAA guidelines specifically identify the requirement of a legal guardian to be present and provide permission for disclosure of information related to a minor. This includes the requirement of the legal guardian's presence with all discussions and engagement with the minor unless otherwise approved by the guardian.

This can present ethical and moral dilemmas among nurses and medical team members when surgeons or attending staff speak directly to minor patients when guardians are not present. Examples were shared where diagnoses or interventions have been shared with minor patients when guardians are away from the room, and although the medical professional may have acted within their scope of practice, the moral and/or ethical lines were seen by nursing as having been crossed by sharing detailed medical information with a minor. When this situation occurs, guardians often demonstrate frustration and angry outbursts toward nursing staff who are relegated to resolve the situation before they are able to continue providing complicated patient care. This occasionally happens within the realm of transplant nursing when minor clients are in need of an organ transplant and guardians are protective of information delivered due to the maturity level of the patient. Providers who disclose information for the convenience of their professional agenda are seen as crossing a moral and/or ethical line because of the potentially negative and/or harmful impact upon the patient who is a minor. The consensus among the transplant nurse participants is that this is an ethical and moral breach of conduct, even though it was within the professional realm of duties ascribed to medical professional. One nurse explained that,

“Morally, ethically, I was just angered by the surgeon to take that decision upon himself. I know that that situation could apply to any. It isn’t necessarily transplant. I know that could apply to whatever service you want to apply it to. I think surgeons, and I know I think our transplant surgeons, in my opinion, have a sense of being untouchable or being above the law...Some 16 year olds aren’t very mature. Some 16 year olds have a lot of responsibility that they seem to carry very well, but yet you don’t – it’s hard in a short timeframe to know the emotional maturity of a 16 year old.”

This particular discussion continued with a debriefing session that helped several resolve the frustration felt about these events. It was further discussed how awareness of patient preference

and confidentiality must be maintained as priority, even if this does not align with convenience of professional schedule. Transplant nurses often face specific patient requests for confidentiality, allowing for information to be shared at a time when the patient feels the emotional strength to have difficult conversations. The risk of adverse outcomes when dealing with organ transplants is extremely high. Although ethical and moral issues are not unique to transplant nursing, the life and death continuum of care is present. These representatives of the transplant nursing population expressed a responsibility to maintain ethical and moral safeguards for transplant patients, ensuring that external influencers do not undermine the successful navigation of patient care.

Patient Encounters

Patient encounters within the transplant specialty were seen as having a different impact from other specialties. There was a sentiment among the group that receiving an organ from a donor was very different than recovering from other surgical interventions. A strong sentiment among the group was that receiving an organ from a donor often meant taking that organ from someone else. It also meant that the life-saving organ is available usually because someone else's life ended. One participant stated that,

“Getting some type of heart surgery, that’s just you, right? As you’re receiving an organ, you’re potentially taking something from somebody else. Somebody’s giving it to you. There’s a difference.”

The participants endorsed the power of healing, and in general as patients literally receive the gift of life through organ transplantation. Several stories about patient encounters that reflect positive outcomes were shared by one particular participant who summed up the group sentiments when stating that,

“There was a daughter who died and I think the heart was donated by the mom [to another patient]. She went and listened with the stethoscope to the heartbeat. She was in tears. I think those things are different.”

Patient and family triggers were revealed that were found to not only increase mental and emotional stressors, but also resulted in a decline in proficiency due to the discomfort caused by family and caregivers during patient care. This was a serious concern shared among participants because family and caregiver involvement can increase tension and patient stress, as well as become an obstacle for nurses to maintain efficacy with care related interventions. One particular story was shared where a liver transplant patient’s family member was a lawyer. The family member remained with the patient at all times and made it known that everything was being recorded. Although HIPAA guidelines were reviewed with the family, a refusal to stop recording resulted in discomfort among the nurses and medical team. Participants agreed that this increased their stress levels and had them questioning their own expertise and professional skills. One participant stated that,

“We’re so focused on our patients, but being also mindful of what the family’s doing, especially if they’re doing something that they shouldn’t be doing...I hear it all the time where people on the news and our peers that have experienced this, but for me it didn’t happen up until that event, so I feel like okay, it’s for real.... You’re more conscientious about your surroundings, especially when you’re doing procedures or something.”

This was of particular concern to these transplant nurses because there are many unpleasant procedures involving body fluids that need to be completed as part of the patient recovery care after transplant surgery. Although these procedures are carried out with professionalism and support of patient dignity, family and caregivers may not fully understand those tasks and make assumptions that are not based upon facts. Participants shared that they take the time to explain what they are doing and always request privacy with the patient to complete the procedure.

However, in the story that was shared, nurses were placed on notice that they were being recorded by the daughter, sharing that this resulted in additional stress triggers that increased their risk for burnout and compassion fatigue.

Boundaries

The discussion regarding boundaries was varied as some participants related this topic to patient and family involvement, and some shared examples of crossing personal boundaries that could influence a risk for burnout and compassion fatigue. One participant shared a story of a patient encounter that was particularly stressful because of family involvement. Family had been taking notes, taking pictures, and audio recording the nursing care delivered to the patient during hospitalization. Despite education on organization policy and HIPAA guidelines, family continued to closely monitor and record all activities. This was unnerving for the nursing staff. This particular nurse, who had received commendations for maintaining excellent patient care standards, was relegated to self-doubt and questioned all activities throughout the shift. The nurse double-checked charting at the end of shift, went home to sleep for a few hours, then returned later that evening to review charting again and ensure every detail was accurately captured. Of note, there were no exceptions and charting was appropriately completed. However, this nurse explained that breaching personal boundaries and foregoing sleep to return to review charting again provided piece of mind, and assurance that all aspects of patient care were accurately recorded. Other participants shared similar experiences within their nursing careers and discussed that the demands of caring for patients often requires going the extra mile, even though others are unaware of how much extra effort has been provided to deliver exceptional patient care.

This discussion point was also related to the demands of patient care that often result in nurses not taking bathroom breaks or lunch breaks to promote self-care. Although this is not specific to transplant nursing, this subject was met with humor among these participants as they shared how ironic it was that they supported kidney transplants and were placing themselves at risk for chronic kidney disease. This discussion is representative of how nurses use dark humor to alleviate tension and cope with challenging issues.

It was agreed within this group of experienced transplant nurses that adhering to personal boundaries substantially improves self-care and the quality of life experienced outside of their nursing role. The most significant challenges they agreed as jeopardizing adherence with personal boundaries were becoming emotionally invested in particular patients and their families, or always placing others' needs ahead of self. For this group, they related that encouragement among peers helped to promote healthier management of boundaries. One participant stated that,

“... [management] is asking us to do more with less. I don't think it's realistic anymore...you know, it's not like we're not doing our best every time we see our patients. I understand they all look at the numbers. They also have to look at what we need to go through with each of those patients so that we can get that number. They're still not happy. I don't know why. I'm sure it's financial issues, for sure. I get that one, but sometimes the boundaries, we need to make sure that for ourselves we'll be okay in the end.”

The sentiment shared in this discussion is that as self- awareness with personal boundaries increases, adherence with boundaries becomes more important. They agreed that emotional investment is difficult to leave behind at the end of shift and they often find themselves wondering about patient outcomes. Phrases included “turn it off,” “wishing them well in your heart” and “let go.” A participant shared that,

“I feel like we have this unknown a lot...patients are super sick when they’re here. You go home... and you’re wondering what’s happening. Where are they? You have no control over that.”

Some shared that the positive influences of co-workers, family, and friends who reminded and encouraged self-care practice made a significant difference in adhering to the boundaries and allowing time for self-care. Others informed that adhering to boundaries remained challenging because of the nature of compassion extended toward the care of others. All participants ascribed to the importance of maintaining boundaries to improve self-care and allow for renewal time needed to energize internal resources that are leveraged when delivering compassion based care.

Outcomes and Coping Mechanisms

Kind or Self-Disparaging Self-Talk

The majority of the participants worked for the same organization. However, many of them also held other registry or per diem nursing jobs in other hospitals within southern Arizona. One participant had come from an overnight shift at another hospital and disclosed that the completed shift mirrored the workshop one discussion about stress triggers and burnout. This participant stated that,

“I have another job. Going to my second job is totally different from the one where we work. I went in. I usually get there just before the start because of school and stuff. When I got there, I had five patients, but it was pretty difficult assignment. Maybe four of the five patients were heavy acuity patients. From there, I was just overwhelmed, thought that my shift would be terrible just from looking at the kardex report. It just set my mood right away. So I did have a pretty bad night. Just the teamwork wasn’t there like the other place, so that just got me stressed out and had me frustrated and wanted to not be there anymore.”

Discussion ensued which further clarified the feeling of wanting to leave and no longer maintain employment with that organization. When other participants affirmed similar experiences in their

past, the question was asked about what strategies are used to get through those difficult experiences. The same participant expanded upon this by stating that,

“I just kept saying [to myself] I’m here for one night. I have to do what I have to do and get out of here. That’s what I kept saying to myself. It’s only one night.”

Self-coping strategies became an important focal point in the second workshop as others shared similar experiences and reinforced the need for an immediate coping strategy to gain mental clarity and persevere through the difficult situations. Another participant stated that,

“I’ve had some shifts when I’ve worked registry at another place and sometimes it’s like that...sometimes we have support with CNA’s available and a lot of time to help you. Then sometimes, when you flip the switch and you get a bad night like that where you’re five-to-one and you have patients that are total cares, it’s hard. I do the same thing though. I can do anything for one night. That’s your coping skill. There is no resource nurse to call, and all of the other nurses are just as busy as you, so there’s no support available.”

Self-talk was also affirmed as the primary coping strategy employed by these transplant nurses to enhance personal courage when faced with grave illness or patient death. They shared that intense emotions are difficult to suppress when experiencing the loss of a patient. Self-talk helps to guide the mental strength needed to focus on delivering appropriate care and functional tasks needed without getting caught up in the grief of the situation. Consensus within the group reflected the need to remain mentally present, professionally focused, and emotionally strong during traumatic events because family and caregivers are looking to the medical team for guidance and support. One participant spoke with me a few days after the workshop and shared that this discussion was on the mind for the past few days. The participant stated that,

“I kept thinking about how I control my emotions when facing patient codes and trauma at the bedside. I stay strong emotionally because I am afraid if I start to cry then I won’t be able to do anything else. It’s not that I lack compassion, or have seen so many deaths that I no longer care, it’s that I know in that moment that I need to be strong for the

family. I need to be the professional who quietly gets things done to make this situation less horrible, less graphic, and hopefully one that the family will look back later and see that I really cared. I talk myself through that in my mind. I focus on the tasks that need to get done and I cry later.”

Self-talk was unanimously believed to strengthen resolve, improve resilience, and motivate perseverance when facing the most challenging obstacles related to patient care.

Collaboration and Colleague Support

Lack of support was discussed as being inherent to the nursing role in hospitals because so many variables influence the patient care needs. The group shared experiences that made a difference in their personal stress levels when colleagues, medical team members, team leads, or administrative staff would offer help. They explained that it could be something simple like handing them a supply or offering a solution to a problem, but the fact that they were aware of the nursing needs made them feel as though there was support “out there”, despite feeling overwhelmed. Participants agreed that conferring and debriefing with other colleagues relieves stress, mitigates burnout, and enhances resilience in the midst of challenging scenarios. They also shared that there are times when you have to figure out how to release the tension or you feel as though you might explode. One participant shared that,

“... We’re human beings, you get hurt cuz your human beings. I let it out. If I can’t talk to anyone, especially when everyone’s so busy, I say, let me find a place that’s quiet and that is by myself. I go there and I yell. I go to the stockroom and just yell there. Just yell. Then I take a deep breath. I’m good. Then you just go forward.”

The group embraced this technique and explained that after doing this in their own way, they not only feel better, but they usually share what they did with another colleague which makes them laugh. Laughter is another technique that is seen as unique among nursing coping strategies. Sharing “weird” or “dark” humor with other nurses helps to alleviate the tension and stressors

associated with the difficult event, and helps to build the camaraderie and unity that leads to colleague support of one another. One example shared was when a code happened and a nurse was asked to bring the crash cart to the patient's room. In the haste of doing this, the nurse fell and required surgery to repair a damaged knee. Although there was great sympathy among colleagues, the nurses referred to this as the "crash cart dummy" moment, which allowed humor to relieve the tension and resilience to prevail.

Self-Care and Mindfulness

As previously discussed, participants endorsed self-talk, deep breathing, venting, and even "yelling" as strategies used to relieve stress and reduce the onset of burnout or compassion fatigue. Discussion points within this second workshop also included recommendations for meditation and yoga to release negative thoughts and bring more oxygen to the brain. Although many participants stated that they do not like to journal, there was an irony this PI found in those statements, as so many of them had used the journal for this workshop to record thoughts, triggers, strategies, and stories associated with experience of burnout in their roles as transplant nurses. One participant reported that journaling has significantly helped with coping skills and shared that,

"I journal. Since 2004. Especially the time of – the year my mom passed away. It helps me. Then when I go back a year after, two years after, three year after... I just love looking back at how it changed right now. I wrote everything I felt. I name people. I put the names of people so I can remember.... I write it down when I'm hurt, when I'm angry with somebody... then I will read it later and feel funny, like that's what I thought? I feel funny about myself and [realize] the best thing I did was not to express that to that person because it was all about me, what I felt."

Advocating for journaling as a coping strategy resulted in discussions about how this has been shown to reduce emotional and mental stress. Research also indicates that this act of "letting go"

further releases physical stress and lowers the impact upon the immune system, where it is known that stress can influence inflammation and physical illness. Although journaling is not a new strategy for these nurses, gifting the journals as part of this workshop experience provided a tangible reminder to use this technique to help offset symptoms associated with stress. Several participants shared that they liked the journal and would continue to note things that influence their awareness of personal triggers so that they can reduce the risk for compassion fatigue.

Reflections on Workshops

Participants reported that self-talk, deep breathing, and venting with colleagues and family were the most frequently used strategies to relieve stress after difficult patient encounters. Another shared that daily journaling provided a stress relief and allowed for review of personal growth and resilience when reflecting on past events. In addition, participants shared that mindfulness and self-care through daily exercise and nutritional diets also helped to offset physical symptoms experienced within the intensity of this transplant nursing profession. Workshop 2 revealed the most significant areas of focus as resilience and self-talk, collaboration and colleague support, patient encounters, ethical and moral dilemmas, boundaries and mindfulness.

Participants willingly shared notations from their journals that expanded upon workshop topics related to poor teamwork, lack of support, ethical and moral dilemmas and challenging nurse-to-patient ratios. However, in this second workshop, after relating examples of stressors, participants often shared coping strategies they used, observed, or experienced to help mitigate the onset of compassion fatigue, and to improve resilience and perseverance within their transplant nursing role. The consensus was that acquiring years of bedside and floor nursing

experience improves critical thinking and crisis response, which then culminates into better leadership skills. All participants embraced higher education within the nursing practice as a way to progress in their careers.

DISCUSSION

The purpose of this DNP educational intervention project was to describe symptoms, triggers, and outcomes of compassion fatigue, and to identify potential interventions, as experienced among Arizona transplant nurses. Content analysis of participant discussion from both workshops revealed that poor teamwork, lack of organizational support, high nurse-to-patient care ratios, and ethical/moral dilemmas were noted as the most significant factors contributing to the risk for compassion fatigue and professional dissatisfaction. Resiliency and mindfulness discussions emphasized interventions to reduce the risk of compassion fatigue and enhance compassion satisfaction. Despite a paucity of literature related to transplant nursing, a literature review of similar critical care nursing specialties provided insight when interpreting these project findings.

Symptoms of Compassion Fatigue

Participants revealed that in addition to the physicality required for bedside nursing care, psychosocial stressors such as emotional exhaustion when dealing with poor outcomes or patient loss, and mental and physical fatigue associated with complexities of patient care, can increase the risk for burnout. They shared that physical symptoms of headaches, joint pain, neck and shoulder tension, and general malaise can occur with the mental, emotional, and physical depletion of personal reserves when providing patient care. Without rest and renewal, these symptoms can become worse and manifest into chronic illness and compassion fatigue.

Literature supports this sentiment with data reflecting a physical, emotional, mental and spiritual cost of caring that can influence burnout and place nurses at a higher risk for compassion fatigue (Berg et al., 2016; Boyle, 2011; Sheppard, 2015). Secondary traumatic stress is frequently experienced among critical care, palliative and forensic nurses as a result of exposure to other's traumatic events, which overlaps the stress described among these participants (Hinderer et al., 2014). Nurses responding to critical care and patient traumas report increased irritability, inability to focus, intrusive and recurring thoughts, and sleep disturbances placing them at greater risk for burnout and compassion fatigue (Berg et al., 2016; Hinderer et al., 2014). Although the participants in this DNP educational intervention project agreed that some depletion of personal reserves is inherent within the profession of nursing, they concurred that enhanced awareness of triggers, symptoms, and outcomes provided additional opportunities to use protective strategies to mitigate the onset of compassion fatigue.

Triggers for Compassion Fatigue

Lack of Support

A lack of support from other nurses on the floor during shift, absence of administrative support, and unavailable medical staff expertise during night or holiday shifts were determined as significant contributing factors toward the risk for compassion fatigue among nurses. Within this specialty transplant nursing population, these factors were also discussed as potentially jeopardizing the quality and expediency of patient care. This sentiment is prevalent in literature where leadership prioritization of staff support was found to develop peer trust and positive working relationships, promote positive self-coping skills, and fosters a collaborative approach to deliver quality patient care (Berg et al., 2016; Finley et al., 2017; Hunsaker et al., 2015).

Literature also indicates that environments embracing team centrality, and positive exchanges between nurses and other medical team members, realized an internal network of support that served to offset high stress levels and mitigate the onset of burnout and/or compassion fatigue (Hersch et al., 2016; Hunsaker et al., 2015; MacKusick et al., 2010). Throughout the reviewed literature a theme of higher levels of management and co-worker support strengthened coping strategies, leading to higher levels of role satisfaction and retention within the nursing practice (Hunsaker et al., 2015; Kelly et al., 2015). Additionally, leadership that promotes a culture of caring and meaningful recognition, debriefing, and professional development establish healthier work environments with improved nursing satisfaction (Sacco et al., 2015). Consensus among participants in both workshops revealed that the sense of unification and support from leadership reduced stress levels, encouraged collaboration, and perpetuated a united work environment that was poised to meet complex patient care demands.

Scheduling and Nurse-to-Patient Ratios

High nurse-to-patient ratios were of significant concern expressed by participants as placing themselves and patients at risk for adverse events. This theme was seen in literature review where intense patient care demands and lack of appropriate staffing influences a greater risk for errors, negative patient outcomes, and patient dissatisfaction with quality of care (Hinderer et al., 2014; Kelly et al., 2015; MacKusick et al., 2010; Maiden et al., 2011).

Participants in these project workshops revealed that along with a perceived lack of support from management, inadequate staffing to meet patient care demands directly influenced attrition experienced within clinical nursing. Although this concern may be generalizable to all nursing specialties, transplant nurse participants indicated that critically timed tests, procedures,

interventions, and medication administration resulted in high acuity levels among transplant patients requiring lower nurse-to-patient staff ratios to ensure that efficacy and safety was maintained within this specialty.

Ethical and Moral Dilemmas

Ethical and/or moral dilemmas are also known to increase stress when patients disregard the value of their new organ, are non-compliant with medications, or experience organ failure and hospital readmissions. A study of burnout and compassion fatigue among more than 650 Chinese oncology nurses indicated burnout and compassion fatigue to be higher in this critical care nursing population (Yu, Jiang, & Shen, 2016). This often equated with what the authors termed as “moral distress,” where ethical dilemmas intensified the nursing experience when caring for critically ill and actively dying patients (Maiden et al., 2011; Yu, Jiang, & Shen, 2016). This directly correlated with emotional, mental, and spiritual demands upon transplant nurses who often must navigate the patient and family emotions, and ethical concerns, related to the death of a donor to provide life for the patient. As identified in oncology nurses, transplant nurses may have a greater risk of burnout and compassion fatigue because of the demand for overwhelming compassionate stress when caring for critically ill and dying patients (Finley & Sheppard, 2017; Kim, 2013; Yu, Jiang, & Shen, 2016). Within these workshops, moral and ethical dilemmas related to patient confidentiality, and patient adherence with post-transplant plan of care, were determined as triggers influencing the onset of mental, emotional, and often spiritual stress that exacerbated fatigue experienced by transplant nurses.

Patient Encounters

Patient encounters were seen as being unique within the transplant specialty. Participants shared that unlike most surgical interventions designed to resolve illness through removal of disease, the surgical addition of organs provides transplant patients with improved functionality to sustain life. Nurses within this specialty develop relationships with transplant patients and may have numerous encounters to support a lifetime journey of patient care (Kim, 2013).

Collaboration and interdisciplinary care is integral to the lifetime support of transplant patients and reported by participants as strengthening peer relationships, establishing a strong sense of purpose, and contributing to a high level of personal and professional satisfaction within the dynamic specialty of transplant nursing.

Boundaries

Personal and professional boundaries were discussed by participants as having different influencers that placed them at risk for burnout or compassion fatigue. It was revealed that professional boundaries were strongly defined, aligned with organizational policies, and provided clarity with role expectations. Personal boundaries were not as clearly defined and workshop participants explained that it was difficult at times to disengage from emotional ties with transplant patients. They revealed that foregoing personal needs or checking on patients after shift were common, and not always seen as placing themselves at risk for further depletion of personal resources. The educational intervention discussions enhanced awareness of personal boundaries and allowed for the sharing of strategies to promote self-care, respite, and renewal to mitigate stressors that could reduce performance and jeopardize personal health. It is understood that there is an inherent personal cost of caring associated with the delivery of empathic patient

care (Boyle, 2011; Sheppard, 2015). Despite participant perception that the transplant nurses have a propensity to 'go the extra mile' with patient care, it was agreed that crossing personal boundaries increases risks of mental, physical, emotional and spiritual depletion, placing them at greater risk for burnout and compassion fatigue.

Outcomes and Coping Mechanisms

Kind or Self-Disparaging Self-Talk

Kind self-talk and self-coping strategies were deemed as important reinforcement tools to inspire perseverance in the midst of challenging patient care issues. The need for immediate coping strategies became an important focal point as participants shared scenarios where mental clarity and personal resolve required positive self-talk to inspire the courage to persevere through difficult situations. The concept of kind self-talk seeks to overcome self-criticism and reduce negative thoughts associated with self-condemnation or blame (Beaumont et al., 2016; Raab, 2014). Kind self-talk not only strengthens self-resolve, but also dispels debilitating anxiety to allow for mental clarity needed to execute resolutions (Beaumont et al., 2016; Raab, 2014). Participants shared that intense emotions are difficult to suppress when faced with challenging patient care demands or when experiencing the loss of a patient. It was determined that kind self-talk helps to guide the mental strength needed to focus on delivering appropriate care and executing functional tasks without getting caught up in the emotional aspect of the situation. Consensus within the group reflected the application of kind self-talk as a powerful coping strategy that improved mental clarity, professional focus, and emotional fortitude during challenging and traumatic events.

Collaboration and Colleague Support

Collaboration and colleague support was deemed by participants as pivotal to personal and professional satisfaction. Within their transplant specialty nursing role, team centricity was revealed as critical to ensure safety and quality with patient care. Interdisciplinary cohesion among transplant professionals is often a factor that influences a lifetime of patient health care outcomes (Kim, 2013). Participants emphasized that collaboration among surgeons, medical providers, administration, leadership and peers ensured timely communication and efficacy with the delivery of patient care. Strong collaboration was not only determined to improve the patient experience, but was also seen by participants as providing a sense of purpose and meaningful recognition as a valuable member of the transplant medical team.

Self-Care and Mindfulness

The incapacitating nature of physical illness, sleep disturbance, avoidance, and unhealthy coping experienced with the onset of compassion fatigue requires nurses to engage resilience strategies to offset the negative influencers of caregiver demands (Beaumont et al., 2016; Flarity et al., 2016). Resiliency and mindfulness discussions emphasized interventions to reduce stress, with participant review of self-care strategies that included deep breathing, counting, exercise, listening to music, aromatherapies, debriefing with colleagues and family, journaling and daily meditation to replenish self-reserves and enhance compassion satisfaction.

Compassion Fatigue among Transplant Nurses

Burnout and secondary traumatic stress are known contributors to the phenomenon of compassion fatigue (Berg et al., 2016; Hinderer et al., 2014; Makic, 2015). Transplant nurses are uniquely positioned to support the patient continuum of life and death, frequently exposing them

to stressors that can influence the onset of burnout and secondary traumatic stress (Kim, 2013; Makic, 2015). Participants revealed an overall high level of satisfaction in their transplant specialty nursing roles. These nurses shared that the opportunity to be involved with the life and death continuum of patient care provided meaning and purpose to their work as a transplant nurse. This also influenced a sense of satisfaction with their career choice, as reflected in many of these participants currently seeking higher-level education to progress their nursing careers.

Group DNP Project

This educational intervention DNP project was completed with the same workshop approach among four different nursing specialties that included travel nursing, newly graduated BSN nurses, rural emergency nursing, and the specialty of transplant nursing. Although four different doctoral candidates conducted workshops individually and in different geographical locations throughout Arizona, we remained congruent in our preparation and delivery of the workshops. Employing the same questions and educational materials allowed for the identification of commonalities experienced among the four different nursing specialties. From the inception, the group relied upon one another via texts, emails and telephone conference calls to assimilate and synthesize information that would enhance the project. We shared accomplishments, frustrations, opinions, techniques, successes, and creativity, as we collaborated to accomplish the recruitment of participants, the coordination of workshops, delivery of educational interventions, the completion of individual defense presentations, and an overall PowerPoint presentation that reflected individual and group efforts to conduct and recapitulate the importance of mitigating risks for compassion fatigue within the practice of nursing. The culmination of this group effort will be realized in April 2018 when the committee chair will

share a symposium at the Western Institute of Nursing conference with all four doctoral candidates to present the findings from this project, and promote the advancement of future clinical scholarship related to the phenomenon of compassion fatigue.

Focus Groups as an Intervention

The *Act* phase of the PDSA cycle required the implementation of project initiatives to further analyze whether improvements were made in support of the educational intervention project goals. I led both workshops, which allowed participants to engage in discussion and learning interventions, return to work to practice the employment of self-coping strategies, and provide feedback about triggers, symptoms, and observations noticed in the time between workshops. A target goal of five participants was established to obtain a small sample size to conduct this educational intervention project. The goal was exceeded with a total of seven, who participated in both workshops. It was enlightening for me to learn that increased participation was due to the snowball sampling approach where word of mouth generated excitement in the opportunity to learn more about the compassion fatigue phenomenon. Although the initial workshop yielded insightful discussions regarding burnout, secondary traumatic stress, and the risk for compassion fatigue among transplant nurses, participants returned to the second workshop with enhanced awareness of how they personally experienced stress, burnout, and the risk for compassion fatigue. The second workshop was identified as the most meaningful intervention by participants as they learned new strategies to promote self-care, mindfulness, and resilience as ways to mitigate the onset of compassion fatigue in both professional and personal caregiving roles. By conducting non-judgmental, open-ended discussion interviews and educational interventions, informative data was collected. This illuminated how the term

compassion fatigue is perceived, affects performance, and influences satisfaction within the transplant nursing specialty. The following sections provide additional discussion of participant outcomes, trustworthiness and limitations of these workshop interventions which further addresses application of the PDSA cycle within this DNP educational intervention project.

Trustworthiness

Elevating trustworthiness within qualitative research employs the five criteria of credibility, transferability, dependability, confirmability, and authenticity to enhance the confidence of truth and accuracy when collecting and reporting inquiry based data (Birt et al., 2016; Lincoln & Guba, 1994; Morse, 2015). Although this is not a true qualitative analysis, the focus group workshop process and rigor of collecting data within those workshops were guided by principles of trustworthiness. This was promoted throughout the project with the collection of data, analysis review, and the reporting of findings by ensuring adherence with HIPAA guidelines during workshop discussions, and maintaining anonymity with the reporting of participant feedback. Audio recordings of workshops and verbatim transcriptions were employed to promote authenticity and confirmability, elevating credibility associated with project findings. Transferability of findings was reflected in commonalities expressed by nurse transplant participants that aligned with literature regarding the compassion fatigue phenomenon experienced among other critical care, palliative, and forensic nursing specialties.

Trustworthiness has been addressed in this DNP educational intervention project by leveraging a narrative design that is in alignment with qualitative research methodology as a way to support rigor within this project (Lincoln & Guba, 1985; 1994). This approach has allowed for the description of triggers, symptoms, and observations, illuminating underlying commonalities,

and providing narrative evidence related to compassion fatigue as experienced among Arizona transplant nurses.

Limitations

This DNP educational intervention project was purposed to facilitate workshops that engaged participants in open-ended questions as a qualitative method to collect data, and through the delivery of an educational intervention that enhanced awareness of compassion fatigue.

The biggest limitation of this educational intervention project was a small sample size. However, it was anticipated in the project design that a small sample size would allow for a tone of confidentiality among participants that would encourage discussion about personal and challenging compassion fatigue experiences. It was also understood that due to the paucity of literature related to compassion fatigue among transplant nurses, even a small sample size would improve upon research data available to enhance the understanding of influencers and risks associated with this phenomenon among transplant nurses. A limitation that became apparent toward the end of each workshop was the fact that many of these transplant nurses had worked a 12-hour night shift prior to the workshop and reflected a depletion in stamina toward the end of the one-hour session. Facilitation of workshops on a day when the participants were not affected by work schedules may have supported the respite and self-care strategies discussed within the project workshops.

Another limitation that was not evident until the second workshop was the comfort of sharing personal information without concern about others' judgments. Several of the participants worked together on the same transplant unit, had established trust with one another and were comfortable with sharing personal experiences. The other participants needed time to

gain trust within the workshop environment and were much more open with contributing to discussions by the second workshop. Established trust allowed for introspective discussions about journal entries and patient encounters that further delineated the risk for compassion fatigue among the transplant specialty.

Dissemination and Directions for Future Research

Dissemination of the findings from this DNP educational intervention project have been outlined in this document. This educational intervention project established a foundation for post-doctoral clinical scholarship, allowing for further review and analysis of commonalities revealed among all four nursing specialties as reflected in the larger collaborative DNP project. Through the expertise and guidance of the committee chairperson, the *Act* portion of the PDSA cycle has been addressed where all four doctoral candidates will collaborate with the chairperson to deliver a compassion fatigue symposium at the 2018 Western Institute of Nursing (WIN) Conference. This symposium will allow for further discussion and analysis of findings that describe triggers, symptoms, outcomes, observations and experiences associated with compassion fatigue and compassion satisfaction among the four different nursing specialties.

Although the full PDSA cycle was applied to this project, the value of this methodology is to repeat the cycle process, with further analysis of outcomes to determine if additional improvement opportunities have become evident within the project cycle. Based upon feedback from that symposium, I will consider publishing findings from this project in a professional nursing journal. It is also my intent to share the educational intervention with other students and medical administration to promote education among nurses as a way to enhance awareness of the compassion fatigue phenomenon.

Directions for further clinical scholarship may include additional review of participant outcomes to seek such improvement opportunities. In addition, the delivery of educational intervention materials among other nursing specialties would allow for identification of commonalities experienced with the phenomenon of compassion fatigue. Commonalities revealed through such education may indicate that the risk for compassion fatigue is generalizable among all nursing populations. Although burnout and secondary traumatic stress have been deemed in literature as generalizable among caregivers, understanding how and what influencers affect nurses will enhance awareness of the need to mitigate the risk for compassion fatigue.

Implications for Nursing and Advanced Practice Nursing

Findings from this educational intervention project met the outlined aims of describing symptoms, triggers, and outcomes among Arizona transplant nurses, providing a focused educational intervention, and identifying techniques to further reduce the risk of compassion fatigue among this nursing specialty. The implications derived from this project among the transplant nursing specialty is that there is an inherent cost to caring, represented by the mental, physical, emotional and spiritual depletion of personal resources that significantly impact performance and role satisfaction. Affirmed within this project is the sentiment that the term compassion fatigue has been reported as a negative, “stigmatizing” term that reflects a lack of compassion, when it is understood that the delivery of compassion based care can remain congruent with quality performance, despite feeling extreme fatigue. Advanced practice nursing has the opportunity to lead the way in promoting the need for enhanced awareness of the compassion fatigue phenomenon within the practice of nursing. APRN’s have a voice to

champion education and promote interdisciplinary support of strategies to mitigate caregiver related burnout and compassion fatigue. Using that professional voice will encourage self-care strategies that can improve nursing satisfaction, mitigate compassion fatigue, and ultimately influence retention of skilled nursing professionals within an evolving health care arena.

Conclusion

Burnout and secondary traumatic stress were perceived by the volunteer transplant nurse participants as inherent to the specialty of transplant nursing, specifically due to associated challenges with a life and death continuum of patient care. Participants in this educational intervention project reported an overall high level of personal satisfaction in their transplant nursing careers. They asserted that despite physical and mental symptoms of burnout and secondary traumatic stress, the nurse-to-patient relationship remains rewarding, which helps to prevent the onset of compassion fatigue and encourages a greater sense of compassion satisfaction. Participants agreed that the term “compassion fatigue” is viewed as negative and does not accurately represent compassion levels when feeling fatigued from delivering empathic patient care. Lack of support, poor teamwork, high nurse-to-patient ratios, and moral/ethical issues were identified as influencing triggers, symptoms and negative outcomes experienced with the onset of compassion fatigue. Mindfulness, self-care, and various coping strategies were shared as techniques to encourage resilience and promote retention in the dynamic specialty of transplant nursing. This DNP educational intervention project allowed for detailed discussions of transplant nurse experiences in workshops that enhanced awareness of the compassion fatigue phenomenon and promoted the use of self-care strategies that help to identify and resolve stressors to reduce the risk for compassion fatigue among transplant nurses.

APPENDIX A:
FOCUS GROUP SCRIPT AND QUESTIONS

- ❖ Welcome everyone!
- ❖ My Name is Tamara Sharp and I'd like to begin by thanking each of you for coming today and being willing to participate in this educational intervention project.
- ❖ The reason we're here today is to seek your thoughts about experiences you may have had with compassion fatigue while practicing as a transplant 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 a disclosure about today's focus group session, and a brief demographic 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.
- ❖ 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 (your specialty)??
- ❖ What do you like best about being a transplant 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 includes 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. *Example to be provided 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. *Example to be provided here.*
- ❖ Compassion satisfaction is defined as the pride and satisfaction a professional helper such as a nurse gains 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 you witnessed either 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.

Thank you for your participation in this educational intervention 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:
IRB APPROVAL LETTER



Research
Office for Research & Discovery

Human Subjects
Protection Program

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Tucson, AZ 85724-5137
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Date: August 24, 2017
Principal Investigator: Tamara D Sharp
Protocol Number: 1708752371
Protocol Title: Compassion Fatigue Among Arizona Transplant Nurses
Level of Review: Exempt
Determination: Approved

Documents Reviewed Concurrently:

Data Collection Tools: *Td Sharp REVISED Attachment 6 Demographic Questionnaire IRB August 2017.docx*
Data Collection Tools: *Td Sharp REVISED Attachment 7 Educational Intervention Workshop Scripted Questions IRB August 2017.docx*
HSPP Forms/Correspondence: *Signature page.pdf*
HSPP Forms/Correspondence: *TD Sharp F107 VOTF Form IRB attachment July 2017.doc*
HSPP Forms/Correspondence: *Td Sharp REVISED F200 IRB Form August 2017.docx*
Informed Consent/PHI Forms: *Td Sharp Attachment 3 t502a_icf_consent_form_v2016-07_0 (1) IRB August 2... (1).doc*
Informed Consent/PHI Forms: *Td Sharp Attachment 3 t502a_icf_consent_form_v2016-07_0 (1) IRB August 2... (1).pdf*
Participant Material: *Td Sharp Attachment 8 Mental Health Resource List Phoenix Community IRB August 2017.docx*
Participant Material: *Td Sharp REVISED Attachment 5 Educational Intervention Workshop Confirmation Email IRB August 2017.docx*
Recruitment Material: *Td Sharp Attachment 9 Recruitment Script Email IRB August 2017.docx*
Recruitment Material: *Td Sharp REVISED Attachment 4 Recruitment Flyer IRB August 2017.docx*

This submission meets the criteria for exemption under 45 CFR 46.101(b). This project has been reviewed and approved by an IRB Chair or designee.

- The University of Arizona maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00004218).
 - All research procedures should be conducted according to the approved protocol and the policies and guidance of the IRB.
 - Exempt projects do not have a continuing review requirement.
 - Amendments to exempt projects that change the nature of the project should be submitted to the Human Subjects Protection Program (HSPP) for a new determination. See the Guidance on Exempt Research information on changes that affect the determination of exemption. Please contact the HSPP to consult on whether the proposed changes need further review.
 - You should report any unanticipated problems involving risks to the participants or others to the IRB.
- All documents referenced in this submission have been reviewed and approved. Documents are filed with the HSPP Office. If subjects will be consented, the approved consent(s) are attached to the approval notification from the HSPP Office.

APPENDIX C:
LITERATURE REVIEW AND ARTICLES

Project Question: *How do transplant nurses within Arizona perceive or experience compassion fatigue?*

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
Beaumont, et al., 2016	Quantitative Survey	<p><u>Sample:</u> A purposive convenience sample n=103 of 2nd & 3rd year student nurse midwives recruited from a northwest England University (UK)</p> <p>All participants female, between 19-56 yrs of age</p> <p><u>Setting:</u> University classroom</p>	<p><u>Data Collection:</u> Individual information packets provided for each participant that included:</p> <ul style="list-style-type: none"> • Study guidelines • General information • Consent forms • An “Opt Out” form • 4 validated scale surveys: <ul style="list-style-type: none"> • Compassion for other scale (Pommier, 2011) • Self-Compassion Scale Long Version (Neff, 2003) • Professional Quality of Life scale (ProQOL) (Stamm, 2010) • Short-Warwick and Edinburgh Mental Well Being Scale (sWEMWBS) (Tennant et al., 2009) <p>Questionnaires numbered to ensure participant anonymity</p> <p>Facilitators delivered a compassion fatigue/compassion satisfaction presentation followed by a question and answer session</p>	<p><u>Data Analysis:</u> Analysis conducted using Pearson’s correlations to determine average & mean scores associated with risks for compassion fatigue as identified in questions from each of the 4 survey scales</p> <p>Results analyzed within the following categories to identify average and mean scores as related to personal perceptions of performance:</p> <ul style="list-style-type: none"> • Compassion for others • Compassion satisfaction • Burnout • Compassion fatigue • Self-kindness • Self-judgment • Self-compassion • Well-being <p>Self-judgment scores assigned 2 categories: Low & High - to investigate differences among surveys</p>	<p><u>Findings:</u> Significant statistical differences indicate high self-judgment scores correlate to reports of increased burnout, lower compassion toward others, and a sense of lower well-being</p> <p>Conversely, greater compassion satisfaction and personal well-being reported by nurses who practice self-compassion and self-soothing to reduce compassion fatigue</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
Berg et al., 2016	Educational intervention project	<p><u>Sample:</u> A small focus group (n=12) within a Midwestern Level 1 trauma medical center in Kansas (US)</p> <p>All participants >18 yrs with 83% > 40yrs; 75% female, & 25% male; 4.7y avg experience</p> <p>Mix of trauma related positions, 50% nurses</p> <p>Volunteered to participate and recruited within medical center with IRB approval</p> <p><u>Setting:</u> On site medical center meeting room</p>	<p><u>Data Collection:</u> Focus group led by trained facilitator & 1.5 hrs in length</p> <p>Two trained researchers took notes, audiotaped and transcribed session</p> <p>Chaplain available for debriefing following focus group</p> <p>Informed consent obtained prior to focus group session</p> <p>Individual surveys completed by participants during session included:</p> <ul style="list-style-type: none"> • 2 validated scale surveys: <ul style="list-style-type: none"> • Holmes-Rahe Life and Stress Inventory (Homes & Rahe, 1967) • Professional Quality of Life scale (ProQOL) (Stamm, 2010) • 1 Demographic survey <p>Along with completion of surveys, facilitator guided focus group discussion with scripted compassion fatigue/compassion satisfaction questions followed by debriefing</p>	<p><u>Data Analysis:</u> Notes and transcripts independently reviewed by 2 research team members to identify themes</p> <p>Data summarized using means for interval data, and frequencies for categorical data (i.e., standard deviation and frequencies)</p> <p>Four themes identified in analysis that include:</p> <ul style="list-style-type: none"> • Positive job aspects • Stress triggers • Stress symptoms • Coping with stress 	<p><u>Findings:</u> 41.7% reported mild stress & 58.3% no significant stress in the Holmes-Rahe Life & Stress Inventory Scale</p> <p>ProQOL scale results include:</p> <ul style="list-style-type: none"> • 42% identified at risk for compassion fatigue, 25% feeling distress, overwhelmed, or useless in job, and 16.7% scored at high risk due to burnout <p>Four theme results:</p> <ul style="list-style-type: none"> • Positive job aspects include “saving lives” and “knowing you made a difference • Stress triggers include child & elderly abuse, multiple family traumas, life threatening injuries, and senseless deaths • Stress symptoms varied with nightmares, hypervigilance w/ injuries & activity restrictions • Coping strategies varied, no recommendations

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
Finley & Sheppard, 2017	Qualitative Phenomenologic Interviews	<p><u>Sample:</u> N=16 hospital based oncology RN's</p> <p>Secondary data from 5 RN's with face-to-face interviews</p> <p><u>Setting:</u> Level 1 trauma facility in Nevada</p>	<p><u>Data Collection:</u> Anonymity and confidentiality maintained through omission of subject names</p> <p>Interviews with open-ended & focused questions conducted for approximately 1 hour until saturation of themes reached and information contributing to compassion fatigue fully explored</p> <p>Recordings allowed for verbatim capture of subjects response, then transcribed into written form</p>	<p><u>Data Analysis:</u> Transcripts read three times, reviewed for accuracy, and deductively analyzed using Stamm's (2010) framework to identify commonalities of phrases, words, and ideas</p> <p>Themes then identified using codes developed through analytical thinking and descriptive explanations</p>	<p><u>Findings:</u> Six themes discovered:</p> <ul style="list-style-type: none"> • Field of oncology felt to have "picked" RN via practicum experience • Forming & losing long-term connections with patients & family • Burnout related to unrelenting workplace stress • Emotions spent when feeling so deeply with patients/families • Sense of being a better person related to the nursing care for patients <p>Positive coping skills included honoring self-care practices, spending time with family and friends, and taking vacations/holidays</p> <p>Negative coping skills reported overindulgence in alcohol, staying out late resulting in sleep deprivation and poor self-care</p>
Flarity et al., 2013	Educational intervention project	<p><u>Sample:</u> A convenience sample of ED nurses self-selected (n=73) as participants in the</p>	<p><u>Data Collection:</u> Participants initially contacted via study information/invitation packets in individual work mailboxes</p>	<p><u>Data Analysis:</u> Data recorded and scored using recommendations in the <i>Concise ProQOL Manual</i> by Dr. Stamm</p>	<p><u>Findings:</u> Pretest ProQOL survey results (n=73):</p> <ul style="list-style-type: none"> • 52% reported low to moderate levels of

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
		<p>pre-test survey, and (n=59) of the same RN's participated in the posttest survey</p> <p>38% as RN's >20+ yrs, and 58% RN's <8 years.</p> <p>65 female and 8 male participants</p> <p><u>Setting:</u> University of Colorado's Memorial Hospital, 2 ED units, North & South, Colorado Springs, CO</p>	<p>Participants self-scheduled attendance at multifaceted compassion fatigue resiliency intervention program/seminar</p> <p>Informed consent and demographics sheet obtained from participants prior to intervention seminar</p> <p>Participants selected fictitious names to ensure anonymity with real names/identifiers throughout the study</p> <p>Individual surveys completed by participants during session included:</p> <ul style="list-style-type: none"> • 1 Demographic survey • Pre-test & posttest - Professional Quality of Life scale (ProQOL) (Stamm, 2010) <p>Handouts included:</p> <ul style="list-style-type: none"> • "Tools of Hope" DVD • CD of guided imagery/music • Website access to compassion fatigue/compassion satisfaction education 	<p>(2010)</p> <p>Pre-test and posttest scores individually compared and evaluated for compassion fatigue risk</p> <p>Scores for the three ProQOL subscales identified and summed as follows: Compassion satisfaction, burnout & secondary traumatic stress:</p> <ul style="list-style-type: none"> • score < 22 = low compassion satisfaction • score 23-41 = average compassion satisfaction • score >42+ = high compassion satisfaction <p>Univariate statistics used to examine data for normalcy of distribution, Wilcoxon signed-rank and used to evaluate differences, and the level of significance of $p = 0.05$</p>	<p>compassion satisfaction</p> <ul style="list-style-type: none"> • 59% reported moderate to high levels of burnout • 60% reported moderate to high levels of secondary traumatic stress <p>Pre and Posttest ProQOL survey results of compassion satisfaction, burnout & secondary traumatic stress (n=59): Report high level of compassion satisfaction</p> <ul style="list-style-type: none"> • Pre = 50.8% • Post = 61% <p>Low to moderate compassion satisfaction</p> <ul style="list-style-type: none"> • Pre = 49% • Post = 39% <p>High burnout levels</p> <ul style="list-style-type: none"> • Pre = 34 subjects • Post = 14 subjects <p>Moderate to high secondary traumatic stress</p> <ul style="list-style-type: none"> • Pre = 35 subjects • Post = 24 subjects <p>Overall statistically significant improvement</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
Flarity et al., 2016	Exploratory Study	<p><u>Sample:</u></p> <p>Convenience sample (n=55) forensic nurses (FN) who self-selected while attending SANE & SAFE conference - results applied to prevalence component of study; 96% females, ages 20-56, 81% as FN <11 years</p> <p>Intervention component involved FN's (n=9) from Level II Trauma center who completed both a pre and post ProQOL survey in conjunction with attendance to a compassion fatigue 4 hr seminar</p> <p><u>Setting:</u></p> <p>Offsite career conference for sexual assault forensic examiner (SAFE) & sexual assault nurse</p>	<p><u>Data Collection:</u></p> <p>Certified compassion fatigue specialist led 4 hour interactive seminar</p> <p>Hospital Institutional Review Board (IRB) approved protocol</p> <p>Informed consent obtained prior to focus group session</p> <p>Pre/Post ProQOL: surveys completed prior to start of seminar and post completion of seminar related activities; participants served as own control group</p> <p>Individual surveys completed by participants during session included:</p> <ul style="list-style-type: none"> • 1 Demographic survey • Pre-test & posttest - Professional Quality of Life scale (ProQOL) (Stamm, 2010) <p>Handouts included:</p> <ul style="list-style-type: none"> • "Tools of Hope" DVD • CD of guided imagery/music <p>Facilitator guided focus group</p>	<p><u>Data Analysis:</u></p> <p>Data recorded and scored using recommendations in the <i>Concise ProQOL Manual</i> by Dr. Stamm (2010)</p> <p>Pre-test and posttest scores individually compared and evaluated for compassion fatigue risk</p> <p>Scores for the three ProQOL subscales identified and summed as follows: Compassion satisfaction, burnout & secondary traumatic stress:</p> <ul style="list-style-type: none"> • score < 22 = low compassion satisfaction • score 23-41 = average compassion satisfaction • score >42+ = high compassion satisfaction <p>Optimal levels are high compassion satisfaction and low secondary traumatic stress</p> <p>A paired <i>t</i> test was used to evaluate differences, and the level of significance of <i>p</i> =</p>	<p><u>Findings:</u></p> <p>Prevalence component: Pretest ProQOL survey results (n=55):</p> <ul style="list-style-type: none"> • 69% reported low to moderate levels of compassion satisfaction • 73% reported moderate to high levels of burnout • 73% reported moderate to high levels of secondary traumatic stress <p>All 55 reported 1+ compassion fatigue symptom in month</p> <p>Pre and Posttest ProQOL survey results Intervention (n=7):</p> <p>Report moderate compassion satisfaction</p> <ul style="list-style-type: none"> • Pre = 86% • Post = 43% <p>Low to moderate compassion satisfaction</p> <p>High burnout levels</p> <ul style="list-style-type: none"> • Pre = 6/7 subjects • Post = 3/7 subjects <p>Moderate secondary traumatic stress</p> <ul style="list-style-type: none"> • Pre = 5/7 subjects • Post = 5/7 subjects

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
		examiner (SANE) focus	discussion with scripted compassion fatigue/compassion satisfaction questions followed by debriefing	0.05.	All 7 reported 1+ compassion fatigue symptom in month Overall statistically significant improvement
Hersch et al., 2016	Randomized Controlled Trial	<p><u>Sample:</u> 117 RN's recruited as volunteer participants of which 104 completed surveys</p> <p><u>Setting:</u> Six hospitals across suburban Virginia and 1 in New York</p>	<p><u>Data Collection:</u> IRB board approval obtained prior to start of study recruitment process; Informed consent and demographics sheet obtained from participants prior to completion of online surveys</p> <p>Participants recruited via online emails, posting flyers on units and new RN orientation forums</p> <p>Participants self-selected, contacted study team to participate and were provide \$25 for participation</p> <p>Randomization completed via computer program and participants were directed to an outside website link to either an experimental group, <i>BREATHE</i>, with a randomly generated user name and password to begin using the program for a three month period, or to a control group</p>	<p><u>Data Analysis:</u> The <i>BREATHE</i> website was designed as a stress management educational tool with the following measures:</p> <ul style="list-style-type: none"> • Demographics • Nursing Stress Scale • Symptoms of distress • Coping with Stress • Work Limitations Questionnaire • Substances use for stress relief • Drinking quantity/frequency • Understanding depression/anxiety • Nurses job satisfaction scale <p>Attrition analysis conducted to determine if failure of randomization due to 14 nonresponses during the pretest – no significant results indicating study</p>	<p><u>Findings:</u> Results indicated no significant differences between the two groups during the pretest measures</p> <p>Overall the experimental group showed statistically significant improvement over the control group</p> <p>Study findings indicate that the web-based <i>BREATH</i> program was an effective means of reducing RN's perceived stress related to death, conflict with physicians, inadequate preparation, conflict with other RN's, work load and uncertainty concerning treatment.</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
			<p>where participants were told their program access was delayed until the end of the test period</p> <p>Participants in the experimental group maintained 24/7 at work and at home access to the <i>BREATHE</i> website</p>	<p>variables were successful</p> <p>Primary analysis followed intent-to-treat principles irrespective of events during post randomization</p> <p>Analyses consisted of a series of multiple regressions in Mplus using imputed data sets and allowing for generation of standard errors.</p>	
Hinderer et al., 2014	Cross-sectional study	<p><u>Sample:</u> Purposive sampling used to recruit 1000 ED RN's across various U.S. ED's, mailing addresses obtained from the Emergency Nurses Association (ENA)</p> <p>Participants N=278, a response rate of 27%, included RN's who worked >8 hrs/wk in ED of which 87% women, mean age 44 yrs, and mean years of 13 working on an ED unit</p> <p><u>Setting:</u> Varying ED units</p>	<p><u>Data Collection:</u> Paper form of demographic survey and Likert-scale ProQOL 30 item survey to assess burnout, secondary traumatic stress, compassion fatigue and compassion satisfaction completed by participating ED nurses</p> <p>27% response rate (N=278)</p> <p>Completed surveys remained anonymous and returned in sealed postage paid envelopes</p> <p>Confidentiality maintained by coding all data numerically and only research team members had access to data</p>	<p><u>Data Analysis:</u> Data analyzed via SPSS version 21.0 using Pearson r correlation, <i>t</i> test, and one-way analysis of variance (ANOVA) to examine associations between demographics, work-related characteristics, along with burnout, compassion fatigue, and compassion satisfaction levels of risk</p> <p>Alpha level set at 0.5 for statistical significance, and a minimum sample size of 153 subjects needed to achieve a 95% power level and medium effect size of (.15) at alpha = 0.5.</p> <p>Seven independent variables employed to run a multiple</p>	<p><u>Findings:</u> Two study questions asked:</p> <ol style="list-style-type: none"> 1) What is the prevalence of compassion satisfaction, compassion fatigue, and burnout among ED nurses? 2) What demographic characteristics such as age and gender are associated with the prevalence of compassion satisfaction, compassion fatigue and burnout among ED nurses? <p>Findings include: Mean scores: compassion satisfaction =39.77 compassion fatigue=21.57 burnout=23.66</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
		throughout the United States.		regression	Indicating that >56% reported average level of compassion satisfaction, >65% had low level of compassion fatigue, and >54% had average levels of burnout as ED nurses
Hunsaker et al., 2015	Descriptive and predictive study	<p><u>Sample:</u> 1400 clinical RN's among 25 different units were invited to participate in online survey</p> <p>N=491 RN's, average age of 39 years with average of 11 years nursing experience</p> <p>Excluded leadership & APRN positions</p> <p><u>Setting:</u> Large, Magnet-recognized quaternary care teaching facility in the southwest U.S.</p>	<p><u>Data Collection:</u> Group participants completed the ProQOL 30 item instrument to assess positive and negative quality of life elements associated with careers in caregiving; assessing three subscales to determine risk for compassion fatigue:</p> <ul style="list-style-type: none"> • Pre-test & posttest - Professional Quality of Life scale (ProQOL) (Stamm, 2010) • Compassion Satisfaction • Burnout • Secondary Traumatic Stress <p>A smartphone application – <i>Provider resilience mobile application</i> – allowed the intervention group to personal digital device web access to psychoeducation on the risks of burnout, secondary traumatic stress, compassion satisfaction, and compassion fatigue with a tracking tool monitor user</p>	<p><u>Data Analysis:</u> Descriptive data along with frequencies of demographics satisfaction were used to describe the sample. Age ranges were identified into three generational categories: 21-33 yrs of age = Millennials 34-49 yrs of age = Gen-X 50-65 yrs of age = Baby Boomers</p> <p>Differences among ages and generations were assessed using analysis of variance (ANOVA). Regression analysis was conducted via the ProQOL subscale scores and individual nursing characteristics.</p>	<p><u>Findings:</u> 15% of the sample identified being highly satisfied with their jobs, and the same percentage (15%) indicated an intention to leave their job within a year.</p> <p>ANOVA showed no significant difference in burnout, secondary traumatic stress, or compassion satisfaction scores among the various 25 units within the hospital.</p> <p>The millennials indicated higher levels of burnout and secondary traumatic stress than the generation-X or baby boomer generations</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
			interaction with interventions and self-coping tools		
Jakel et al., 2016	Quasi -Experimental with Longitudinal Approach	<p><u>Sample:</u> Convenience sample of 25 oncology inpatient RN's all > 18 years of age, fluent in English, and owned a smartphone.</p> <p>Participants non-randomly assigned to an intervention (n=16) or control group (n=9)</p> <p><u>Setting:</u> 26-bed oncology unit of California medical center.</p>	<p><u>Data Collection:</u> Group participants completed the ProQOL 30 item instrument to assess positive and negative quality of life elements associated with careers in caregiving; assessing three subscales to determine risk for compassion fatigue:</p> <ul style="list-style-type: none"> • Pre-test & posttest - Professional Quality of Life scale (ProQOL) (Stamm, 2010) • Compassion Satisfaction • Burnout • Secondary Traumatic Stress <p>A smartphone application – <i>Provider resilience mobile application</i> – allowed the intervention group to personal digital device web access to psychoeducation on the risks of burnout, secondary traumatic stress, compassion satisfaction, and compassion fatigue with a tracking tool monitor user interaction with interventions and self-coping tools</p>	<p><u>Data Analysis:</u> Study not determined statistically significant as pre and post test scores remained the same among intervention and control groups Small sample size resulted in a low statistical power Further studies with larger sample size may provide generalizability to the use of technology based tools to prevent compassion fatigue</p>	<p><u>Findings:</u> Statistical, software and technological limitations were discovered during the study that included a policy of no cellphones used on the oncology unit during work which limited the feasibility of the smartphone application providing real time support to mitigate burnout, secondary traumatic stress, and compassion fatigue and improve compassion satisfaction</p> <p>Literature suggests secondary traumatic stress burnout & compassion fatigue are significant problems among oncology RN's</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
Kelly, Runge, & Spencer, 2015	Cross-Sectional, Quantitative Survey Research Study	<p><u>Sample:</u> 1400 clinical RN's among 25 different units were invited to participate in online survey</p> <p>N=491 RN's, average age of 39 years with average of 11 years nursing experience</p> <p>Excluded leadership & APRN positions</p> <p><u>Setting:</u> Large, Magnet-recognized quaternary care teaching facility in the southwest U.S.</p>	<p><u>Data Collection:</u> Human subject approval obtained from IRB prior to start of study Conducted to assess compassion fatigue and compassion satisfaction over a three week period in May 2013 Individual surveys completed by participants via hospital web-based access included:</p> <ul style="list-style-type: none"> • Demographic survey • Professional Quality of Life scale (ProQOL) (Stamm, 2010) 	<p><u>Data Analysis:</u> Descriptive data along with frequencies of demographics were used to describe the sample. Age ranges were identified into three generational categories: 21-33 yrs of age = Millennials 34-49 yrs of age = Gen-X 50-65 yrs of age = Baby Boomers</p> <p>Differences among ages and generations were assessed using analysis of variance (ANOVA). Regression analysis was conducted via the ProQOL subscale scores and individual nursing characteristics</p>	<p><u>Findings:</u> 15% identified as highly satisfied with their jobs, and another 15% indicated intention to leave their job within a year.</p> <p>ANOVA showed no significant difference in burnout, secondary traumatic stress, or compassion satisfaction scores among the various 25 units within the hospital.</p> <p>The millennials indicated higher levels of burnout and secondary traumatic stress than the generation-X or baby boomer generations.</p>
Kim, 2013	Exploratory Descriptive Study	<p><u>Sample:</u> Convenience sample of 14 liver and kidney transplant nurse coordinators</p> <p><u>Setting:</u> Conducted at a large urban multi-organ transplant center in the southeast region</p>	<p><u>Data Collection:</u> Approval from IRB obtained prior to study and all participants were provided general information about the study before choosing to participate</p> <p>Participants were provided with anonymity and completed surveys were returned to a designated file in sealed</p>	<p><u>Data Analysis:</u> Responses were analyzed by using descriptive statistics with mean scores for compassion satisfaction, burnout and secondary traumatic stress by using a one-way analysis of variance.</p> <p>Results showed a significantly significant</p>	<p><u>Findings:</u> Scores indicated that transplant nurse coordinators report an average level of compassion satisfaction, burnout, and secondary traumatic stress in their specialty role.</p> <p>Participants also indicated and average level of "unpleasant and</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
			<p>envelopes.</p> <p>Research questions posed to the participants included:</p> <ul style="list-style-type: none"> • What is the level of compassion fatigue in liver and kidney transplant nurse coordinators? • How do liver and kidney transplant nurse coordinators' demographic factors influence their compassion satisfaction, burnout and secondary traumatic stress scores? <p>Individual surveys completed by participants included:</p> <ul style="list-style-type: none"> • Demographic survey • Professional Quality of Life scale (ProQOL) (Stamm, 2010) 	<p>relationship between burnout and the level of education held by the respondent, $p = .02$. No other significant relationships were found between other variable or subscale scores.</p>	<p>dysfunctional condition” reflective of job-related stress.</p> <p>Limitations noted include small sample size, and possible influence upon responses due to perceived evaluation of response to survey tool</p>
Ledoux K. (2015)	Discussion Paper / Original Article	<u>Sample:</u> Literature review of research using CINAHL, Proquest, NAHS, PubMed and Psychinfo to	<u>Data Collection:</u> Review of literature between 1998-2014, using key words of compassion and compassion fatigue, to assess themes focused upon the prevalence of	<u>Data Analysis:</u> Analysis of literature included review of definitions, understandings and discourse on what compassion fatigue is and	<u>Findings:</u> Key findings include: • Compassion illuminated as central concept within nursing practice

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		examine the discourse on compassion fatigue	compassion fatigue among varying roles of health care professionals	how it may affect the nurse-patient therapeutic relationship	<ul style="list-style-type: none"> • Possibility compassion fatigue is not related to nurses caring, but rather when care is obstructed • Tools used to measure compassion fatigue among nurses (ProQOL), but no tools to measure the construct of compassion
MacKusick & Minick, 2010	Qualitative Study	<p><u>Sample:</u> Purposive sampling to recruit participants: N=10; 2 male, 8 female Participants > 1 yr experience in med/surg nursing</p> <p><u>Setting:</u> Southeastern U.S. region; time/locale agreed as setting for individually conducted interviews</p>	<p><u>Data Collection:</u> IRB from Georgia State University obtained and written informed consent completed by all participants prior to conduction of interview and data collection</p> <p>Confidentiality was maintained through participant use of a pseudonym throughout the interview</p> <p>10 semi-structured interviews were audiotaped and transcribed verbatim for data analysis, transcription compared to audiotape to ensure accuracy, and participants received written copies of their transcripts for review of accuracy</p>	<p><u>Data Analysis:</u> Analysis included demographical data for categorization of findings</p> <p>Transcriptions reviewed for themes and contextual meanings, then reviewed with research colleagues to ensure appropriate interpretations</p> <p>Hermeneutics used to allow researcher to probe further into contextual meanings</p>	<p><u>Findings:</u> Three themes emerged regarding decision to leave clinical nursing:</p> <ul style="list-style-type: none"> • Unfriendly workplace • Emotional distress related to patient care • Fatigue and exhaustion <p>Nurses reported positive and negative perceptions of their nursing practice experience</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
Maiden, Georges & Connelly, 2011	Mixed methods: Quantitative survey and qualitative focus groups	<p><u>Sample:</u> N=205 CCRN's completed mail surveys; 5 recruited for focus group interviews</p> <p>90% females, 10% males, avg 47 yo, avg. 23 yrs in practice</p> <p><u>Setting:</u></p> <p>Mail exchange and small focus group in mutually agreed San Diego locale</p>	<p><u>Data Collection:</u> IRB from University of San Diego approval and written informed consent obtained prior to participant completion of surveys and/or focus group interviews</p> <p>1000 surveys mails of which 205 returned</p> <p>Focus group of 5 recruited as volunteers</p> <p>A demographic survey and Likert-type scales were employed to gather participant responses</p>	<p><u>Data Analysis:</u> Participant responses summarized using Pearson coefficients statistical scores to compare study variables of:</p> <ul style="list-style-type: none"> • Participant demographics • Nursing characteristics • Moral Distress Scale • ProQOL Scale • Medication Administration Error Survey <p>Tables of comparisons created to report perceived reasons for nurse medication errors</p>	<p><u>Findings:</u> Qualitative data indicated themes of:</p> <ul style="list-style-type: none"> • Need for process and work practice change • Negative emotions • Frustration • Devastation • Fear <p>Quantitative data indicated higher compassion fatigue scores and intent to resign among nurses who experienced a critical care medication error</p>
Morrison & Joy, 2016	Triangulation of qualitative and quantitative methods	<p><u>Sample:</u> Phase 1: Convenience sample of N=200 emergency nurses</p> <p>Phase 2: N=10 stratified sample to allow for small focus group</p> <p><u>Setting:</u></p>	<p><u>Data Collection:</u> Two phases of study includes quantitative survey and qualitative focus group discussions; Data collected through interviews and questionnaires over a 1 month period in 2013 at hospital sites</p> <p>Phase 1 Quantitative data collected via a 17-item Likert-scale survey to assess for symptoms of secondary</p>	<p><u>Data Analysis:</u> Phase 1 survey tool data manually coded and entered into a Microsoft Excel spreadsheet and uploaded for Minitab for analysis where >38 score indicated diagnostic criteria for secondary traumatic stress</p> <p>Phase 2 data collected as feedback during small focus group discussions was</p>	<p><u>Findings:</u> Emergency RN's report acute stressors of death and resuscitation influenced secondary traumatic stress</p> <p>symptoms of secondary traumatic stress prevalent among this population of emergency RN's</p> <p>Coping strategies of debriefing and social support</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
		Four hospitals in the area of west Scotland, UK	<p>traumatic stress Phase2: Qualitative data collected with interviews during focus group discussions</p> <p>Anonymity maintained through collection of surveys and respondent feedback without inclusion of names</p>	conducted via field notes and member checking to ensure conformity and validity of data	beneficial tools for mitigating secondary traumatic stress
Sacco et al., 2015	Cross-Sectional	<p><u>Sample:</u> Convenience sample of 221 volunteer RN participants representing 9 different units within the medical center</p> <p>Female (n=209) and male (n=11) with mean age of 20-29 years old</p> <p><u>Setting:</u> 739-bed tertiary care, academic medical center</p>	<p><u>Data Collection:</u> Study approved by medical center's IRB and nursing leadership and educators granted permission for electronic distribution of the ProQOL survey</p> <p>Anonymity was maintained through an embedded link that redirected users to a secured website to complete the survey.</p> <p>Individual surveys completed by participants included:</p> <ul style="list-style-type: none"> • Demographic survey • Professional Quality of Life scale (ProQOL) (Stamm, 2010) 	<p><u>Data Analysis:</u> Data downloaded from website and uploaded to SPSS platform for analysis. Correlations and Cronbach <i>a</i> were used to examine internal consistency reliability of the ProQOL scale, and priori was set at $\alpha < 0.5$ for a nominal significance</p> <p>Analysis of variance with post hoc comparisons via the Scheffe test was used to compare mean scores for subscales for organizational characteristics, units, and individual nurses.</p>	<p><u>Findings:</u> Findings reflect younger, less experienced RN's reporting higher levels of burnout and secondary traumatic stress, placing them at higher risk for compassion fatigue.</p> <p>Significant differences according to gender were evident in compassion and secondary traumatic stress subscales, with males indicating a lower compassion satisfaction and secondary traumatic stress score than females. However, it is important to consider that there were a significantly lower percentage of males participating in this survey</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
Sheppard, 2015	Concept Development Study	<p><u>Sample:</u> Interpretive phenomenology (n=16)</p> <p>Mixed Methods (n=52)</p> <p><u>Setting:</u> Level 1 trauma hospital for Interpretive phenomenology study, and a University online module web based learning program and delivery of the ProQOL survey tool</p>	<p><u>Data Collection:</u> Concept development study was conducted in alignment with the hybrid model (Schwart-Barcott & Kim, 2000) with the following phases: Theoretical Field Analytical</p> <p>The field phase included interpretive phenomenological interviews with (n=16) RN's</p> <p>ProQOL compassion fatigue risk assessment survey (Stamm, 2010) completed by volunteer student participants (n=59) via online web based compassion fatigue series of educational modules – students volunteered to participate in the ProQOL survey after completing the compassion fatigue coursework</p>	<p><u>Data Analysis:</u> Descriptive study data collected through qualitative interviews with RN's providing responses to scripted questions about perceptions and experiences with compassion fatigue and compassion satisfaction</p> <p>In addition to ProQOL survey tool scores, qualitative data was collected from the student sample group (n=59), providing additional personal experience data with compassion fatigue, burnout, secondary traumatic stress, and compassion satisfaction</p>	<p><u>Findings:</u> Interpretive Phenomenology (n=16) study provided qualitative data reflecting RN experiences with compassion fatigue, burnout, and secondary traumatic stress that reduced compassion satisfaction</p> <p>The qualitative and quantitative mixed-methods study correlated ProQOL compassion fatigue risk assessment scores with personal RN detailed accounts of burnout and secondary traumatic stress that resulted in greater compassion fatigue than compassion satisfaction within their nursing roles</p>
Sinclair et al., 2016	Grounded Theory Study	<p><u>Sample:</u> Convenience and theoretical sample (n=53), adult (> 18 yrs) cancer inpatients</p> <p><u>Setting:</u> Palliative care unit at large acute academic</p>	<p><u>Data Collection:</u> Face-to-face semi-structured interviews with an interview guide based upon a literature review and experienced professionals conducting end of life interviews with patients</p> <p>Private interviews averaged 1 hour in length, were supervised,</p>	<p><u>Data Analysis:</u> Three stages of coding completed using Straus and Corbin's approach to grounded theory: Stage 1 –open coding through line-by-line transcript review to identify themes and categorize phenomena</p>	<p><u>Findings:</u> Key elements of compassion emerged with varying themes: Virtues Relational Space Patient Awareness Engaged Caregiving (this is relevant to compassion satisfaction)</p>

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		hospital in Alberta, Canada	recorded and then transcribed verbatim to preserve data integrity	<p>Stage 2 – Axial coding involved assigning codes to themes</p> <p>Stage 3 – Selective coding reviewed all previous coding of transcripts to verify core variables and develop the empirical model</p>	<p>Virtuous Response Beneficence (this is relevant to compassion satisfaction) Seeking to understand the person and their individual needs</p> <p>Patient explanation that going above and beyond examples compassion</p> <p>”Compassion is more action” <i>Patient quote</i></p>
Stamm, 2010	Professional Quality of Life scale (ProQOL)	<u>Sample:</u> N/A	<p><u>Data Collection:</u> Professional Quality of Life scale (ProQOL) (Stamm, 2010) designed as a Likert scale survey tool</p> <p>Measures/assesses potential compassion fatigue risk through three subscales of assessment: burnout, secondary traumatic stress, and compassion satisfaction</p>	<p><u>Data Analysis:</u> Not a diagnostic test</p> <p>Allows data capture of self-reported assessment</p>	<p><u>Findings:</u> Findings can be interpreted on an individual level as well as for a large sample size</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
Young, Derr, Cicchillo, & Bressler, 2011	Exploratory descriptive study	<p><u>Sample:</u> Convenience sample N=70 of staff RN's compared two heart/vascular units of one ICU inpatient heart unit (n=45) & heart/vascular intermediate unit (n=25)</p> <p><u>Setting:</u> 484 bed academic medical center in Pennsylvania</p>	<p><u>Data Collection:</u> Quality of Life committee recruited RN's from each unit within hospital and placed surveys into individual mailboxes for completion</p> <p>Anonymity and confidentiality maintained without using participants names</p> <p>Likert-scale type ProQOL survey tool used 30 questions to reflect subject experience with burnout, secondary traumatic stress, compassion fatigue, and compassion satisfaction within the past 30 days</p>	<p><u>Data Analysis:</u> Survey results manually entered into SPSS software version 18.0.2 for data analysis</p> <p>Two incomplete questionnaires were excluded from reported results</p>	<p><u>Findings:</u> Scores indicated that intermediate care RN's reported an average burnout score of 19 and ICU nurses score of 25 indicated a higher risk of burnout in the intensive care unit</p> <p>Compassion satisfaction scores were higher among intermediate RN's than ICU nurses</p> <p>All RN's within study indicated low to average burnout levels</p>
Yu, H. H., Jiang, A., & Shen, J. (2016).	Cross-sectional survey	<p><u>Sample:</u> A total of 669 survey packets distributed to Chinese oncology nurses, with N=650 subjects (71%) response rate</p> <p>Subjects ages 19-55, with avg. 6.7 yrs oncology nursing practice</p> <p><u>Setting:</u> 5 secondary and 10</p>	<p><u>Data Collection:</u> Six survey instruments distributed to subjects in sealed packets, with provided collection receptacles on each hospital unit involved with survey</p> <p>Subjects allowed one week for completion of all survey instruments</p> <p>Anonymity maintained through completion with including subject names</p>	<p><u>Data Analysis:</u> Descriptive statistics used to describe demographic data. Data entered and analyzed using SPSS version 21.0 software.</p> <p>Difference between compassion fatigue, compassion satisfaction and burnout tested using independent <i>t</i> test and one-way analysis of variance (ANOVA).</p>	<p><u>Findings:</u> Findings report Chinese oncology RN's having more years of clinical experience reported higher levels of burnout</p> <p>Cognitive empathy, relevant training, and organizational support deemed as significant factors to decrease burnout and improve compassion satisfaction among this nursing population</p>

Author / Article	Study Approach	Sample and Setting	Design Methods for Data Collection	Data Analysis	Findings
		tertiary hospitals in Shanghai, China			Personality traits of openness & conscientiousness reports higher levels of compassion satisfaction

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