CRITICAL CARE NURSE INSIGHT INTO PERCEIVED COMPASSION FATIGUE: A PHOTOVOICE STUDY

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KAREN C. VESSIER M.S., M.Ed.

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DEDICATION

For my husband, Robert, thank you for your never-ending patience and supporting love throughout this journey.

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ABSTRACT

KAREN C. VESSIER

CRITICAL CARE NURSE INSIGHT INTO PERCEIVED COMPASSION FATIGUE: A PHOTOVOICE STUDY

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Critical care nurses can experience compassion fatigue (CF) as the state of emotional and physical exhaustion resulting from exposure to unavoidable workplace stressors in the scope of carrying out their duty to suffering patients. Critical care nurses in various high intensity patient care areas have been found to have CF at concerning levels. The problem is that the presence of CF threatens to limit the critical care nurse's capacity to fully participate in providing compassionate care with patients and to undermine the essence of professional nursing practice. Photovoice, a participatory action research methodology, was used to examine CF through the nurse's voice and images. Through thematic analysis of data gathered from interviews, focus group discussion and visual images of photos taken by participants with written meanings, new knowledge was gained concerning CF in critical care nurses. Three themes were identified: Before nurse work – anticipatory CF triggers; During nurse work – inescapable CF triggers; and After nurse work – incessant CF triggers. Findings suggest critical care nurses experience CF from work factors of which they have either no control nor adequate resources to help cope with CF.

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CHAPTER 1

INTRODUCTION

Compassion fatigue (CF) is a complex and grave threat to the health and well-being of clinical nurses within hospital work environments. CF occurs from the challenges of encountering and witnessing patient pain and suffering (Figley,1995; Showalter, 2010). As frontline patient care providers, nurses are at risk for developing the occupational hazard of compassion fatigue (Bush, 2009; Kelly, Runge, & Spencer, 2015; Lombardo & Eyre, 2011; Sabo, 2011; Wentzel & Brysiewicz, 2014). Nurse risk for CF occurs from direct contact with suffering patients over long work hours (Abendroth & Flannery, 2006; Bao & Taliaferro, 2015) and experiencing the patients' pain vicariously (Showalter, 2010). Sheppard (2015) stated CF places the nurse at risk for decreased work performance, medication errors, frequent sick days, exhibiting rudeness and sarcasm to co-workers and patients, and leaving the profession. Further, negative psychological manifestations such as a sense of burden, depletion, self-concern, and resentment are also associated with CF (Valent, 1995). Ultimately, there is a cost to caring for the nurse and the hospital. However, researchers have failed to conduct research that communicates nurse experience with CF to hospital administrators who have the power to initiate meaningful interventions (Kelly et al.2015; Sorenson, Bolick, Wright, & Hamilton, 2016). There is a need to study CF to advance CF knowledge for nurses and to create a communication pathway to hospital administration about CF reality of CF in nurses.

CF is a complex concept and is without a definitive definition nor determined interventions (Boyle, 2011; Coetzee & Klopper, 2010; Lombardo & Eyre, 2011; Sabo, 2011). Further, CF has not been clearly defined in the literature which may be related to the overlapping of symptoms with other related concepts (Coetzee & Klopper, 2010; Sorenson et al., 2016). The term *compassion fatigue* was first introduced by Joinson (1992), a nurse, to describe the emotional upheaval emergency nurses experienced in caring for traumatized and suffering patients. Since Joinson (1992) first used the term *compassion fatigue* two decades ago to describe the nurse's inability to nurture others, CF has had similar but different definitions of CF and related constructs from other healthcare disciplines.

CF as experienced by nurses has been defined as the inability to provide compassion to others (Coetzee & Klopper, 2010), a state of psychic exhaustion (Boyle, 2011), and the secondary traumatic stress (STS) from knowing and wanting to help a traumatized or suffering person (Figley, 1995). Adding to the many CF descriptions, Stamm (2010) posited CF was associated with the constructs of burnout and secondary traumatic stress. Pearlman (1999) used the term, vicarious traumatization (VT), to describe the "…process of change resulting from empathic engagement with trauma survivors" (p. 52). CF has been used interchangeably with terms such as burnout, STS, and vicarious traumatization (Figley, 1995; Sabin-Farrell & Turpin, 2003). Though the terms are used interchangeably in the literature, they may not be definitively synonymous (Sorenson et al., 2016). However, Figley (2003) noted professionals, who experience STS

in the line of duty, such as nurses, have favored the more user-friendly term *compassion fatigue*. Currently, the term *compassion fatigue* is the term more frequently used but not universally understood and remains surrounded in the ambiguity of what CF is to nurses, what specific support is needed to prevent CF in nurses, and how to communicate the experience of CF to hospital policy makers.

Problem of Study/Statement of Purpose

Nurses working in hospitals, especially those nurses with a great capacity for feeling and expressing empathy (Figley, 1995), are particularly vulnerable to CF because of the physical and emotional demands from intense empathetic relationships with suffering patients over long work hours (Bao & Taliaferro, 2015). Even though many studies regarding CF have been conducted over the last two decades, CF continues to be without a definitive definition for a common understanding and without any research supported prevention for CF or interventions to mitigate the effects of CF (Lombardo & Eyre, 2011). Meanwhile, even without a definitive meaning, there is mounting evidence that the prevalence of CF, as currently understood in nurses, is being found in widespread patient care areas (Lombardo & Eyre, 2011). The CF prevalence suggests the prevailing practice of many contemporary nurses working in hospitals contend with CF. Furthermore, CF mutually impacts nurses and hospitals.

CF places the nurse, as a key employee, at risk for decreased work performance related to medication errors, frequent sick days, exhibiting rudeness and sarcasm to co-workers and patients and leaving the profession (Sheppard, 2015). Research has not been

conducted explore the convergence of nurse expressed CF reality with hospital leadership to act and resolve the issue of CF in nurses. Challenging current approaches to understanding CF in nurses, Ledoux (2015) suggested "there is a need to clear a space and re-build the foundation of our understanding of compassion fatigue" (p. 6).

The rebuilding of the foundation of CF knowledge requires gathering knowledge from nurses who have experienced CF as local knowledge in nurse stories and perceptions. The CF stories and perceptions could reveal the realities of CF and unmet needs of nurses experiencing CF for raising CF awareness in hospital policy-makers. In the absence of the nurse's voice in CF stories and perceptions augmenting what is known about CF, it is reasonable to expect CF to continue being present in nursing and hospitals. The importance of hearing the nurse's voice in CF stories and perceptions is that the stories and perceptions become meaningful themes embedded and inseparable from the nurse's human-world relationship (Freire, 1970/2000).

Unfortunately, when a group "…does not concretely express generative thematics – is, on the contrary, suggesting a very dramatic theme: the theme of silence" which limits any insight into the situation (Freire, 1970/2000, p. 106) and marginalizes the nurse within the nursing community. Silence is defined as being compelled or reduced to not mention something (Merriam-Webster Online Dictionary, 2017). Sheppard (2015) reported nurses felt there was a stigma placed on any admissions of having CF and feared the CF label would compromise the nurse's employment, which led the nurse to leave the

unit or even the profession rather than seeking support. Fearing judgment of whether one's work is of value can trigger self-silence to prevent rejection, especially in women (London, Rattan, Downey, Romero-Canyas, & Tyson, 2012).

When work becomes overwhelming, the self-silencing response can lead to poor communication and shut down the therapeutic process with patients (Baranowsky, 2002). The problem is that this silence about the reality of CF by clinical nurses contributes to the lack of broad or deep subjective understanding of CF. Nonetheless, the cost of silence surrounding the development of CF is the lost opportunity to understand CF in more depth and to address the felt marginalization nurses with CF feel in the workplace. Embedded in nurse silence about CF reality is knowledge of what support is specifically needed in the hospital setting to prevent CF and how some nurses may have developed protective responses to prevent CF, but these efforts are not known. Clinical nurses and hospital leadership will need to work collaboratively rather than separately in resolving the issue of CF in nurses and implementing preventive policies.

Hearing the unsilenced voices of nurses with experience with CF could contribute to raising awareness of the emotional, mental, and physical exhaustion and pain from CF that negatively impacts safe patient care and workplace outcomes in hospitals as well as the well-being of the nurse (Kelly et al., 2015; Sorenson et al., 2016). As unknown local knowledge, these voiced nurse CF stories and perceptions can initiate nurse and hospital action to improve education and support needs specifically tailored around the protection against and prevention of CF in nurses from the emic view of nurses who experienced the

reality of CF (Yoder, 2010). The critical care nurse population is particularly at risk for CF because critical care patient care areas are high intensity areas from physical and emotional demands nurses experience caring for suffering and dying patients over long work hours (Bao & Taliaferro, 2015). It is the same qualities critical care nurses exemplify in providing compassionate care that places the critical care nurse and the hospital at risk for having nurses experience compassion fatigue (Todaro-Franceschi, 2013). CF has been found to be at alarming levels in critical care nurses such as 74% (N = 491) in a critical care unit and 65.9% (N = 284) in an emergency department (Hunsaker, Chen, Maughan, & Heaston, 2015; Sacco, Ciurzynski, Harvey, & Ingersoll, 2015). Unfortunately, nurses with CF become physically, emotionally, and spiritually exhausted and feeling they have nothing left to give (Showalter, 2010). The comprehensive review of the literature is presented in chapter two of this dissertation.

The purpose of this study was to explore and undo the silence of critical care nurse related to their recognition and responsiveness to CF and offer new insights from critical care nurses regarding needed action support to counterbalance the effect of CF. In addition, the purpose of this study was to have the study participants identify methods for increasing awareness of CF in nursing and nursing leadership and for taking action with the intent to formulate change in the work environment to prevent CF in fellow nurses.

Research Questions

The research questions for this study are as follows:

1. What insights do critical care nurses have for recognizing and responding to compassion fatigue?
2. What unmet support do critical care nurses feel is needed to prevent the development of compassion fatigue?
3. What actions can be identified to raise compassion fatigue awareness in other critical care nurses and nursing leadership to prevent compassion fatigue?

Rationale for Study

Although CF is known to be present in many nurses working in hospitals using survey instruments and various definitions, the resolution of CF has not been studied from the emic view of the very nurses who experience CF. Sheppard (2015) noted that among the numerous CF studies searched, no study was found using the registered nurses' own words to describe CF. Unfortunately, there have been sparingly few qualitative studies conducted on CF (Melvin, 2012; McCloskey & Taggert, 2010; Perry, Merrick, & Dalton, 2011; Sheppard, 2015; Tunnah, Jones, & Johnstone, 2012). Sabo (2011) asserted the quantitative instruments limit the explanation on how nurses perceive the nature of their work and factors related to CF. Whereas, qualitative research draws from diverse designs expanding the means to explain concepts using text and image data (Creswell, 2013). Further, complicating the CF knowledge problem is CF has no clear definition and meaning (Sorenson et al., 2016) which hinders the finding of targeted CF

interventions and coping strategies to prevent the development of CF in nurses (Bao & Talioferro, 2015; Hunsaker et al., 2015; Sorenson et al., 2016).

Understanding CF from the nurse's view of CF reality could help develop a common understanding of CF in nursing and identify needed support to help the nurse protect against and prevent CF. The critical care nurse with CF is the expert because only the individual nurse can describe what it means to experience CF and what unmet needs exist related to experiencing CF. Challenging past research approaches to understanding CF in nurses, Ledoux (2015) suggested "…there is a need to clear a space and re-build the foundation of our understanding of compassion fatigue…" (p. 6). Frontline critical care nurse stories and perceptions of CF reality and unmet needs were sought to raise awareness not only in nurses but also in nursing leaders (Kelly et al., 2015; Sorenson et al., 2016).

Compassion Fatigue and Compassionate Care

Nurses are recognized as a particularly vulnerable group to experiencing compassion fatigue (Boyle, 2011; Figley, 1995) because individuals are often drawn to nursing to provide compassion (Wentzel & Brysiewicz, 2014). Nurses encounter and witness patient pain and suffering (Showalter, 2010) and absorb some of the patient's emotional pain (McHolm, 2006; Showalter, 2010). Yet, the emotional toil of caring for the suffering patient can yield a considerable toll in nurses from developing compassion fatigue (CF). Moreover, the presence of CF impairs the nurse from providing compassionate care to patients even though nurses are mandated to provide

compassionate care in their nursing practice (American Nurses Association [ANA], 2016; International Council of Nurses [ICN], 2012). Lombardo and Eyre (2011) posited CF undermines the essence of professional nursing practice – the nurse-patient relationship – if conscious steps are not taken to protect and prevent compassion fatigue in nurses. Thus, CF threatens the nurse's capacity to fully participate in providing compassionate care with patients.

In the current competitive and financially vigilant healthcare industry, organizations are searching and investing in ways to further value and to improve the quality and safety by creating a culture of caring within relationships with patients (Hesselink, Kuis, Pijnenburg, & Wollersheim, 2013; Joseph, 2007; Whitehead, Kuper, Freeman, Grundland, & Webster, 2014). It is this relational capacity that is so implicit in health care organizations that it often goes without being noticed (Duffy, 2013). However, a standard for measuring a hospital's culture of caring does not exist (Hesselink et al., 2013). Further, compassionate care is associated with improved direct and indirect costs and outcomes within healthcare organizations (Burtson & Stichler, 2010; Schwartz Center, 2015). Factors that disrupt caring relationships with patients, such as CF, need to be thoroughly examined for what specific support nurses with CF feel is needed to provide early protection against and prevention of CF through deliberative attention.

Compassion Fatigue Presence in Critical Care Nursing

Lombardo and Eyre (2011) asserted nurses in any specialty can experience CF

whereby the nurse provides empathetic care and experience their patients' pain.

The literature has a substantial number of studies showing the presence of CF in clinical nurses within a variety of patient care settings such as oncology care, hospice care, acute care, and ambulatory care (Abendroth & Flannery, 2006; Bao, & Taliaferro, 2015; Hegney et al., 2014; Kelly et al., 2015; Potter et al., 2010; Slocum-Gori, S., Hemsworth, D, Chan, W., Carson, A., & Kazanjian, 2011). Recent studies have also shown the presence of CF in nurses working in high intensity patient care areas such as emergency care (Hunsaker et al., 2015), trauma care (Hinderer et al., 2014), critical care (Sacco et al., 2015; Elkonin & van der Vyver, 2011). However, studies of CF prevalence have a common limitation of not discovering the nurse's recognition and response to their own CF (Kelly et al., 2015).

Compassion Fatigue Impact on Nurse Health

CF in nurses is associated with many health and well-being complaints that are well documented in the literature (see Table 1). Nurses with CF become physically, emotionally, and spiritually exhausted and feeling they have nothing left to give (Showalter, 2010), which can have serious impacts on patient care and work environment in hospitals. The work environment in hospitals positions the nurse-patient relationship to be markedly different from other clinicians in that nurses have significant spatiotemporal proximity to the patient, which becomes the core connection to the larger hospital system (McGibbon, Peter, & Gallop, 2010). Temporally and spatially at the bedside, the nurse is present to the patient for extended time periods with constant vigilance and monitoring of

the patient (McGibbon et al., 2010). Thus, nurse work places the nurse at risk for CF from direct contact with suffering patients over long work hours (Abendroth & Flannery, 2006; Bao & Taliaferro, 2015). In fact, several nurse authors have asserted CF is an occupational hazard in nursing (Kelly et al., 2015; Lombardo & Eyre, 2011). Consequently, there is cost to nurse caring (Figley, 1995) and a need for nurse and nursing leadership action toward unresolved CF in nurses.

Table 1.

Compassion Fatigue Manifestations in Nurses

Physical	Emotional/Mental	Spiritual	Workplace Performance	Sources
Weariness, without energy, burnout	Lessened enthusiasm, apathetic, callousness, indifference, irritable, impaired ability to concentrate	Lack of spiritual awareness, poor judgment, disinterest in introspection	Diminished performance, accident prone, desire to quit	Coetzee & Klopper, 2010
Headaches, digestive problems, muscle tension, sleep disturbances, fatigue, cardiac symptoms of chest pain, palpitations	Mood swings, restlessness, irritability, anxiety, oversensitivity, excessive use of substances: nicotine, alcohol, illicit drugs, depression, anger and resentment, memory issues, Poor concentration	Judgment, lack of joyfulness	Avoidance or dread of working with certain patients, reduced ability to feel empathy towards patients and families, frequent sick days	Lombardo & Erye, 2011
Skip breaks and lunch, staying late, find work exhausting and equate to working 24 hours 7 days a week	Feeling powerless to help, push away from potential source of support,	Losing hope, no longer caring	Requesting a transfer, quitting hospital nursing, becoming a nurse practitioner, leaving the profession	Sheppard, 2015

Compassion Fatigue Impact on Hospitals

CF can have a broad, negative impact on nurses and hospitals related to the physical and emotional health of the nurse, the nurse's ability to care for patients, nurse work productivity, and nurse retention (Lombardo & Eyre, 2011). CF in nurses should be a concern to any healthcare organization because nurses are the largest group of healthcare providers and perform nurse work 24 hours/7 days a week within nurse-patient interactions (Duffy, 2013). Ultimately, nurse well-being is at stake as hospital nurses are at increased risk for CF because of their extended work hours of direct patient contact and witness of pain, suffering, trauma, and death or dying (Bao & Taliafero, 2015). Furthermore, Coetzee and Klopper (2010) assert, if CF is not alleviated, it can be calamitous to the nursing profession because the nurse may lose the power to recover and not regain previous levels of compassionate caring. Spiritually, nurses with CF feel a loss of their sense of self to the fear, pain, and suffering of patients in their care (Figley, 1995). Thus, the incidence of compassion fatigue in nurses is complex and has adverse effects on patients, nurses, and healthcare organizations leading to compromised patient care quality (Bao & Taliaferro, 2015) and nurse well-being. These findings give notice to nurses and nursing leadership to not overlook nurse CF as a limiting factor in the quest for quality and safe patient care within healthcare organizations.

Though CF has been shown to be present in clinical nursing, it is imperative to note that it can be prevented (Coetzee & Klopper, 2010; Figley, 1995). Coetzee and Klopper (2010), claim CF progressively develops through three stages: compassion

discomfort, compassion stress, and ultimately, compassion fatigue. Figley (1995), an early CF researcher, claimed "compassion fatigue …is the natural, predictable, treatable, and preventable unwanted consequence of working with suffering people" (p. 4). In addition, Boyle (2011) cautions the nurse's ability to provide compassionate care may become altered if conscious efforts are not made to intervene in the earliest stages. Even so, the convergence of most CF studies has focused on the final stage of the nurse's experience of CF rather than the earlier developing stages. Attention is lagging on how nurses know they are experiencing CF, what specific support nurses with CF find effective in preventing the development of CF, or what actions nurses would like other nurses and nursing policy-makers to make in protecting and preventing CF in nurses.

Compassion Fatigue Relationship with Burnout

CF and burnout have been studied together and as separate constructs. Maslach (1982), the creator of the Maslach Burnout Inventory (MBI), stated burnout is characterized by emotional exhaustion and feeling drained and used up. The MBI has been used widely to measure burnout in nurses and other professional groups (Poghosyan, Clarke, Finlayson, & Aiken, 2010). In a later writing, Maslach and Leiter (1997) further explained burnout is associated with work overload, which is increasing in tempo in contemporary work places, hurts quality, and disrupts collegial relationships (Maslach & Leiter, 1997). Sabo (2011) contended burnout might be a pre-condition for CF. Stamm (2010) posited the concepts burnout and compassion satisfaction rarely occur together, but when burnout and compassion fatigue/secondary trauma stress are present

the negative outcome is increased. Conversely, Sheppard (2015) concluded from a qualitative study that burnout is not a significant risk factor for CF. Ultimately, burnout and CF have similar manifestations of emotional exhaustion though Maslach (1982) reports when burnout begins in an individual, the individual tends to blame others for causing it. Interestingly, like CF, burnout presence in nursing is associated with perceived diminishing quality of patient care. In a large six-country cross-sectional secondary analysis, researchers found nurses with higher levels of burnout had higher ratings of fair/poor quality of care (Poghosyan et al., 2010). In addition, and probably of equal importance, is that compassion fatigue and burnout may have an indirect effect on the nurse's motivation in caring (Burtson & Stichler, 2010).

It is important to note that researchers exploring compassion fatigue in nurses frequently used the Professional Quality of Life (ProQOL) instrument, which measures not only the construct of CF as secondary traumatic stress (STS), but also burnout (Abendroth & Flannery, 2006; Elkonin & van der Vyver, 2011; Hinderer et al., 2014; Hunsaker et al., 2015; Kelly et al., 2015; Potter et al, 2010; Sacco et al., 2015; Slocum-Gori et al, 2011; Yoder, 2010). The ProQOL instrument measures positive and negative characteristics of individuals, who have experienced stressful events (ProQOL.org, 2017). The ProQOL measures three subscales that measure burnout along with the constructs of compassion satisfaction and secondary traumatic stress (Stamm, 2010). The implication is that many CF studies with nurses have used the same conceptual model for explaining CF even though CF continues without a clear definition. Thus, burnout and

CF have blurred edges of interpretation related to identifying what nurses experience and contribute to CF ambiguity. Contrary to currently recommended strategies and policies, Ledoux (2015) stated, nurses and organizations may need to create different strategies and programs for CF than those used for burnout management.

Compassion Fatigue Predictors

Compassion fatigue has been studied to isolate significant predictors. Prediction as a research approach is conducted by researchers to learn whether one variable may be predicted from knowledge of another variable (Marczyk, DeMatteo, & Festinger, 2005). The (ProQOL) instrument (Stamm, 2010) has been used in determining predictors of CF. Several CF predictors have been found in the nursing literature with some contrasting findings suggesting predicting CF is complex and, thus, CF prediction is not well understood.

Age and experience have been found to be predictors of CF. Kelly et al. (2015) studied compassion fatigue and compassion satisfaction using the ProQOL as an electronic survey to a cross-sectional hospital nurse population (N = 491) and found meaningful recognition as acknowledgement of one's work in the millennial generation (ages 21-33 years) as a predictor of their retention and compassion satisfaction, but higher CF and lower compassion satisfaction were found in nurses with more experience ($p < .10$). Similarly, a study of 71 nurses from a single-site community hospital found nurses with 10-19 years of experience had higher levels of compassion fatigue than those with less than ten years of experience (Yoder, 2010). Hunsaker et al. (2015) found

contrary CF findings in a cross-sectional study of emergency care nurses from across the United States that CF became less prevalent with increasing age and experience. However, Potter et al. (2010) studied oncology nurses and did not find significant relationships between years of general healthcare experience and CF but did find nurses with 11-20 years of oncology experience had higher CF scores than nurses with 6-10 years of oncology experience. Likewise, Hegney et al. (2014) did not find significant relationships between CF and demographic variables such as age and experience in a cross-sectional study (N = 132) of tertiary nurses. Thus, there is ambiguity to the role age and nursing experience play as predictors of CF.

Lack of nurse leadership or managerial support as a workplace characteristic has been suggested as a CF predictor. The perceived low levels of managerial support by clinical nurses were found to be a significant predictor to higher levels of compassion fatigue in nurses working in emergency care (Hunsaker et al., 2015), trauma care (Hinderer, et al., 2014), hospice care (Abendroth & Flannery, 2006), and emergency care (Hunsaker et al., 2015). Hinderer et al. (2014) found that weak coworker relationships were found with higher levels of CF. These findings suggest the development of positive and supportive working relationships with staff nurses may help mitigate CF.

The workplace characteristic of worked time has inconsistently been found to be a CF predictor. Study findings have shown nurses working shifts, or rotating shifts were found to have essentially the same level of CF risk as those nurses who did not work shifts or rotating shifts (Abendroth & Flannery, 2006). However, in a study of trauma

nurses, CF was found higher in nurses who worked increased hours per shift (Hinderer et al., 2014). High-intensity patient care is also associated with higher levels of CF among clinical nurses (Elkonin & Vyver, 2011). Also, personal characteristics such as having few hobbies and self-medicating was associated with higher levels of CF (Hinderer et al., 2014).

Summary

Compassion fatigue is a risk and can be found in up to 74% of critical care nurses, particularly nurses working in high-intensity patient care areas frequently caring for suffering patients with life threatening and witnessing patient decline in quality of life such as in critical care nurses. CF also places the nurse at risk for decreased work performance. It is important for research to be conducted to further increase knowledge surrounding CF in nurses.

Terms and Concepts

The following terms are provided with brief explanations to their use in this study.

Critical care nurse. The critical care nurse is a clinical nurse who is a registered nurse and provides care directly to patients as the primary role of employment within a critical care service unit in a hospital. Critical care nurses often care for patients with life-threatening illnesses and sudden and disfiguring health events (Sacco et al., 2015) and are exposed to intense emotional aspects and workload in patient care (Carayon & Gurses, 2005). The literature has also shown the presence of CF in critical care nurses (Elkonin & van der Vyver, 2011; Sacco et al., 2015). While nurses from a wide range of

clinical specialties experience CF, the population of interest for this study is critical care nurses. For this study, critical care nurse referred to any nurse working in one of the critical care services area.

Critical care services. The critical care unit is an intense hospital patient care area and frequently expose nurses to patients with life-threatening illnesses and life-sustaining procedures (Crowe, 2017; McMeekin, Hickman, Douglas, & Kelley, 2017) and exposure to failures to prolong a patient's life (McMeekin et al., 2017). Sorenson et al. (2016) stated the development of CF in nurses is related to the intensity of the patient setting. For this study, the critical care service units afford the researcher access to clinical nurses caring for patients in healthcare's most intense areas of patient pain and suffering within a frequent life-death environment (Carayon & Gurses, 2005; Sacco, et al., 2015). For this study, critical care service areas included critical care (intensive care), intermediate care (step-down care), and emergency care areas.

Compassion. Compassion is the acknowledgment of another's suffering from a desire towards alleviating another's suffering or pain (Webster-Merriam's Online Dictionary, 2017; Ledoux, 2015; Schantz, 2007). Ledoux added compassion is also the movement towards social justice. The term compassion is not considered interchangeable with empathy, which is related to one's vicarious participation in another's emotions without acting upon the emotions (Schantz, 2007). Even though nurses interpret compassion as an inherent and expected aspect of nursing, Sheppard (2015) found nurses

felt the loss of compassion was shameful and not something nurses would want to admit to self and others. In this

study, the term *compassion* is used interchangeably with the terms *caring* and with the term *care* as in *compassionate care*.

Compassionate care. Compassionate care has no single source nor standard (Schwartz Center, 2015; Whitehead et al., 2014). To establish a common compassionate care understanding. The leading national proponent of healthcare compassion, Schwartz Center for Compassionate Healthcare (SCCH) states:

> "Compassionate care is an important and frequently overlooked component of patient-centered care. It addresses the emotional and psychological aspects of the patient experience and the patient's innate need for human connections and relationships. At its core, it means recognizing the concerns, distress, and suffering of patients and their families and taking action to relieve them. It is based on active listening, empathy, strong communication and interpersonal skills, knowledge of the patient as a whole person including his or her context and perspectives, and the ability to work together to relieve distress." (SCCH, 2015, pp. 4).

For this study, compassionate care is the nurse response to the innate needs of patients for connection and relationship along with clinical expertise and professionalism (Lown, Rosen, & Marttila, 2011).

Compassion fatigue. There is no universally accepted definition of CF (Boyle, 2011; Coetzee & Klopper, 2010; Lombardo & Eyre, 2011). For this study, the term compassion fatigue is the emotional, physical, and mental exhaustion the nurse experiences from exposure to unavoidable workplace stressors in the scope of carrying out their duty to their patients. Though Figley (1995) claimed CF is manifested suddenly and without much warning, several nursing authors have since claimed CF is progressive (Boyle, 2011; Coetzee & Klopper, 2010; Sabo, 2011). Coetzee and Klopper (2010) claimed CF is the final stage of a progressive and cumulative process that "evolves from compassion stress after a period of unrelieved compassion discomfort, which is caused by prolonged, continuous, and intense contact with patients, the use of self, and exposure to stress. The manifestations increase in intensity with each progressive state…" (p. 239). For this study, *compassion fatigue* was approached as a progressive state of exhaustion that evolved overtime because the individual nurse cared for suffering patients over time and not as a singular event. Therefore, CF is considered having early stages to be recognized for preventive action.

Culture of silence. The culture of silence is the state of being whereby the individual and the community are unaware and unmotivated within a situation of economic, social, and political domination rather than encouraged and educated to know and to respond, "to the concrete realities of their world" (Freire, 1970/2000, p. 30). For this study, the *culture of silence* was defined as the state of feeling powerless or oppressed to address the physical and emotional exhaustion the nurse experiences from

exposure to unavoidable work place stressors in the scope of carrying out their duty to their patients. Further, Freire asserted the culture of silence is derived from the absence of dialogue with the people and "dialogue with the people is radically necessary to every authentic revolution" or awakening (p. 128). In nurses with CF, the silencing response is manifested by fear of judgment of peers or leadership or even reprisal or ridicule, not reaching out for help and hinders advanced knowing of CF reality (Elkonin & van der Vyver, 2011; Baranowsky, 2002; Gentry, Baranowsky, & Dunning, 2002).

Nursing leadership. Nursing leadership encompasses those individuals accountable within an organization for positive patient and organization outcomes through nursing practice. Nursing leadership happens within the clinical environment context (Duffy, 2013). For this study, nursing leadership includes any individual with authority to make practice changes and policy changes related to patient care such as chief nursing executive, nursing directors and managers.

Philosophical Underpinning

This study is guided by the transformative philosophical underpinnings of Paulo Freire's (1970/2000) *critical consciousness*. In as much as CF reality can be voiced through this study, what is sought is the 'authentic word' of CF from nurses. The authentic reality of CF has not been voiced enough nor presented in a way to inform nursing leadership as a serious factor deterring the quest for high-quality patient care. Moreover, the authentic word is the essence of dialogue, according to Freire because it needs to be understood in its constitutive elements which become action and reflection as

praxis. CF reality in nurses from the words of nurses as authentic words was sought in this study because CF reality cannot be described to another in a prescriptive act to resolve (Freire). Rather, Freire stated those individuals who are denied the right to speak must first reclaim the right and prevent "the continuation of this dehumanizing aggression" (p. 88) by the oppressor. For this study, the nurse with CF is considered marginalized and disempowered in the nursing community by not claiming the right to express CF reality through a silence-response and feeling powerless to change the work environment. In the context of Freire's approach to the oppressed and the oppressor for this study, nursing leadership and other hospital administrators are considered the oppressors for not seeing CF reality in nurses nor acknowledging CF as an occupational hazard requiring prevention measures. Therefore, the philosophical underpinnings of Paulo Freire's *critical consciousness* supported the need to create a dialogue among critical care nurses as active participants to critically reflect upon their CF reality and to act towards educating other nurses and nursing leadership about CF reality with the intent of transforming their work environment.

Paulo Freire: Critical Consciousness

To better understand the collective perception of nurse CF and initiate a problem-solving dialogue for CF preventive action, between nurses and hospital administration, Freire's critical consciousness is the chosen theoretical underpinning for this study. Historically, Paulo Freire, a Brazilian educator, was influenced towards his philosophy on education from his childhood experiences with poverty in the 1920s and 1930s. Freire

(1970/2000) fell behind in school related to health conditions from hunger and vowed at a very early age to dedicate his life to preventing other children from experiencing poverty and hunger. With this experience in mind, he developed his philosophy of *critical consciousness* or *conscientização* initially with a literacy project in an impoverished and neglected area of Brazil (Breda, 2015a; Shaull, 2000). Freire (1970/2000) defined critical consciousness as "learning to perceive social, political, and economic contradictions, and to take action against the oppressive elements of reality" (p. 35).

Principle concepts of Freire are dialogue, praxis, the oppressor-oppressed dynamic, emancipation, and culture circles (Heidemann & Almeida, 2011). Freire (1970/2000) took the position that the oppressed individual's self-perception is submerged in the concrete existential situation that shaped the perception.
Freire sought to confront a problematic situation by engaging directly with individuals struggling with the situation to liberate the individuals and create a new world. Freire engaged directly with individuals because he felt every human being "no matter how ignorant or submerged in the culture of silence he or she may be, is capable of looking critically at the world in a dialogical encounter with others" (p. 32) and win the right to say 'their' word or name their world. Likewise, in nursing, CF reality is submerged in the nurse's concrete existential world with the silence response about CF, but is capable of voicing in 'authentic' words that describe their CF world for others to more accurately understand CF.

Freire (1970/2000) stated the moment the individual moves from being naïve in

a situation to being aware of its objective reality, the individual enters critical consciousness. However, Freire claimed during the initial stage of gaining awareness the oppressed tend to become oppressors because their thought process has been shaped by the oppressor. Of course, much of the impetus for Freire's language is from his work with the poor farmers and the education system in early 20th century Brazil and the concept of prescription was used in loosening the power the oppressors (government/landowners/ teachers) had over the oppressed (poor, uneducated farmers/students). The relationship between the oppressor and the oppressed involves a prescription of the "imposition of one individual's choice upon another, transforming the consciousness of the person prescribed to one that conforms with the prescriber's consciousness" (Freire, 1970/2000 p. 47). However, for true transformation to occur, the oppressor (nursing leadership) must encounter the oppressed (critical care nurses) with courage and with solidarity (Freire, 1970/2000).

In this study, advanced knowledge was sought from critical care nurses about their CF experience through discussion and reflection (Heidemann & Almeida, 2011). In this study Freire's (1970/2000) philosophy of critical consciousness guides the exploration of local knowledge deeply held by critical care nurses on how they come to be aware and respond to CF through praxis. Praxis is the interaction between action and reflection creating a transformative environment (Alvarez, 2001). As conscious beings, creative imagination exists and is exercised through praxis as a reflection form (Crotty, 2010). Crotty (2010) posited Freire approached praxis as reflection and action that cannot

be separated and must take place at the same time and with fellowship. Furthermore, Freire asserted praxis encourages the forthcoming of the authentic word, needed from participants because the unauthentic word is unable to transform reality. In fact, Freire posits dialogue alone is not capable of transforming an environment; rather, an action is needed.

Summary

Sometimes the literature written about nurses emphasizes the nurse as the dispenser of the process of care rather than the nurse caring for another by understanding the suffering of another (Tschudin, 2003). Within the process of care, critical care nurses provide patient care in an intense work environment that frequently exposes nurses to patients with life-threatening illnesses and life-sustaining procedures (Crowe, 2017; McMeekin, Hickman, Douglas, & Kelley, 2017). Nurses frequently perceive the death of a patient as failure to prolong a patient's life (McMeekin et al., 2017). Also, the intense critical care work conditions are constant and unavoidable, yet, if CF is present, the critical care work conditions become hazardous to nurse health and work performance within the hospital organization. Although healthcare organizations, such as hospitals, are dealing with the increasingly publicized and measured quality outcomes (Burtson & Stichler, 2011), neither nursing leadership nor nurses themselves have acknowledged CF as an occupational hazard requiring prevention measures for nurses.

In the current healthcare environment, compassion fatigue is a serious experience

for many critical care nurses in providing direct patient care. Compassion fatigue, the emotional, physical, and mental exhaustion the nurse experiences from exposure to unavoidable work place stressors in the scope of carrying out their duty to their patients can have negative consequences to quality and safe patient care. Unfortunately, CF in nurses carries a cost that can go unnoticed related to nurse silence on experiencing CF. Research on CF in nursing practice to date has provided evidence that is neither clear nor consistent and needs further investigation. Conceptually CF is built on a fragile foundation of understanding (Ledoux, 2015). Local knowledge from critical care nurse voices is needed to reveal significant insight related to nurse recognition and response to CF in practice. The prevention and mitigation of CF will allow the nurse to more fully participate in the nurse-patient encounters and fulfill the full scope of practice expectations of the nurse profession and health organizations.

Based on the purpose of this study, Photovoice as Participatory Action Research (PAR) was chosen as the methodology. PAR allowed the researcher to approach an issue of concern with the intent to empower and transform the participants' lives (Kendrick, 2015) and has had an increase in popularity in recent years within the social sciences, including nursing (Breda, 2015a). In Photovoice, participants are acknowledged as having deep understandings of their life-worlds and can interpret their life events within the research process to formulate changes (Stringer & Genat, 2004). Photovoice was conducted to enhance the emic view by positioning participants to be recorders of

their CF experience reality and to be potential catalysts for change (Wang & Burris, 1997). Participants were engaged in reflective discourse and furnish visual photographic CF evidence with written descriptions (Wang & Burris, 1997). A synthesis comparison of Freire's philosophical framework and Photovoice is illustrated in Table 2. Further, no study of CF in nurses was found using Photovoice, which offers a different pathway of illuminating new knowledge and guiding the transformation of practice and policies regarding CF in nursing.

Table 2

Synthesized Comparison of Study Frameworks used as Guides

	Philosophical Underpinnings Guiding Study Framework	**Methodology for Study & Interpretive Findings**
	Critical Consciousness *(Paulo Freire, 1970/2000)*	**Photovoice as Participatory Action Research** *(Breda, 2015; Wang & Burris, 1997; Plunkett, Leipert, & Ray, 2013)*
Epistemology	Knowledge is gained through action and reflection cycle (praxis) with marginalized or underrepresented participants	Knowledge is socially constructed by the participants as local knowledge and collaboratively interpreted with the researcher from multiple data sources, including photographs.
Goals	To uncover real problems and actual needs for new knowledge to be created.	To enable people to describe their perceived needs in everyday life and become advocates for their own and their community's well-being
	To identify aspects around real situations and real people who reflect critically.	To identify a community's strengths and concerns through dialogue and the robust form of communication-the visual image.
	To achieve praxis: the reflection and action upon the world (work environment of nurses) to transform it.	To foster critical dialogue in small and large groups for building the capacity for action.
	To link knowledge to actions with intent to change at a local level and beyond.	To frame the problem to reach policy-makers for meaningful and transformative social change.

CHAPTER II

INTEGRATIVE REVIEW OF WORK ENVIRONMENT FACTORS IN CRITICAL CARE NURSE COMPASSION FATIGUE

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Karen C. Vessier, MS, MEd.; and Becky S. Spencer, PhD

Abstract

Aim
To provide a synthesis of work environment factors affecting critical care nurse compassion fatigue.

Background
The critical care service areas of hospitals are increasingly a major portion of the overall patient service provided by hospitals. Critical care hospital units need competent nurses at adequate staffing levels. Nurses in critical care service areas are frequently subjected to substantial and repeated physical and emotional situations as occupational stress experiences that can compromise the nurse and the patient and result in compassion fatigue. Compassion fatigue is associated with increased absence and turn-over. A greater understanding of work environment factors that are associated with compassion fatigue in critical care service areas of hospitals could lead to changes in the work environment that could reduce the incidence of compassion fatigue.

Design
Integrative literature review.

Method
The search of electronic data bases (1992-2018) of CINAHL, ProQuest and PubMed generated 21 articles with design rigor and substantial subject relevancy: 17 quantitative, 2 qualitative, and 2 mixed-methods. Quality of studies was appraised using a point appraisal score. Data extraction, coding and theme development was conducted using an iterative analysis approach allowing conceptualization of themes to emerge.

Results
Data analysis identified two emerged themes regarding work environment factors to compassion fatigue experienced by critical care nurses: work design and work climate.

Conclusions
Studies on compassion fatigue and critical care nursing reveal work environment factors investigation to improve care delivery suggest a developing awareness of the need to recognize the serious negative emotional, mental, and physical manifestations associated with compassion fatigue in nurses. Lack of any comprehensive work environment management approach indicates need for future research.

Keywords
compassion fatigue, mental fatigue, compassion, empathy, occupational stress, burnout, critical care, intensive care, emergency care

INTRODUCTION

In recent years, critical care (intensive care) services have emerged as an important sector of care delivery in the United States. More than 500,000 nurses work in intensive care units in the United States (Altaker, Howie-Esquivel, & Cataldo, 2018; Carayon & Gurses, 2005). Consequently, with the rise of the critical care service sector, the nurse work environment has come under increasing scrutiny regarding patient, nurse, and organization outcomes. Even the American Association of Critical Care Nurses (n.d.), the largest nurse specialty organization, has recognized the need to address the work environment for nurses to optimally contribute to quality and safe patient care and has set Healthy Work Environment Standards. Within the high-pressure work environment, critical care nurses' work environment has declined in its overall health since 2008 along with the nurses' perceptions of quality care (Ulrich, Lavendero, Woods, Early, 2014).

The critical care work environment is impacted by the national shortage of nurses and the increasing nurse turnover rates because nurse turnover diminishes nurse work productivity, staff morale and quality of care (Mealer, Jones, & Meek, 2017a). An area of developing quality and safety patient care concerns related to nurse shortage and turnover, as well as work place issues, is the presence of compassion fatigue as a state of being in nurses working in critical care service areas of hospitals. Compassion fatigue is frequently defined or explained as the emotional, mental, and physical exhaustion nurses can experience from providing care to suffering patients (Abendroth, 2011; Boyle, 2011; Coetzee & Klopper, 2010) and compromises the nurse capacity to provide compassionate care through the nurture and care of patients (Hinder et al., 2014). Nurses and nursing leadership are frequently not well versed in protecting nurses from experiencing compassion fatigue (Todaro-Franceschi, 2013). The importance of revealing work environment factors contributing to nurse compassion is paramount to sustaining the much needed competent and well-staffed nurse workforce in the growing critical care service sector.

Background

Nursing studies have well documented the presence of compassion fatigue in critical care nurses. Research using the Professional Quality of Life (ProQOL) instrument (Stamm, 2002), which measures the subscales of compassion satisfaction, burnout, and secondary traumatic stress (compassion fatigue), has revealed compassion fatigue at concerning levels in critical care service area nurses. These areas include critical care

nursing (Elkonin & van der Vyver, 2011; Kelly & Lefton, 2017; Kelly & Todd, 2017; Mooney et al., 2017; Sacco, Ciurzynski, Harvey, & Ingersoll, 2015); trauma care nursing (Berg, Harshbarger, Ahlers-Schmidt, & Lippoldt, 2016; Hinderer et al., 2014; Kim, 2013); and emergency care nursing (Hunsaker, Chen, Maughan, & Heaston, 2015).

Though compassion fatigue can impact nurses in any specialty (Lombardo & Eyre, 2011), the nature of providing critical care particularly places the nurse to be vulnerable to compassion fatigue from caring for suffering patients with life-threatening conditions for prolonged periods of time requiring vigilant attentiveness. Unfortunately, in as much as the qualities critical care nurses embody to provide compassionate care, they are also the same qualities that places the nurse at risk for compassion fatigue (Todaro-Franceschi, 2013). The manifestations of compassion fatigue compromise the nurse's capacity to nurture and care for patients. Common manifestations of CF include signs of depression, overworking, substance abuse, calling in sick more often, numbness, apathy, sleep disturbances, difficulty focusing and even cardiac symptoms (Todaro-Franceschi, 2013). Compassion fatigue is often associated with burnout (Boyle, 2011; Stamm, 2002), which is a type of job stress and is defined as the emotional exhaustion in doing intensive 'people work' for extended periods of time from which people find it hard to recover (Maslach & Leiter, 1997; Maslach, 1982). Besides compassion fatigue and burnout, other terms have been used in the nursing literature to describe exhaustion from doing 'people work' including moral distress, job strain, mental quality of life, post-traumatic stress disorder, and occupational stress. Compassion fatigue is being

recognized as an occupational stress or occupational hazard in nursing (Sabo, 2011; Sanchez, Valdez, & Johnson, 2014). In this literature review multiple related compassion fatigue terms were searched to comprehensively capture studies focused on work environment contributing to emotional, mental, and physical exhaustion.

The relationship between the nurse work environment characteristics or factors and compassion fatigue is not well understood and has resulted in a lack of effective and targeted interventions (Kelly & Todd, 2017). Sacco, Ciurzynski, Harvey, and Ingersoll (2015) contend the goal of any intervention to reduce the occurrence of compassion fatigue is to modify the associated factors, especially factors the nurse can influence. The problem is the understanding of work environment factors related to critical care nurse compassion fatigue has been approached towards single or few factors rather than a more comprehensive approach for strategic management of compassion fatigue. For example, the patient's clinical condition has been used to determine the critical care nurse's workload rather than concentrating on the critical care work characteristics (Gurses, Carayon, & Wall, 2009). Therefore, the importance of revealing work environment factors contributing to nurse compassion fatigue for development of a more comprehensive and effective strategic management of CF in critical care service areas is paramount to sustaining the much needed competent and well-staffed nurse workforce in the growing critical care service sector.

THE REVIEW

Aim

The aim of this integrative literature review is to present a review of work environment factors impacting nurse compassion fatigue in the critical care service areas of hospitals. For this integrative review, the authors placed emphasis on studies with aspects of critical care nurse work-life with compassion fatigue and used the term *compassion fatigue* as a literary absorption of the many terms in nursing literature used to describe critical care nurse emotional, mental, and physical exhaustion. Answers to the following questions were sought:

- What is the state of knowledge development of nurse work environment factors in critical care practice areas regarding compassion fatigue?
- What are nurse work implications for future critical care service strategy management of compassion fatigue in hospitals?

Design

An integrative literature review strategy was used to evaluate, analyze, and synthesize data because it allows a narrative integration of findings from diverse research methodology (Whittemore & Knafl, 2005). Data collection and extraction from quantitative and qualitative research as primary source studies were guided by the Whittemore and Knafl methodology for integrative reviews. The integrative review was conducted using the Whittemore and Knafl five-stage framework to enhance methodological rigor: (1) problem identification; (2) literature search; (3) data evaluation;

(4) data analysis; and (5) presentation. A thematic analysis was conducted on the extracted data involving an iterative process resulting in analytic themes. The themes are presented in a narrative presentation form.

Search Method

To obtain primary source articles about work environment factors of compassion fatigue in critical care nurses, three electronic databases were searched: CINAHL, ProQuest, and PubMed. Key search terms included the following in various combinations using the Boolean operator 'and': compassion fatigue, mental fatigue, compassion, empathy, occupational stress, critical care, intensive care, emergency care. Article inclusion in the review included the following criteria: (1) were published between 1992 and 2018; (2) focused on compassion fatigue (or related term) in nurses working in critical care service areas; (3) were peer-reviewed; (4) were quantitative or qualitative studies; and (5) were published in English. Literature was searched in publications spanning between 1992 and 2018, because the term compassion fatigue was introduced in 1992 by a nurse who used the term to describe emotional and physical exhaustion emergency care nurses were exhibiting in providing intense care to patients (Joinson). Articles were reviewed for inclusion appropriateness with close attention given to any related terms to compassion fatigue in relation to nurse exhaustion in critical care. Terms used to identify work environment factors specific to critical care nurses experiencing emotional, mental, and physical exhaustion were compassion fatigue, burnout, post-traumatic stress syndrome, resilience, quality of life, stress, occupational stress, mental

quality of life, and moral distress. These related terms were highlighted in the article summary for transparency (see Table 1).

Search Outcome

The initial search yielded 515 potential articles. To narrow the results, duplicates, non-research articles, and theoretical articles were removed to yield 92 potential primary source research articles. Though integrative reviews are the broadest type of research review with the inclusion of experimental and non-experimental research as well as theoretical literature to better understand a phenomenon of concern (Whittemore & Knafl, 2005), this review does not include non-research or theoretical literature. Only published primary research studies were reviewed because empirically studied findings of work environment factors associated with compassion fatigue were sought for use in developing strategies to ameliorate compassion fatigue in nurses.

From the 92 articles, delimitation of 70 articles occurred through screening their titles and abstracts for work environment factors in critical care units describing exhaustion in nurses using inclusion criteria. The remaining 22 articles were selected and assessed using a quality appraisal. Three of the 22 articles were excluded because the authors used emergency care in a broader term for the hospital rather than specialized units as done in Western countries or were primarily focused on physicians rather than nurses and received a ‘0’ quality appraisal score resulting in 19 selected studies. In addition, the reference lists of the 19 studies were reviewed for any additional articles, resulting in 2 additional primary source articles for a total of 21 articles selected and

reviewed for this integrative literature review (see Figure 1). The literature search result included 17 quantitative studies, 2 qualitative studies and 2 mixed method studies.

Quality Appraisal

The quality of each of the primary source articles was assessed using the authors' developed criteria guided by the Whittemore and Knafl (2005) framework for integrative research reviews (see Figure 2). Whittemore and Knafl expressed evaluation of research reviews had no standardized quality appraisal. Even so, it is important to create a quality appraisal with clarity and exercised with consistency in application. For this integrative review, data evaluation was created of a 3-point scale (*2 = high, 1 = moderate, 0 = low*) which serve as a quality criterion of the author's judgement of the rigor and relevance of the selected articles.

Data Abstraction

The final selected primary source articles were summarized in a tabular format to include the author(s), date of publication, research design with setting, sample size with critical care service area, relevant work environment factors reported with the compassion fatigue concept of interest identified, and the quality appraisal score (see Table 1). Caution was given to data extracted from articles with an appraisal score of '1' because some of the derived data may have been from the samples with multiple care providers (physicians or nurse aides) or deemed having less design rigor and contributed less to the analysis. The primary author extracted the data and it was reviewed and modified by the second author.

Synthesis

In integrative review studies, the goal is to provide a thorough and unbiased interpretation and an innovative synthesis of the evidence from the selected articles through analytical honesty of the researcher (Whittemore & Knafl, 2005). To this end, a constant comparison method was applied which allowed the researcher to see the extracted data in a new way. Constant comparison is a data analysis process of continually comparing the collected information to the emerging subgroups (Creswell, 2013). Using constant comparison, the initial extraction of work-life factors from articles was reduced to subgroups. As more and more data were processed into subgroups, the articulation and integration of codes gradually became saturated leading to the emergence of two well defined themes. This final step for organization of the literature synthesis led to an integrated summation of the topic of interest (Whittemore & Knafl).

RESULTS

State of Knowledge of Work Environment Factors in Critical Care Nurse Compassion Fatigue

The integrated literature review synthesis resulted in the identification of two emerged themes associated with work environment factors affecting nurse emotional, mental, and physical exhaustion in critical care services: work design and work climate factors.

Theme #1 - Work design factors

Consideration must be given to not only the physical work environment but also the work design. Workload assignments, redeployment (floating), shift scheduling, single versus multiple patient acuity diagnoses units, adequate staffing, and inadequate rest periods between shifts contributed to nurse stress and fatigue and can be related to nurse perceptions of lower quality and safe patient care. Bellagamba, Gionta, Senergue, Beque, and Lehucher-Michel (2015) found job strain was present in over eighty percent of critical care and emergency care participants (n = 145). The participants were in multiple caregiver roles (practitioners, nurses, nurse-assistants, and paramedics) and worked more than two weekends per month or were regularly on-call. Job strain was also attributed to inadequate rest periods between shifts while flexible schedule and overtime seemed to not influence job strain (Bellagamba, et al., 2015). The ongoing issue of lack of adequate staffing was frequently discussed in the reviewed articles as contributing to experiencing fatigue symptoms from critical care and emergency care work (Bellagamba et al., 2015; Donnely, 2014; Sacco et al., 2015). Similarly, Gurses et al. (2009) surveyed 265 intensive care nurses in 17 intensive care units on the impact of performance obstacles on the nurses' workload and found that forty percent of the variability in workload came from the work system characteristics and not patient acuity.

Using the Perceived Quality and Safety of Care instrument, Gurses et al. (2009) also found lower perceptions of quality and safe patient care and higher perceptions of stress and fatigue were present when the critical care nurse's workload increased.

Unfortunately, the workload of intensive care nurses related to nurse to patient ratios has been studied mostly based on the patient's clinical condition, or acuity, rather than the characteristics of the work system (Gurses, et al., 2009). Workload as the nurse's subjective experience of task and demands imposed on them by obstacles in the work system was found to be a work design factor in critical care (Gurses et al., 2009). Gurses et al. (2009) stated that because increases in nurse workload negatively affect perceptions of quality and safety of care, there is need to redesign the critical care work system and measure nurse workload differently.

The distribution of critical care-type patients can impact the nurse's experience of burnout. Sacco et al. (2015) investigated compassion fatigue, burnout, and compassion satisfaction in 221 critical care nurses and found a significant difference in compassion fatigue and burnout between single-acuity diagnosis units (intensive care patients only) and mixed-acuity diagnoses units (intensive care patients, progressive care patients, and general care patients in the same unit). Compassion fatigue was found to be lower in nurses from single-acuity diagnosis units (81%) than nurses from mixed-acuity diagnosis units (61%). Likewise, Sacco et al. reported burnout was lower in single-acuity diagnosis units (64%) than nurses from mixed-acuity diagnosis units (42%). In Ireland, Donnely (2014) studied work-related stress comparing critical care and non-critical care nurses in a single-site setting and found redeployment (floating) to work in other areas as the highest perceived stressor. Metzler and Huckabay (2004) found nurses who worked consistently in units with the same patient population with similar acuity had lower

scores of depersonalization subscale in the Moral Distress Scale (MDS) than nurses who rotated units and cared for varied patient populations (t = -3.114, p=.004). Mealer et al. (2017a) found mixed medical intensive care units and surgical intensive care scored lowest on control of nursing practice in a sample of 698 ICU nurses from eight Magnet hospitals. Mooney et al. (2017) suggested the work environment contributed to the nurse experience of burnout. Mooney et al. (2017) used the ProQOL instrument to compare compassion satisfaction, burnout, and compassion fatigue between critical care nurses and oncology nurses and found critical care nurses had significantly lower levels of compassion satisfaction and higher levels of burnout than the oncology nurses though both care for suffering patients. Also using the ProQOL, Hunsaker et al. (2015) studied compassion satisfaction, burnout and compassion fatigue in emergency care nurses and found nurses who worked 8-10-hour shifts had higher levels of compassion satisfaction and lower levels of burnout than nurses who worked 12-hour shifts.

Having effective nurse leadership and unit management practices is also necessary for establishing a work environment that reduces compassion fatigue manifestations. Managing a work environment that includes regular staff meetings and minimal changes in leadership can positively impact the nurse work environment. Bellagamba et al. (2015) reported that a lack of regular staff meetings had a strong relationship with job strain. Also, any change in nursing leadership in the preceding year or major system or practice change in the preceding year was related to higher levels of burnout reported by nurses (Sacco et al., 2015). Hunsaker et al. (2015) reported that

emergency care nurses (n = 278) had higher levels of compassion satisfaction and lower levels of compassion fatigue and burnout (using the ProQOL instrument) when they perceived that they received support from the manager. Kelly and Todd (2017) reported lower burnout and higher compassion satisfaction were found with nurse increased perception of authentic leadership measured by the Healthy Work Environment Assessment and ProQOL instruments. In a qualitative study, Moola, Ehlers, Hattingh (2008) found that the lack of support from management and colleagues was a stress-related factor in critical care nurses' perceptions of stress. Verdon, Merlani, Perneger, and Ricou (2008) studied burnout in surgical critical care nurses (n = 97) and found 28% reported high levels of burnout. Nurse concerns including lack of patient co-operation, organization of the service, and rapid patient turnover were significant independent factors contributing to high levels of burnout measured by the Maslach Burnout Inventory (MBI).

Other periphery aspects of nurse work environment such as disorganized supplies area, delay in getting medications from pharmacy, equipment-related issues, poor work space design, and poorly stocked patient rooms also were found to contribute to diminished quality of work life for nurses (Gurses et al., 2009). Mealer et al. (2017b) found that poorly stocked supply carts were associated with burnout in critical care nurses. Mealer et al. also found that the constant noise of alarms and monitors triggered PTSD symptoms in critical care nurses. Work design factors contribute to nurse emotional, mental, and physical state of being in critical care services.

Theme #2 - Work climate factors

Consideration must be given to factors that disturb or contribute to a negative work climate that impact cooperative work relationships in critical care service areas and contribute to nurse exhaustion. Factors of the work climate and perceptions of discord between peer workers and dealing with patient's family members were related or contributed to the experience of emotional and physical exhaustion. Mealer et al. (2017b) found increased burnout levels in critical care nurses related to coworker apathy and family demands, feeling administration was disconnected with bedside nursing issues, pettiness, coworker arguments, and an environment not conducive to learning. Dominguez-Gomez and Rutledge (2009) studied secondary traumatic stress in 67 emergency care nurses and found 54% of nurses reported irritability (arousal symptoms), 52% reported avoidance of patients (avoidance symptoms), 46% reported intrusive thoughts about patients (intrusive symptoms) from the Secondary Traumatic Stress Survey (STSS). Dominguez and Rutledge also reported that 85% of the 67 emergency care nurses indicated experiencing at least one of the symptoms in the last week. Kelly and Lefton (2017) surveyed 726 critical care nurses online and found secondary traumatic stress was decreased in nurses with job satisfaction and job enjoyment and decreased with job stress. Increased burnout was predicted by increased job stress (1.53, $p < .001$) and decreased with meaningful recognition (-0.61, $p < .03$) as measured by the ProQOL scale (Kelly & Lefton). Bellagamba et al. (2015) studied job strain and mental quality of life in emergency and critical care practitioners, nurses, nursing aides and paramedics (*n*

= 375) with nurses comprising 53.1% of the sample. Respondents reported that weak inter-staff communication was related to low mental quality of life and over 70% of the nurses thought their workspace was a dysfunctional work environment (Bellagamba et al., 2015).

de Cassia Fogaca et al. (2010) studied nurses in pediatric and neonatal critical care units using the Effort-Reward Imbalance Questionnaire (ERI) to evaluate if there were differences between effort (work demands and individual motivations in the face of demands) and reward (self-esteem, self-efficacy, and social opportunity). de Cassia Fogaca et al. reported pediatric intensive care nurses had higher effort (8.70) than neonatal intensive care nurses (7) with no statistically significant differences ($p = 0.12$) and pediatric intensive care nurses had higher reward (14.30) compared to neonatal intensive care nurses (13.20) with no statistically significant differences ($p = 0.23$). de Cassia Fogaca et al. suggested the tasks of nurses in pediatric and neonatal intensive care units should be studied for unit differences related effort and reward to analyze work environments.

Dealing with many family-related issues such as phone calls to nurses from patient family and family demands were also found to contribute to feelings of exhaustion (Bellagamba et al., 2015; Mealer et al., 2017b). Metzler and Huckabay (2004) found that critical care nurses who experienced moral distress associated with futile care (care that has no reasonable hope of cure or benefit) in patients with a terminal health condition had a direct and significant relationship with experiencing emotional

exhaustion ($r = 0.317$, $p = .05$). Another work climate factor is the care of the critical care nurse after patient deaths. Mealer et al. (2017b) found the lack of debriefing resulted in guilt associated with perceived delivery of bad patient care after patient deaths contributed to PTSD symptoms. Metzler and Huckabay (2004) suggested the frequency of perceived feelings of moral distress from futile or nonbeneficial patient care led to burnout in critical care nurses from the care conflicting with the nurse's values. Lee et al. (2015) suggested nurse resilience could be optimized by the nurse taking a break from stressful patients and relieving the nurse of duty after their patient's death.

In a qualitative study with trauma nurses, Berg, Harshbarger, Ahlers-Schmidt, and Lippoldt (2016) found staff were aware of available coping resources but felt uncomfortable or unwilling to participate in the coping resources. Metzler and Huckabay (2004) suggested that hospital administration could provide resources to critical care nurses for working through ethical dilemmas such as interdisciplinary group discussions, accessibility to ethics committees, and encouraging critical care nurse involvement in writing futile care policy and guidelines, which provide guidance for decision making regarding continuation of care in patients with terminal medical conditions. Metzler and Huckabay (2004) also suggested that hospitals should provide access to a counselor at the unit level to process emotions related to work stress and patient suffering. Berg et al. (2016) suggested nurses might not be managing work stressors as they might perceive, and that low use of coping resources should be of concern to hospital leadership. Verdon et al. (2008) studied burnout in surgical critical care nurses and found 91% of surgical

critical care nurses (n = 93) reported some difficulty expressing their feelings or expectations to colleagues because of fear of conflict, being in a bad work atmosphere, and fear of being judged.

One area of moral distress concern is the critical care nurse integrating with palliative care teams with the dying patient. Altaker, Howie-Esquivel, and Cataldo (2018) reported nurses with access to the supporting role of a full palliative care team had higher levels of moral distress than nurses who did not have access to a full palliative care team. Altaker et al. (2018) suggested the presence of insufficient team integration might result in the lack of collaboration between the palliative team and the nurse, which can invoke conflict. Altaker et al. (2018) also suggested the existence of a palliative care team increases the care expectations of the dying patient and when the team is not accessible, the nurse may not be able to meet the palliative care level expectations resulting in moral distress in the nurse.

Other factors noted in this integrative literature review that contribute to the work climate related to emotional, mental and physical exhaustion of critical care nurses were nurse age and personality traits. Study findings indicate that age of the nurse is related to how compassion fatigue is manifested. Sacco et al. (2015) found nurses 50 years old or older scored higher on compassion satisfaction and lower on burnout and secondary traumatic stress than younger nurses. Likewise, Metzler and Huckabay (2004) found nurses 46-60 years old had lower depersonalization scores from the Moral Distress Scale (MDS) than nurses 18-30 years old. Gurses et al. (2009) also found that nurses aged

greater than 60 years of age had perceived lower work-related fatigue and stress. Mooney et al. (2017) found compassion fatigue levels decreased with increasing age and years of experience from the ProQOL instrument. Yet, Donnely (2014) did not find age had any influence over perceived stress. Bellagamba et al. (2015) suggested older nurses may be better suited for working conditions in critical care and emergency care areas because of developed coping skills over time in practice.

Cho and Kang (2017) suggested certain personality traits can contribute to compassion fatigue-like symptoms. Cho and Kang studied personality characteristics of critical care nurses using Type D scale-14 instrument (DS14 in the Korean version). Nurses with Type D personality reported increased PTSD symptoms ($r = .58$, $p < .001$) than nurses without Type D personality. Persons with Type D personality have a negative affectivity and show social isolation (Cho & Kang). Nurses with higher resilience as measured by the Conner-Davidson Resilience scale had lower reported PTSD symptoms (Cho & Kang; Mealer et al., 2017a). Moola et al. (2008) reported participants indicated personality types in critical care influence nurse reactions and coping with stressful events.

DISCUSSION

Critical care nurses are tasked and held accountable for providing quality and safe care to their patients (American Association of Critical Care Nurses, n. d.). Work environment factors such as work design and work climate contribute to nurses' experiences of emotional, mental, and physical exhaustion as compassion fatigue and

related constructs including burnout, secondary traumatic stress, moral distress, post-traumatic stress. Among the studies, the authors noted a wide variation regarding the definitions and measures of nurse emotional, mental, and physical exhaustion experiences. Therefore, the full impact of compassion fatigue from work environment factors may not have been fully captured because of the lack of consistency of definitions and measurement instruments. Captured in this integrative literature review, however, was the complexity of work environment issues challenging work performance of nurses in critical care areas of practice. Taken together, the evidence suggests that compassion fatigue as perceived by nurses is an important construct relative to work capacity in critical care nurses and needs to be studied more beyond nurse self-care to resolve compassion fatigue.

This integrative literature review revealed a gap that can be described as a lack of a systems or work environment modifications approach being studied to address compassion fatigue. Coetzee and Laschinger (2017) presented a salient point in their recent study on compassion fatigue in that most resources available to the nurse to resolve compassion fatigue have related to the individual level (personal and energy resources) rather than the nurse's practice environment (object resources). In this line of thought, a nurse's self-care can be considered at the individual level resource and the nurse's practice environment as an external resource which can be addressed by policies developed in the healthcare facility (Coetzee & Laschinger, 2017). For example, of the 21 studies in this integrative review most were descriptive cross-sectional and only two

addressed interventional practice resources for critical care nurses. Steinberg, Klatt, and Duchemin (2017) studied a work design intervention of the effect of a mindfulness-based intervention on work engagement, burnout, and compassion fatigue as measured by the Maslach Burnout Inventory and Professional Quality of Life scale (ProQOL), and levels of biological markers of stress. Steinberg et al. found that emotional exhaustion and burnout scores were negatively related to dedication (r = -0.50, 95% CI, -0.66 to -0.29, p <.001) and to emotional exhaustion subscale for burnout (r = -0.62, 95% CI, -0.75 to -0.44, p < .001). Quenot et al. (2012) studied a work climate intervention of the effect of a communication strategy based on results of caregiver interviews to identify burnout symptoms related to end-of-life practices to improve communication among caregivers, patients and families. Quenot et al. found that an implementation of an end-of-life communication strategy in critical care was associated with a decrease in relative risk of severe burnout by 50% as measured by the (MBI) and depression by 60% as measured by the Centre for Epidemiologic Studies Depression Scale (CES-D).

A serious drawback with addressing compassion fatigue through research focused only at the individual level (self-care) is that this approach is neglecting a major element in the nurse's work life – the practice environment. Nursing and hospital leadership must be active partners in acknowledging and ameliorating the work environment to relieve nurses of common sources of emotional, mental, and physical exhaustion that lead to symptoms of compassion fatigue in critical care nurses. In addition, implementing any program to address work environment factors related to compassion fatigue requires

nurses and nurse leaders to acknowledge and accept that compassion fatigue exists and is a reality for many nurses in critical care areas (Berg et al., 2016). Within the context of critical care nurse compassion fatigue experiences, nurse leaders need to incorporate a strategic management process that is broader in scope to curtail compassion fatigue.

Future research is much needed around work environment issues related to CF in nurses, particularly qualitative research because very few qualitative studies have been conducted exploring how the work environment impacts nurses' experiences of CF both inside and outside the workplace. No studies were identified that addressed how CF impacts nurses' personal relationships or activity engagement outside of work. Quantitative studies explored in this literature review document a strong relationship between CF and work environment factors. A qualitative study would give voice to nurses who experience CF and give insight into the role of work environment factors with CF. Interventions aimed at preventing and addressing CF should be developed using insights and experiences of nurses who know the impact of CF both personally and professionally. The relative dearth of qualitative research reveals a gap in the literature of understanding how nurses experience CF and how they are affected both personally and professionally.

Critical care service nurses who experience CF are a vulnerable population because the work environment factors related to CF are in escapable and out of their control or power to change. Participatory action research (PAR) is a qualitative methodology that could be used to elevate the voices of nurses who experience CF. The

goal of PAR is to elevate participants' experiences as holders of local knowledge to leaders and policy makers who can effect change. (Breda, 2015). PAR researchers engage a group of people in their local environments who are marginalized or disempowered in some way (Breda, 2015; Stringer & Genat, 2004). Research regarding CF through PAR could help bring critical care nurses and nurse leadership in hospitals together to develop effective interventions designed to ameliorate work environment factors that contribute to CF in critical care nurses as well as nurses in other specialties.

CONCLUSION

The findings in this integrated review of work environment factors affecting critical care nurse compassion fatigue echoes previous studies examining compassion fatigue and related constructs such as burnout, secondary traumatic stress, moral distress, PTSD, but also identified new information regarding the lack of research directed towards work environment factors impacting compassion fatigue. Most of the problematic work environment factors identified in this literature review cannot be controlled or changed by the practicing nurse. Based on the synthesis of this integrated review, the results suggest there is merit in addressing nurse compassion fatigue and work environment factors through further examining work design and work climate on a broader scale rather than focusing on a single work environment factor. Findings from this integrative literature review can help nurses and nurse leaders work together in identifying problematic work environment factors and modify the critical care nurse work environment to help ameliorate compassion fatigue.

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Figure 1.

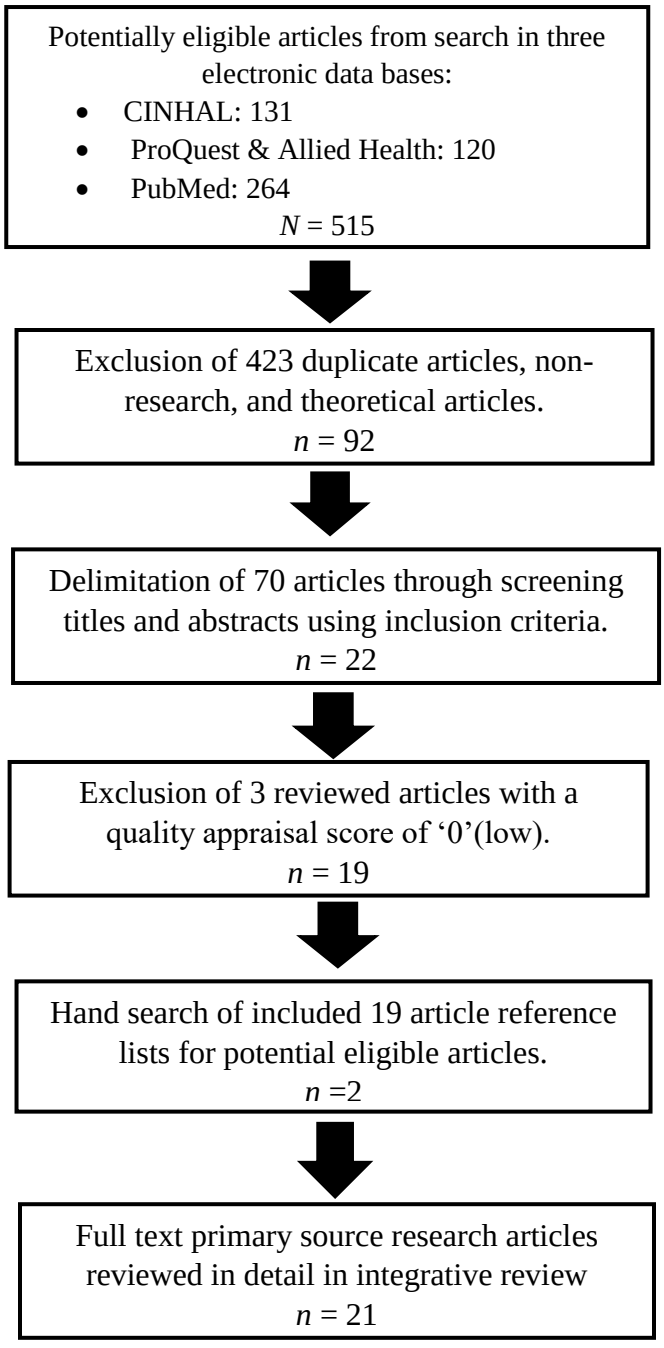

Figure 1. Flow chart of search identification and exclusion process for this integrative review.

Figure 2.

Quality criterion	Score
1. Quantitative or qualitative studies judged to have a rigorous design with primary focus of compassion fatigue (or related concept) only on critical care service nurses regarding work-related factors.	2
2. Quantitative or qualitative studies judged to have a rigorous design with a primary focus of compassion fatigue (or related concept) on critical care service nurses along with other healthcare providers regarding work-related factors.	1
3. Quantitative or qualitative studies judged to be of low quality based on a selected design yet offered subject relevancy with compassion fatigue (or related concept) on critical care service nurses regarding work-related factors.	0

Figure 2. Criteria used to appraise the quality of literature review guided by Whittemore and Knafl (2005) of eligible primary sources.

Table 1

Summary of work-related factors affecting nurse compassion fatigue (emotional, mental, physical exhaustion) in critical care services

Author(s), year	Research design and setting	Sample size	Work-related factors reported with construct of compassion fatigue or related construct	Score
		WORK DESIGN FACTORS		
Bellagamba et al. (2015)	Quantitative: descriptive cross-sectional design with self-administered questionnaire in a public referral university hospital in southern France as a single-site; *Job Strain (JS) & Mental Quality of Life (MQL)*	*N* = 77/145 were nurses (ICU, ER)	**Job Strain and Mental Quality of Life**: job strain associated with *inadequate rest between shifts rather than just working hours, inadequate staffing*; Job Strain related to *dysfunctional work environments*. Decreased mental quality of life influenced by working frequently with dysfunctional environments, employer's institutions organizational model of communication & staffing levels.	1
Donnely (2014)	Quantitative: cross-sectional study compared critical care nurses with non-critical care nurses with self-administered questionnaire in Ireland as single-site; *Bianchi Stress Questionnaire*	*N* = 86/135 were critical care nurses (ICU, ER)	**Work-related Stress:** Stress related to *redeployment (floating*) to work in other areas. Perceived stressors included having *administrative duties, death of patient and trying to achieve work-life balance.*	2
Gurses et al. (2009)	Quantitative: cross-sectional design in 17 intensive care units with structured questionnaire and at multi-site; Author developed questionnaire measuring performance obstacles, workload, perceived quality and safety care and *Quality Work Life (QWL)*	*N* = 265 (ICU)	**Quality and Safety of Care & Quality of Work Life:** Predictors of high work load: *poor physical work environment, effectiveness of supply chain management, seeking for patient charts, dealing with family-related issues and patient admissions. Age: older nurse reported ↑ quality and safety of care and ↓fatigue & stress; Night shift reported ↑fatigue & stress.*	2
Hunsaker et al. (2015)	Quantitative: descriptive, predictive study of nurses throughout U. S.; *Professional Quality of Life (ProQOL*)	*N* = 284 (ER)	**Compassion Fatigue, Burnout, & Compassion Satisfaction:** *Low*	2

			Manager support was a significant predictor of ↑ levels of burnout & compassion fatigue; ↑levels of manager support contributed to ↑ levels of compassion satisfaction.	
Kelly & Todd (2017)	Quantitative: cross-sectional descriptive study at a Single site; *Professional Quality of Life (ProQOL) & ACN's Healthy Work Environment Assessment (HWEA)*	*N* = 105 (Critical Care)	**Compassion Fatigue, Burnout, & Compassion Satisfaction:** Areas with perceived *authentic leadership* had ↓ burnout levels and ↑ compassion satisfaction levels.	2
Mooney et al. (2017)	Quantitative: nursing unit specialization compared specific personal/professional factors between intensive care and oncology nurses; *Professional Quality of Life* (ProQOL)	*N* = 68 ICU nurses n = 18 oncology nurses	**Compassion Satisfaction & Compassion Fatigue:** ICU nurses exhibited significantly ↓ levels of CS & significantly ↑levels of burnout; compassion fatigue was significantly indistinguishable between the two groups; *reasoning behind low support-seeking when resources are available need to be determined.*	2
Mealer et al. (2017a)	Qualitative: focus group interviews assessing the feasibility and acceptability of a mindfulness-based cognitive therapy program.	*N* = 33 nurses in 11 focus groups	**Resilience:** themes were barriers to mindfulness-based cognitive therapy adherence, incentives for adherence, preferred qualifications of instructors, and didactic content.	2
Mealer et al. (2017b)	Quantitative: sample drawn from AACN members randomly selected and mailed survey; *Posttraumatic scale (PDS)* and an abbreviated version of the *Conner-Davidson Resilience Scale (CD-RISC)*	*N* = 744 (Critical Care)	**Resilience & PTSD**: Nurses who worked in any type of critical care unit other than medical unit and had ↑ resilience scores were 18%-50% less likely to experience post-traumatic stress syndrome (PTSD) than nurses with ↓ scores; critical care nurses with graduate degrees were more likely to experience PTSD than bachelor prepared nurses. *Mixed medical-surgical critical care units* scored lowest on control of practice, perceived *inadequacy of staffing*, support for education, and clinical competence.	2
Sacco et al. (2015)	Quantitative: cross-sectional study in a tertiary care academic medical center from all critical care units; Professional Quality of Life scale (ProQOL)	*N* = 221 (ICU)	**Compassion Fatigue, Burnout, & Compassion Satisfaction**: Nurses 40-49 years old had significantly ↑burnout (*P* = .002) and ↑ STS (*P* = .01) than other age groups. Nurses on *mixed acuity units had ↑ burnout (P = .04) than nurse on single-acuity units*. Nurses working with a *change in nursing*	2

			management had ↑ levels of burnout than nurses without change.	
Steinberg et al. (2017)	Quantitative: pilot study measuring feasibility of a Workplace mindfulness-based intervention at a level 1 trauma center*; Maslach Burnout Inventory, Professional Quality of Life scale (ProQOL), Ulrecht Work Engagement scale*	*N* = 32 (SICU)	**Burnout, Compassion Fatigue, and Work Engagement**: *emotional exhaustion & burnout* scores were negatively correlated with vigor (*r* = -0.53; 95% CI, -0.69 to -0.33; *P*<.001) and dedication (*r* = 0.50, 95% CI, -0.66 to -0.29, *P*<.001) scores. The number of days of self-reported decreased *productivity* was lower after the mindfulness-based intervention although the difference was not statistically significant.	2
			WORK CLIMATE FACTORS	
Altaker et al. (2018)	Quantitative: descriptive correlational and regression analysis in national ICUs; *Moral Distress Scale-Rev., Psychological Empowerment Index, & Hospital Ethical Climate Survey*	*N* = 238 (ICU)	**Moral Distress**: *Poor ethical climate. unintegrated palliative care teams, and nurse empowerment* associated with ↑moral distress. Having access to a palliative care team experienced higher levels of moral distress.	2
Berg et al. (2016)	Mixed method design with focus group and used *Professional Quality of Life (ProQOL)*	*N*= 12 (Trauma)	**Compassion Fatigue & Burnout:** Reported stress triggers were *situational (abuse, pediatric, & geriatric), interacting with family, events like personal situations, failure to act as cohesive team, and conflicts with management.*	1
Cho & Kang (2017)	Quantitative: cross-sectional predictive study from 7 hospitals in Gyeong-Nam province of South Korea; *Type D Scale-14, Posttraumatic Diagnostic Scale, & Conner-Davidson Resilience Scale*	*N* = 179 (ICU)	**PTSD:** *Type D personality* was positively correlated to post traumatic stress disorder (PTSD) (*r* = .58, *p*< .001) and negatively correlated to resilience (*r* = -.43, *p*<.001). Reported 18.2% of critical care nurses in study could be considered at high risk for PTSD.	2
de Cassia Fogaca et al. (2010)	Quantitative: descriptive, cross-sectional in a single-site; *Effort-Reward Imbalance (ERI*) Brazilian version.	*N* = 20 (PICU & NICU)	**Occupational Stress**: *Balance between effort and reward* was higher in neonatal nurses than pediatric nurses; Effort-Reward Imbalance describes situations with no reciprocity between effort and reward at work.	1

Dominguez-Gomez and Rutledge (2009)	Quantitative: exploratory comparative design in three community hospitals in California using *Secondary Traumatic Stress Scale*	*N* = 67 (ER)	**Secondary Traumatic Stress:** Post traumatic stress disorder (PTSD) domain of intrusive thoughts-46% *thought their work with patient when not intending* to: 52% reported *avoiding clients*; 43% reported *diminished activity* and *emotional numbing*; 50%reported being *easily annoyed* and had *difficulty sleeping*. 85% reported at least one symptom of STS.	2
Kelly and Lefton (2017)	Quantitative: descriptive online survey in 14 hospitals with recognition program and 10 without recognition programs; *Professional Quality of Life (ProQOL)*	*N* = 726 (ICU)	**Compassion Fatigue, Burnout, & Compassion Satisfaction**: Predictors for burnout: ↑ *job stress,* ↓ *job satisfaction and* ↓ *job enjoyment*; those nominated for DAISY award reported ↓burnout.	2
Lee et al. (2015)	Quantitative: descriptive study of perceptions of staffing adequacy, and perceived utility of given list of resilience resources and *Safety Attitudes Questionnaire*	*N* = 893 nurses & n = 24 nurse leadership (PICU)	**Teamwork Climate & Utilization of Resources:** Leadership overestimated staff use of *resilience resources*; 2 most impactful resources were *1-on-1 discussions with colleagues & informal social interactions with colleagues out of hospital*; an underused resource was *being sent home after the death of a patient*. Staff with lower *team climate* scores were more likely to use out-of-hospital social mechanisms for coping.	1
Metzler & Huckabay (2004)	Quantitative: descriptive study using *Moral Distress Scale and Maslach Burnout Inventory* in 2 hospitals	*N* = 60 (Critical Care)	**Moral Distress & Burnout:** The frequency of moral distress involving *futile care* was directly and significantly related to the experience of emotional exhaustion ($r = 0.317$, $p = .05$). Age Related: nurses 18-30 had ↑ levels of *depersonalization* than those 46-60; nurses with bachelor's degree or higher experienced more painful feelings.	2
Moola et al. (2008)	Qualitative: focus group interviews in five hospitals in Tshwane metropolitan area of South Africa	*N* = 10 (Critical Care)	**Burnout:** Burnout related to perception of job-related situations (Includes *personality type*). Themes: the inability to function as a result of stress levels, the *inevitability of stress*, role uncertainty, *need from operational support systems, emotional support, critical incident stress debriefing, supportive interrelationships, communication, assertiveness, teamwork.*	2

Quenot et al. (2012)	Quantitative: longitudinal, monocentric, before-and-after interventional study in a French hospital: *Maslach Burnout Inventory & Centre for Epidemiologic Studies Depression Scale*	*N* = 29 (Critical Care)	**Burnout & Depression**: Intensive communication strategy regarding *end-of-life practices* in ICU reduced burnout 50% *Giving greater meaning to work* ↑level of personal accomplishment.	1
Verdon et al. (2008)	Mixed method: *Maslach Burnout Inventory* & Interviews with members of the ICU team related to organizational concerns and relationship concerns with patients, family and peers.	*N* = 97 (ICU) *N* = 10 interviews (ICU)	**Burnout:** 28% participants showed high level of burnout; 37% a medium level; Multivariate analysis showed concerns of the *lack of patient cooperation* ($p = 0.002$); the *organization of the service* ($p = 0.01$); the *rapid patient turnover* ($p = 0.008$) as significant independent factors. *91% of nurses had difficulty expressing their feelings or expectations to colleagues for fear of conflict, or creating bad atmosphere, or being judged by colleagues.*	2

Note. CI = confidence interval; ICU = intensive care unit; ER = emergency room; SICU = surgical intensive care unit; PICU = pediatric intensive care unit; NICU = neonatal intensive care unit.

CHAPTER III

CRITICAL CARE NURSE INSIGHT INTO PERCEIVED COMPASSION FATIGUE: A PHOTOVOICE STUDY

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Karen C. Vessier, MS, MEd.; and Becky S. Spencer, PhD

Abstract

Compassion fatigue (CF) in critical care nurses is the state of emotional and physical exhaustion resulting from exposure to unavoidable workplace stressors in the scope of carrying out their duty to care for suffering patients. CF has been found to be at significant levels in nurses in the specialty practice of critical care-type areas of caring for critical patients. The presence of CF threatens to limit the critical care nurse's capacity to fully participate in providing compassionate care with patients and to undermine the essence of professional nursing practice. Photovoice, a participatory action research method, was used to examine CF through the nurse's voice and images to generate dialogue between critical care nurses and hospital policy-makers with the goal of enacting change to prevent and mitigate the effects of compassion fatigue. Through thematic analysis of visual images of photos taken by participants, interviews, and focus group discussion new knowledge was gained concerning the impact CF has on critical care nurses.

Key words: compassion fatigue, photovoice, participatory action research, critical care nursing

Critical Care Nurse Insight into Perceived Nurse Compassion Fatigue:

A Photovoice Study

Compassion fatigue (CF) is a complex and grave threat to the health and well-being to nurses within hospital work environments from the challenges of encountering and witnessing patient pain and suffering (Figley,1995). Since Joinson (1992) first used the term CF to describe the nurse's inability to nurture others from exhaustion and exposure to patient suffering more than two decades ago, CF remains unresolved. There are several pressing issues surrounding CF in nursing. One issue is that there is no universal definition of CF in the literature. CF as experienced by nurses has been defined as the inability to provide compassion to others (Coetzee & Klopper, 2010) and secondary traumatic stress from knowing and wanting to help a traumatized or suffering person (Figley, 1995). Further, Figley (1995), an early CF researcher of trauma workers, claimed compassion fatigue "is the natural, predictable, treatable, and preventable unwanted consequence of working with suffering people" (p. 4). Yet, CF continues to be without a definitive definition for a common understanding and without any meaningful interventions with long term impact (Lombardo & Eyre, 2011). Meanwhile, even without a definitive definition, there is mounting evidence that the prevalence of CF, as currently understood in nursing, is commonly experienced by nurses in a variety of patient care areas (Lombardo & Eyre, 2011). This CF prevalence evidence suggests that nurses commonly contend with the ill effects of CF while working in hospitals. As a result, nurses are caring for suffering patients in hospital work environments without a clear

pathway of mutual CF understanding between nurse leadership and hospital administration for the protection, prevention, and treatment of CF. For consistency of thought in this study the definition of CF in nurses is the state of emotional and physical exhaustion resulting from exposure to unavoidable workplace stressors in the scope of carrying out their duty to suffering patients.

Critical care nurses working in hospitals are particularly vulnerable to CF because of the physical and emotional demands from intense empathetic relationships with suffering patients over long work hours (Bao & Taliaferro, 2015). Unfortunately, it is the same qualities critical care nurses embody to provide compassionate care that places the nurse and hospital at risk from compassion fatigue (Todaro-Franceschi, 2013). CF studies have illuminated disturbing levels of CF in critical care nurses. Study findings reveal the prevalence of CF in critical care nurses as high as 74% (N = 491) in a critical care unit and 65.9% (N = 284) in an emergency department (Hunsaker, Chen, Maughan, & Heaston, 2015; Sacco, Ciurzynski, Harvey, & Ingersoll, 2015). Although some studies of CF in nursing have included specific interventions to diminish CF in nursing, such as resiliency training with self-care (Hunsaker et al., 2015; Potter, Pion, & Gentry, 2015), they were directed towards nurse self-care only as a preventive action rather than a broader, systemic approach.

CF can have a broad, negative impact on critical care nurses and hospitals related to the emotional and physical health of the nurse, the nurse's ability to care for patients, nurse work productivity, and nurse retention (Lombardo & Eyre, 2011). Specifically, CF

in nurses is associated with many detrimental symptoms such as weariness, headaches, digestive problems, sleep disturbance, fatigue, mood swings, irritability, depression, excessive use of substances, anger and resentment, indifference and even cardiac symptoms of chest pain and palpitations (Coetzee & Klopper, 2010; Lombardo & Eyre, 2011). Relevant to hospitals, CF in nurses is also associated with the impaired ability to concentrate, being accident-prone, avoidance or dread of working with certain patients, reduced ability to feel empathy, frequent use of sick days, lack of joyfulness, apathetic, and desire to quit (Coetzee & Klopper, 2010; Lombardo & Eyre, 2011), which can have serious impacts on patient care and work environment in hospitals. In fact, several nurse authors have begun to assert CF is an occupational hazard in nursing (Kelly, Runge, & Spencer, 2015; Lombardo & Eyre, 2011).

Another issue related to critical care nurse CF is that CF has rarely been studied from the emic view of the very nurses who experience CF. Studies of CF prevalence, interventions, and contributing factors have had a common limitation of not discovering the nurse's recognition and response to their own CF (Kelly et al., 2015). The lack of close attention to the mutual problem CF placed on critical care nurses and hospitals and healthcare systems necessitates a different research approach than prior CF studies. CF impacts the health of critical care nurses and the ability of hospitals and hospital systems to provide safe patient care. Understanding how CF is experienced by critical care nurses in the work environment and how CF impacts their personal lives outside of work could help healthcare administrators recognize the reality and gravity of CF. There is need for

critical care nurses, nursing leaders and hospital administrators to work together to find solutions for prevention and treatment of CF as an occupational hazard.

The aim of this study was to engage the critical care nurse in dialogue and reflection of the reality of experiencing CF in the hospital setting with the use of meaningful photographs to illuminate new knowledge made visible from what is unseen and unknown about CF. We sought to raise conscious awareness of the reality of CF for critical care nurses and share the findings with hospital policy makers (nursing leadership and hospital administration) to initiate change in the critical care nurse's work environment to protect and prevent CF for the benefit of critical care nurses. We sought to answer the research questions: (a) What insights do critical care nurses have in recognizing and responding to compassion fatigue?, (b) What unmet support do critical care nurses feel is needed to protect against and prevent the development of compassion fatigue?, and (c) What actions can be identified to raise compassion fatigue awareness in other critical care nurses and hospital policy-makers to prevent compassion fatigue?

Philosophical Underpinning

We used the philosophical underpinning of Paulo Freire's *critical consciousness* to learn about critical care nurses' experiences with CF in the work environment and how CF impacts their personal lives. Freire (1970/2000) posited that *critical consciousness* is the discernment that one must have to perceive their reality in a situation not as being closed and without exit, but as a limiting situation which they can change through voicing the 'authentic word'. What is sought in this study is the 'authentic word' of CF in nurses.

Freire's position on critical consciousness is that a marginalized or oppressed population will not gain 'freedom' from their life challenges by chance, but rather through the praxis (reflection and action) of their quest for it. Nurses become a marginalized population because the work environment that contributes to CF is unavoidable and the nurses have no power or agency to change or modify the work environment. It is Freire's belief that individuals who are marginalized can gain agency through praxis. Crotty (2010) asserted that Freire approached praxis as reflection and action as inseparable and must take place at the same time and with fellowship which is inclusive in this study. Therefore, Freire's philosophy of critical consciousness guided this study design because it supported the approach of examining the deeply held CF understandings of critical care nurses by hearing their voices and through praxis because the 'authentic word' on CF reality was sought.

Method

The chosen methodology to elicit the critical consciousness of critical care nurses' experiences with CF was Participatory Action Research using Photovoice methodology. Participatory Action Research (PAR) is a unique and emerging qualitative methodology with the goal of emancipation when employed with communities perceiving themselves as marginalized or disenfranchised for social change (Breda, 2015a). PAR focuses on empowering marginalized people with a political leaning (Breda, 2015b; Corbett, Francis, & Chapman, 2007) and is increasingly being conducted in the social sciences, including nursing (Breda, 2015b; Corbett et al., 2007). PAR was developed from the

work of Paulo Freire (1921-1997), a Brazilian educator and philosopher, around critical theory and social change (Breda, 2015a) and was developed with the intent to raise critical awareness of an issue and improve the lives of the research participants.

PAR involves the research participants as active members of the research process as co-creators of the research rather than being subjected to the research procedures (Breda, 2015a; Corbett et al., 2007). In PAR the co-creators of the research are called participants rather than subjects as in traditional qualitative research because they are included in a meaningful way in each step of the research process (Breda, 2015a). In contrast to traditional qualitative research with subjects in a phase of the study process, PAR gives participants a voice and a meaningful role throughout all phases of the study process and is a type of participatory and cooperative inquiry (Breda, 2015a; Stringer & Genat, 2004). The emic view is paramount to PAR design because the essence of this study was to expose deeply held understandings of CF known only by the critical care nurse who perceived to have experienced CF. The emic view is described as the inside perspective (subjective view), which respects the participants' humanness (Lincoln & Guba, 1985). For this study, the critical care nurses' emic view of CF was sought.

Throughout a PAR study, the researcher makes it possible for participants to create common meanings from shared experiences and information and to develop practical actions (Corbett et al., 2007). PAR deals explicitly with issues that affect groups or communities of people and requires the people to be engaged in three activities: "inquiring into the nature of a problem, getting together as participant units; and

mobilizing for action by raising awareness of what needs to be done" (Corbett et al., 2007, p. 83). Significant to the current understanding of the CF phenomenon is that few qualitative studies have been published. Just as qualitative research keeps the participant's meaning as the focus of the study (Creswell, 2013), PAR also keeps the participant's meaning of the phenomenon as the focus of the study. PAR gives voice to the participant as the source of local knowledge (Breda, 2015a), knowledge known only by the participants through experience with the issue of interest, and keeps the participant active in dialogue (individual and group) for interpreting the data.

A special type of PAR methodology is Photovoice. In Photovoice the participants add depth to the phenomenon of interest by taking photographs as representations of their perception of the issue with the intent to be viewed by others to deepen their understanding through the 'eyes' of the participant. Photovoice was developed by Wang and Burris (1997) using photographs and words to elicit deeper understanding of the lived experience of a phenomenon. Advantages of Photovoice as a study methodology is it creates precise recording as evidence of material reality, formal training is not necessary to take a photograph, and the photographs cannot be labelled right or wrong (Martin, Garcia, & Leipert, 2010). Photovoice allowed the researchers and others to literally *see* through the participants' eyes how they experienced and interpreted the CF phenomenon. By assigning meaning to the photographs, participants are empowered to give voice to their experiences and to advocate for change to those in power to enact change. The point of Photovoice is to facilitate emancipatory action and change.

As an emerging qualitative research design, Photovoice has been used to study a variety of marginalized groups or communities such as persons living with HIV/AIDS (Hergenrather, Rhodes, & Clark, 2006), persons living with disabilities (Cordova, Parra-Cardona, Johnson, Prado, & Fitzgerald, 2013; Newman et al., 2014), persons as family caregivers (Garner & Faucher, 2014), as well as community health building (Wang, Morrel-Samuels, Hutchinson, Bell, & Pestronk, 2004). Photovoice was even used to capture the meaning critical care patients gave to their room as a place of care (Olausson, Lindahl, & Ekebergh, 2013). Consistent with Freire's theory these studies also illustrated the various ways for the dissemination of participant photographs and written meanings to advocate for change with policy makers such as meetings and conferences with influential government advocates (Hergenrather et al., 2006), informing a community advisory board (Cordova et al., 2013), an art exhibit for the community to view (Garner & Faucher, 2014), and invited forums where participants presented their concerns to policy makers, community leaders, the media, and general public (Wang et al., 2004).

According to Wang and Burris (1997), early developers of the Photovoice method, Photovoice had three main goals: "(1) to enable people to record and reflect their community's strengths and concerns, (2) to promote critical dialogue and knowledge about important community issues through large and small group discussions of photographs, and (3) to reach policymakers" (p. 370). In this study of CF, participants were asked to use their smartphone camera to take meaningful photographs representing the specific topic of CF as the participant pictorially *sees* CF and then critically reflecting

on the photographs (Martin et al., 2010; Wang & Burris, 1997). This creation of visual images became meaningful data unique to the individual as the expert on the lived experience of the CF phenomenon. It is this participant as expert that led to constructing the meaning of CF in critical care nursing practice.

Incorporating the participant-taken photographs permitted others to literally *see* and understand the lived experience of CF in critical care nurses through the participants' lens of critical care nursing reality. Bugos et al. (2014) posited "photographs can leave an indelible impression, generate public conversation, and even ignite social change by bridging disparate social worlds and offering glimpses of what might otherwise remain unseen" (p. 2). We chose to use Photovoice as the methodology because through participant-taken photographs with written meanings, interviews and focus group, the participants are immersed in critical reflection on their experiences of CF. The critical reflection of the critical care nurses shed light on what was unknown about CF to influence practice change. It is the photographs that can make visible what had been invisible and leave a glimpse to the viewer of realities otherwise not seen (Bugos et al., 2014). Ultimately, the photographs as the artistic medium taken within the Photovoice method created a way of knowing CF in critical care nurses beyond traditional research methods and shifted knowing towards promoting critical care emancipation and self-agency leading to critical care practice change.

Self-disclosure

As the first author, I entered into this study with a foundation of many years as a clinical nurse and practiced at the bedside of patients on various types of hospital patient care units, including critical care. While inexperienced in Photovoice, I entered this study with a healthy level of curiosity to better understand the work life of critical care nurses who felt they have experienced CF as they understood it while engaged in active practice. Being inspired by the philosophical underpinnings of Paulo Freire (1970/2000), I proceeded to approach and listen to the rarely heard voices of critical care nurses who experienced CF as silent voices of an oppressed or marginalized population. I leaned on the power of trusting relationships with participants to uncover deep insights from each participant as each shared very personal feelings and thoughts about their perceived CF experience. As I listened closely to the meanings and descriptions the participants shared, I was humbled by their forthrightness and frankness in tone and their faithfulness to the nursing profession. The second author provided guidance and research expertise throughout the Photovoice study process. I also consulted with a nurse researcher who has expertise in Photovoice regarding methodological procedures applied in this study.

Participants and Setting

After obtaining Institutional Review Board approval, we used purposive sampling to recruit 10 nurses from critical care-type hospital units including critical care, intermediate (step-down), and emergency care units. The recruitment number goal of 10 was chosen to allow for any attrition and to maintain at least 6-8 participants. For

qualitative studies, the number of participants typically include 5 to 25 participants who have all experienced the phenomenon of interest (Creswell, 2013). In two literature reviews on PAR as Photovoice, the participant sample sizes ranged from 4 to 36 participants (Hergenrather, Rhodes, Cowan, Bardhoshi, & Pula, 2009) and 6 to 49 participants (Evans-Agnew & Rosenberg, 2016). Wang and Burris (1997) stated Photovoice was very flexible because it could be adapted to meet specific participatory goals through the integration of community participation, concern of a phenomenon, and the visual image. For example, Duffy (2011) used Photovoice and recruited seven women of a community to take photographs of community issues they determined important to their health and were encouraged to take part in dissemination of findings. Killion and Wang (2000) used Photovoice to study housing needs of five intergenerational African American women (two homeless and three elderly independently housed women) for feasibility of house-sharing arrangements. Pickin, Brudsen, and Hill (2011) conducted a Photovoice study with five participants to investigate the emotional experiences of foster carers. In each of these Photovoice studies, the participants experienced the phenomenon of interest and were encouraged to self-reflect on their photographs as visual evidence representing that phenomenon.

In Photovoice studies, it is important to recruit participants who have all experienced the phenomenon of interest, which is a characteristic strength of Photovoice with small or large numbers of participants. Recruitment took place in a 528-bed metropolitan hospital located in a Midwestern city with large critical care service areas

for a robust sampling opportunity to recruit critical care nurses as targeted participants. Sampling in Photovoice is inclusive of participants as a valued and vital source of expertise (Wang & Burris, 1997). The study sample was comprised of critical care nurses because they were vastly exposed to intense emotional aspects and work load in patient care (Carayon & Gurses, 2005) and often cared for patients with life-threatening illnesses and sudden and disfiguring health events (Sacco et al., 2015). Recruitment was conducted through flyers distributed on each critical care unit including critical care, intermediate (step down), and emergency care units. The flyers announced the study's intention using photographs to capture critical care experience with CF and researcher contact information.

The inclusion criteria for this study were: (a) be a registered nurse; (b) have primary employment in one of the units of critical care, intermediate care, or emergency care; (c) identify as having had experience with the study definition of CF, physical and emotional exhaustion from exposure to unavoidable workplace stressors; (d) have unencumbered access to a smartphone for taking photographs, and (e) be 18 years of age or older. No additional exclusion criteria were applied to participate.

I gained entreé to my population of interest by meeting with critical care services nursing administrators and providing an information presentation about the study. With IRB approval, in addition to distributing flyers, I shifted to holding scheduled orientation meetings on several individual units to be more conducive to the nurse' work schedules and provided information about the study and CF to potential participants. The

recruitment strategy of holding information presentations helped to build trust and this trust enhanced recruitment and data collection. If potential participants attending the information presentations expressed desire to participate in this study, then a 60-minute orientation meeting was scheduled at the participant(s) convenience. The study with recruitment, orientations, photographs taken by participants, interviews, occurred between September 2017 and June 2018 and the focus group session was held in July 2018.

Of the 12 nurses in total who attended one of several orientation sessions and signed an informed consent over the course of the recruitment process, only seven completed the Photovoice process. Of the five who did not continue participation, three were unable to be contacted for the follow-up call and two stated at the follow-up call they were unable to continue related to work schedule or fear of participation discovery by co-workers or supervisors. All participants were employed full time at the single site setting as staff nurses performing direct critical care patient care. Four nurses were from critical care patient care units, two were from intermediate care patient care units, and one from the emergency patient care unit. One male and six female nurses participated. Five of the participants were 25 to 31 years of age and two were 43 and 53 years of age, respectively. Six participants had bachelor's degrees in nursing with two currently enrolled in nursing graduate programs. One nurse had an associate degree in nursing. Three nurses had two to four years of critical care experience; one had eight years while two had 20 or more years of critical care experience.

The wide range of variation in gender, age, education level, critical care experience, and area of critical care practice, achieved a degree of maximum variation sampling that I was not expecting. Maximum variation sampling in qualitative studies is the purposeful selection of participants to adequately represent the entire range of participant variation rather that the 'typical' participant (Maxwell, 2013) and allows the documentation of unique variations to emerge (Lincoln & Guba, 1985). While I did not intend to recruit such a heterogenous sample the benefit is that maximum variation sampling maximized participant differences from the study's beginning and increased the chance of different participants perspective being reflected which is ideal in qualitative research (Creswell, 2013).

Data Collection

For this Photovoice study, I collected data through multiple data sources: (1) audio-recorded individual interview, (2) focus group meeting, (3) logbooks (journal) written by the participants of the photographs' title and meaning and their reflective thoughts, (4) photographs taken by the study participants, and (5) my researcher's field book. The use of multiple data sources required a systematic process to ensure consistency and to add trustworthiness to the findings. Data were collected through a four-step Photovoice data collection method adapted from Plunkett, Leipert, and Ray (2013). For all data with participant identification, I used the pseudonyms chosen by the participants to protect their confidentiality.

Step 1. The orientation meeting facilitated by the researcher. During the 60-minute orientation sessions, a written agenda was followed for consistency. First, the research study and expectations were explained and then informed consents were signed to participate with copies provided to each participant. A demographic information form was completed and collected from each participant including his or her preferred contact method of communication with me. Also, on the demographic information form, each participant was asked to provide a chosen pseudonym name to be known only by the participant and researcher related to data in this study to maintain their privacy. Instructive handouts were distributed and discussed on ethical photography, basic photography techniques, and participants practiced taking a photograph of the abstract concept 'happy' with the participant's smartphone (digital phone). Smartphones were used rather than digital or disposable cameras because of their ease of use, no added cost to researchers or participants, and accessibility to the participant for taking photographs and the storing and reviewing of photographs.

The participants' logbooks (journals) were distributed for recording titles, descriptions, and reflections of five photographs to be taken over two weeks via the participant's smartphones. Participants were informed to take photographs for two weeks of anything showing what they felt was meaningful about CF or how they recognized CF in practice, as well as photographs showing how they typically responded to CF. I instructed participants not to take photographs of people or objects that would identify the hospital to maintain privacy and confidentiality, but that they could take photographs

of people who consented to participate in writing. Photography consents were provided to all participants and training on obtaining consent to photograph was conducted. Participants were also instructed to take as many photographs as they wished but were asked to reflect and choose the five most meaningful images they deemed relevant to images that represented their experiences with CF. Participants wrote the photograph's title and meaning and any reflective thoughts in the provided logbook. The participants received a $25 gift card after completion of the individual interview and after attending the focus group session as a participation incentive.

Step 2. Follow-up contact (phone and/or email) after one week. After one week, I contacted each participant to check on progress, provided instruction clarification, if needed, and scheduled their interview after the second week of reflective photo-taking and journaling.

Step 3. Individual in-depth audio-recorded interview. The individual interview was a 60-minute audio-recorded interviews were conducted following an agenda for consistency. Being sensitive to the critical care nurse's time availability and need for privacy, the interviews occurred in the hospital in a prearranged private location free from intrusion or at a local public library at the discretion of the participant. The interview was audio recorded and transcribed verbatim. In each interview, the participant and I viewed and screened each photograph together on their smartphone for appropriateness and, if deemed appropriate, the participant airdropped each photograph from their smartphone to the researcher's password protected device. *AirDrop* refers to

the ability of Mac and iOS devises to create a peer-to-peer Wi-Fi network between physically close devices and send files encrypted, which is safer than transferring via email for privacy (Nation, 2018). I also collected the participant's journal with their photographs corresponding titles and narrative meanings that they felt were most important to them.

Table 1

Relationship of Research Questions to the Adapted Photovoice SHOWED questions of Wang and Burris (1997).

Research Questions	SHOWED Interview Questions
1. What insights do critical care nurses have in recognizing and responding to compassion fatigue?	1. What do you ***S**ee* here? 2. What is really ***H**appening* here?
2. What unmet support do critical care nurses feel is needed to protect against and prevent the development of compassion fatigue?	3. How does this relate to ***O**ur* lives? 4. ***W**hy* does this concern, situation, strength exists?
3. What actions can be identified to raise compassion fatigue awareness in other critical care nurses and nursing leadership to prevent compassion fatigue?	5. How can we ***E**ducate* others and policy-makers through our new understanding? 6. What can we ***D**o about it*?

Each interview was conducted using the SHOWED interview guide developed by Wang and Burris (1997) with each photograph. The SHOWED acronym stands for six prompts used to facilitate discussion in the individual interview and are illustrated in Table 1. Throughout the Photovoice method the participants were kept active in

interpreting the data and planning action appropriate and meaningful to the participants to influence change (Plunkett et al., 2012; Wang & Burris, 1997). The relationship between the research questions and SHOWED interview questions is shown in Table 1. After each individual interview, the audio-recorded interview was transcribed verbatim. I recorded my initial thoughts, observations, and any non-verbal participant affect and responses in field notes as data to be used during analysis.

Step 4. Dialogical focus group meetings on initial thematic analysis and decision on dissemination of findings. For this study, the last procedural step included a 120-minute focus group session. Two of the seven participants were unable to attend the focus group with one agreeing to attend an individualized interview with researcher using the same focus group agenda and sharing what the group discussed. I was not able to contact one participant after three attempts and did not include this participant's photographs in the study. The photographs were displayed attached to their title and narrative meaning on a large table in the researcher's initial thematic analysis. Participants were able then to move photographs around into their meaningful groupings and respond to SHOWED questions facilitated by the researcher. After the viewing of photographs and SHOWED questioning, the researcher facilitated focus group discussions focused on the researcher' initial thematic analysis and participants sharing their thoughts about the process of Photovoice. The last facilitated discussion point was focused on the participants' choice and plans for dissemination of the findings to nursing leaders and hospital policy-makers

on the format and forum the participants chose to exhibit the photographs with themes and made recommendations for hospital policy-makers. Field notes were taken.

Data Analysis

The foundation for data analysis was taken from Wang and Burris (1997) three-stage process: *selecting* (choosing the photographs that most accurately depicted the critical care nurse's recognition and response to CF); *contextualizing* (narrating what the photographs mean); and *codifying* (identifying the emerging themes related to recognizing and responding to CF and the needed support to deflect the development of CF). Consistent with Photovoice methodology, this analysis process was a shared analysis with the participants. The participatory process of Photovoice contributed to the *selecting* stage and the *contextualizing* stage during the data collection process. The *codifying* stage was derived directly and inductively from the raw data from the participant's photographs, narrative writing of the CF meaningfulness of the photographs in the participants' reflective journal, interview transcripts, focus group transcript and my field notes.

The *selection* stage occurred prior to and during each individual interview. The participants could take as many photographs that were meaningful representation of CF as they wanted but had to select the five most meaningful photographs prior to the interview. The selection of photographs required reflective thinking of each participant to select their five photographs and to write the CF meaning. During each interview the screening of each photograph was confirmed by the participant.

The *contextualizing* stage occurred with the narrative each participant wrote in their logbooks and verbally shared with me during the interview and were transcribed. I examined my contextualization my ongoing field notes and reflection journal as a data source used during analysis.

The *codifying stage* began upon examination of data from each participant's verbatim interview transcription, photographs, and reflective logbook entries. Audio files of the interviews were transcribed verbatim by transcriptionists and were read and reread by the first author for accuracy. These data sets were entered in the electronic format of Microsoft Word10 software and I then imported these narratives and all photographs into NVIVO 11 (QSR International.com, n. d.). I kept an in-depth audit trail of all research processes from the beginning of the study. After each interview, the transcripts and photographs with corresponding titles and meanings, and my field notes were reviewed for analysis through reading and re-readings with tracking of participant responses to SHOWED questions. Content analysis continued as an iterative process with repeated readings to evolve initial meaning units to condensed meaning units to sub-themes, to themes. The first author led the thematic analysis and the second author provided guidance and clarification in the data analysis process.

The analysis of the focus group session content analysis process also followed the Wang and Burris (1997) three-stage analysis process of selecting, contextualizing, and codifying. The s*electing stage* occurred during the focus group session, participants were asked to make the decision to give written consent or deny consent for the researcher to

display all or selected photographs in public displays or in publications. All seven participants gave written consent to use all their photographs (35 photographs in total) in public displays and in publications. Five gave consent at the focus group meeting and two gave consent at follow-up meetings. The *contextualizing stage* occurred during the focus group meeting in the discussion and confirmation of photographs and their meanings displayed collectively for the participants. *Codifying stage* occurred when I facilitated discussion in the focus group dialogical conversation for the participant identification of issues and confirmation of theme development (Wang & Burris, 1997). The focus group meeting was audio recorded with participants' verbal permission to supplement my written meeting written notes. The focus group transcript and my focus group field notes aided in final data analysis.

True to photovoice methodology, the participants were co-analyzers of the data with the researcher which allowed the voices of the participants to be represented throughout the research process (Wang & Burris, 1997). Ultimately, this process depicted the emic perspective and remains consistent with Freire's bottom-up enlightenment from the people directly impacted by an issue, the critical care nurses.

Findings

In an iterative manner, the content analytic process led to the identification of three temporal themes and nine contextual subthemes. The three themes with associated subthemes are presented in a temporal work-life cycle. While spreading the photographs on the floor and arranging with the initial themes, I observed that three significant time

and space patterns emerged: before nurse work started on arrival to the unit, during the nurse's work shift, and after the nurse completed their shift and left the work area. These emerged themes and temporal arrangement of the photographs were discussed with the participants during the focus group and all agreed without exception the themes and subthemes captured their nurse-life cycle experiencing CF as a critical care nurse in the hospital setting. Dissemination of findings were discussed with the participant with the consensus being to present the findings at a Critical Care Service Directors meeting and a public display at the hospital during Nurses' Week (May 2019) The nurses also strongly agreed that new graduate nurses need more information regarding CF and recommended that the findings of this CF study be incorporated into the new nurse residency program.

Themes and subthemes

Theme 1: Before nurse work: Anticipatory CF triggers. The theme of anticipatory CF triggers emerged during the interviews and viewing of photographs in the individual interviews. For some of the participants there was emphasis on how they felt from tangible environmental stimuli that negatively impacted the participant's work perspective. Dakota, JJ, Jesse, and Justine each included at least one photograph with written meaning that was sensory in nature: seeing, hearing, and smelling. In a more direct manner, Dakota felt the entry walk into the unit impacted the nurse's workday perspective that can *make or break the* (nurse's*) day.* It is notable that *The Long Walk* photograph was taken in black and white because the other photographs by this

participant were in color. Two subthemes emerged from anticipatory triggers: environmental precursors and residual CF experience from previous worked shift(s).

Sub-theme 1: Environmental precursors as CF triggers with anticipatory knowing. The theme of anticipatory CF triggers emerged during the interviews and photographs in three participants. Justine and JJ emphasized the tangible environment and stimuli that negatively impacted their work at the beginning of the work day with a feeling of despair. These participants felt that seeing piles of used linen, many pieces of used equipment, and families crying in the hallway as they walked in to work set a tone of gloom for the day.

Figure 1. The Long Walk (Dakota)

> I believe some critical care units are set up with some type of entry wat that draws out the fatigue of the nurse. Particularly this set of doors open up and you have this long hallway with no windows and in the evening; it is dark so it is in a sense of CF you have a long shift and a long week you have to walk this long hall and it gives a sense of what is going on. (Pause)…. you hit the door and you already

> hear the sounds and all of the sights and you can already smell certain things and can already determine what type of shift you ae going to have. (Dakota)

Sub-theme 2: Residual CF experience from previous worked shift(s). Raven talked about the gradual decline of the nurse's coping over time and asked to have her photographs placed in a certain order. The quote below is from her first two photographs of a large hole in the dirt somewhere and like her quote below, she talked about the hole representing emptiness and sometimes you do not know that you are getting deeper and deeper in the hole from work day to work day.

> Impending doom awakens as one is trapped in a hole with no way out. All coping mechanisms have been exhausted. One may feel they are sinking deeper beyond recognition. (Raven)

Likewise, Corrine recalled having patients receiving the nurse's anger and unfeeling approaches to the patient from mental exhaustion the nurse feels from multiple long shifts.

> So they (patients) get all the anger and they get all of the unfeeling person that you are after a long shift, especially after you work three or four days in a row (multiple long shifts in a row) and you're like exhausted mentally. (Corrine)

Theme 2: During nurse work: Inescapable CF triggers. Five subthemes emerged as inescapable CF triggers as sustained hypervigilance and sensory overload, steep level of expended emotional labor, suppression of emotions, and extensive work demands/distractions without relief/recovery space or time leading to CF state of being.

Alarm fatigue was one of the terms most frequently used by the participants during the interviews and the most common word identified in NVivo 11 word search suggesting alarm fatigue is an inescapable consequence in the critical care environment. The nature of critical care nurse work requires the nurse to constantly be on high alert to provide rapid resuscitative and supportive care when needed (Marshall et al., 2017).

Sub-theme 1: Sustained hypervigilance and sensory overload. Several of the participants talked about alarms. JJ and Manuela specifically talked about 'hearing' the patient alarms because nurses work 12-hour shifts and continue to hear the alarms in their minds for a long time after work. Manuela stated she falls asleep hearing the alarms from IV pumps, ventilators, and monitor alarms that invades her sleep because of exhaustion from her work. Dakota also spoke to what some nurses do to minimize the hearing of alarms. Dakota chose Figure 2 photograph to help let other non-critical care nurses realize how much equipment the patient may be connected and that needs monitoring.

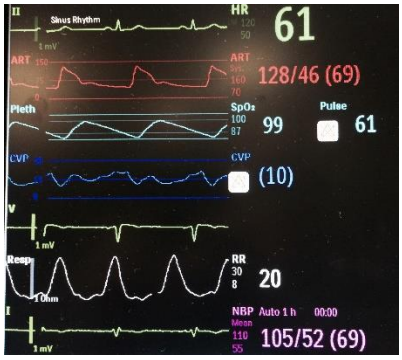

Figure 2. Alarm Fatigue (Dakota)

> Throughout the night, alarms are ringing at the nurse. These alarms can be high priority, or just a soft sound playing on repeat. Continually having this noise can wear down the nurse and cause them to ignore the alarms, putting the patient in harm's way. (Dakota)

Sub-theme 2: Steep level of expended emotional labor. All participants describe experiences, emotions, and stress from working with families of patients. The participant JJ pointed out experiences of being in the role of family to a patient because the patient did not have a family or support group. Corrine spoke frequently about the time nurses spend during a work day dealing with family member concerns and needs.

> Often, I feel we get CF because the patients are alone. They don't have anyone. We can only fill the void so much. Seeing all the empty chairs brings sadness to me because it happens way too often. The patient is so sick and has no support. But my empty space is growing also because we can only fill the void so much. (Jesse)

Sub-theme 3: Suppression of emotions. Despite acuity type patient assignments, three participants shared in the interviews and photograph meanings the toll the emotional extension the nurse has to provide during care for patient and the patients families. Two of the participants shared the struggle they experience with holding back emotions when moving back and forth in a work shift from a dying patient to the next patient who is doing well and will go home. Jesse chose a photograph of a lit fireplace to represent the diminishing light she feels when she experiences the multiple 'poker faces' she must have to work as a nurse in critical care.

> My light feels diminished at times because I can only give so much. I can only shine so bright when darkness tries to take over. In one room my patient is dying and in the next my patient is healing and progressing. (Jesse)

Justine shared the drive home is full of tears, (the nurse) is exhausted, doesn't eat dinner and just goes to bed. She took a picture of a sunset that represented not the end of a day, but she said it could be the end of a nurse's career.

Sub-theme 4: Extensive work demands/distractions. Many participants spoke about the multitude of tasks and decisions a nurse needs to address during each shift which is compounded by trying to also meet the patient demands. Justine and Jesse had photographs of piles of manuals and papers on a desk and stacks of boxes with documentation representing the side of nursing not directly related to bedside care of a patient. Several nurses talked about the consequences to the nurse from having such heavy workloads including feeling small and

unsuccessful, taking no lunch,

> We do more and more and more with less resources or staff all the time. The days we each have more patients to care for my compassion is visibly lower. I am stretched in too many directions at once often and you do what you need to do to get by…but those days I feel small and unsuccessful because I can't be the compassionate person I would like to be 100% of the time. Jesse

Sub-theme 5: Yearning for respite space and time. In the viewing of the photographs with meanings the participants engaged in a lengthy discussion about the

need for little sanctuary spaces and be acceptable for nurses to go when needed ‘to get away’ during the worked shift. The participants emphasized it needed to be very close by their patients.

> …if I’m lucky 10 minutes of peace. Hiding in a corner with my work essentials alone can provide a much-needed respite from my demanding day. (Manuela)

Theme 3: After nurse work: **Incessant CF triggers**

The research on the impact of compassion fatigue has examined the impact been the nurse’s professional life with very little exploration of the impact of CF on their personal lives. In this study all participants spoke about how they felt after a worked shift. It is noteworthy that three participants, Dakota, Jesse, Justine, included a photograph of an outdoor scenery representing an escape from work and feeling free of feeling CF. Two subthemes include cognition of diminished caring for family, friends, peers and patients and harbored intrapersonal conflict towards personal and professional life imbalance from a CF state of being.

Sub-theme 1: Cognition of diminished caring for family, friends, peers and patients. Five of the participants shared in the interviews that they became cognizant of their decreased caring attitude towards their patients and peer nurses. Nursing as a profession is intricately wrapped in the concept of providing compassionate care to patients and the participants presented a sense of sadness when they reflect on times

when they were not compassionate. Justine and Raven talked about nurses leaving nursing because they realize the 'compassionate care is gone'.

> ….sometimes nurses want to get out of patient care because of the lack of compassion they have or the lack of time they actually have to spend with their patients. (Justine)

Sub-theme 2: Harbored intrapersonal conflict towards personal and professional life imbalance. Participants illustrated in several photographs the distress they feel when they cannot give caring attention to their family and friends and opt out of social gatherings because of being exhausted. Corrine's photograph illustrated the nurse's warm outer layer of compassion gets less and less leaving the nurse 'cold' inside represented by a cold pastry that was once warm.

> So, when it is finally time to go home and spend time with family…. "all that is left to share with family is the cold, angry, unfeeling inside. The warm, loving, gooey inside that was there in the beginning is gone. (Corrine)

Figure 3. Cold on the Inside (Corrine)

Discussion

In summary, our findings using Photovoice methodology support Freire's (1970/2000) theoretical framework of critical consciousness in seeking the authentic word of CF in critical care nurses. Without the emic perspectives of nurses who experience CF meaningful interventions to prevent or mitigate the effects of CF cannot be developed. We sought to uncover critical care CF reality as understood by those nurses and gather their authentic word on CF reality to enlighten other nurses and policy-makers to enact practice change. The Photovoice method with participant-taken photographs provided a medium to deeply understand the participants concerns as they described the CF meaning they gave to the photographs in creating conscious-awareness. It was noticeable how at ease the nurses were in the interviews and focus group when discussing their photographs. It was as if the photographs became an anchor for their thoughts that were shared without reservations.

While the participants were viewing the photographs in the focus group meeting and sharing thoughts among, I observed a distinct shift in thought during the participants' discussions. In the individual interviews the participants shared their thought about CF directed toward themselves. In the focus group, the participants shared their thoughts about CF as a shared burden among nurses as if they did not have to be silent to each other about CF experiences. Even though the participants were observed in the interviews to have had limited ideas for dissemination plans of findings beyond in-services, the participants in the focus group shifted thought and ideas in a discussion with a broader

scope for dissemination of findings. The participants decided they wanted the dissemination of findings and the display of photographs to occur during the May 2019 Nurse Week and be placed as a topic in the New Nurse Residency Program to reach all nurses at the hospital and not just critical care nurses. At the time of this writing, I have been placed on the next critical care services directors' meeting agenda and will share the study findings and participant's decision on dissemination of findings. Several participants stated they were interested in presenting or being present at the directors' meeting and I encouraged them to do so.

Working with the participants, new subjective knowledge was found to contribute to what is already known about CF in nurses. Freire (1970/2000) cautioned "not to dismiss the role of subjectivity in the struggle to change structures. On the contrary, one cannot conceive of objectivity without subjectivity" (p. 50). Hidden among the unspoken and subjective feelings and experiences of the critical care nurses was an unexplored approach to resolving critical care CF – the revolving temporal work-life cycle that nurses with CF get trapped which negatively impacts the nurse's professional and personal life (see Figure 4).

While analyzing the photographs with their participant written meanings and transcripts and early coding phrases and terms, I began to *see* three patterns of CF triggers and feelings that were explained in relation to the time of each worked shift in one day: when the critical care nurse began their work shift and anticipated experiencing exhaustion before they began work as anticipatory CF triggers; during the nurse's shift

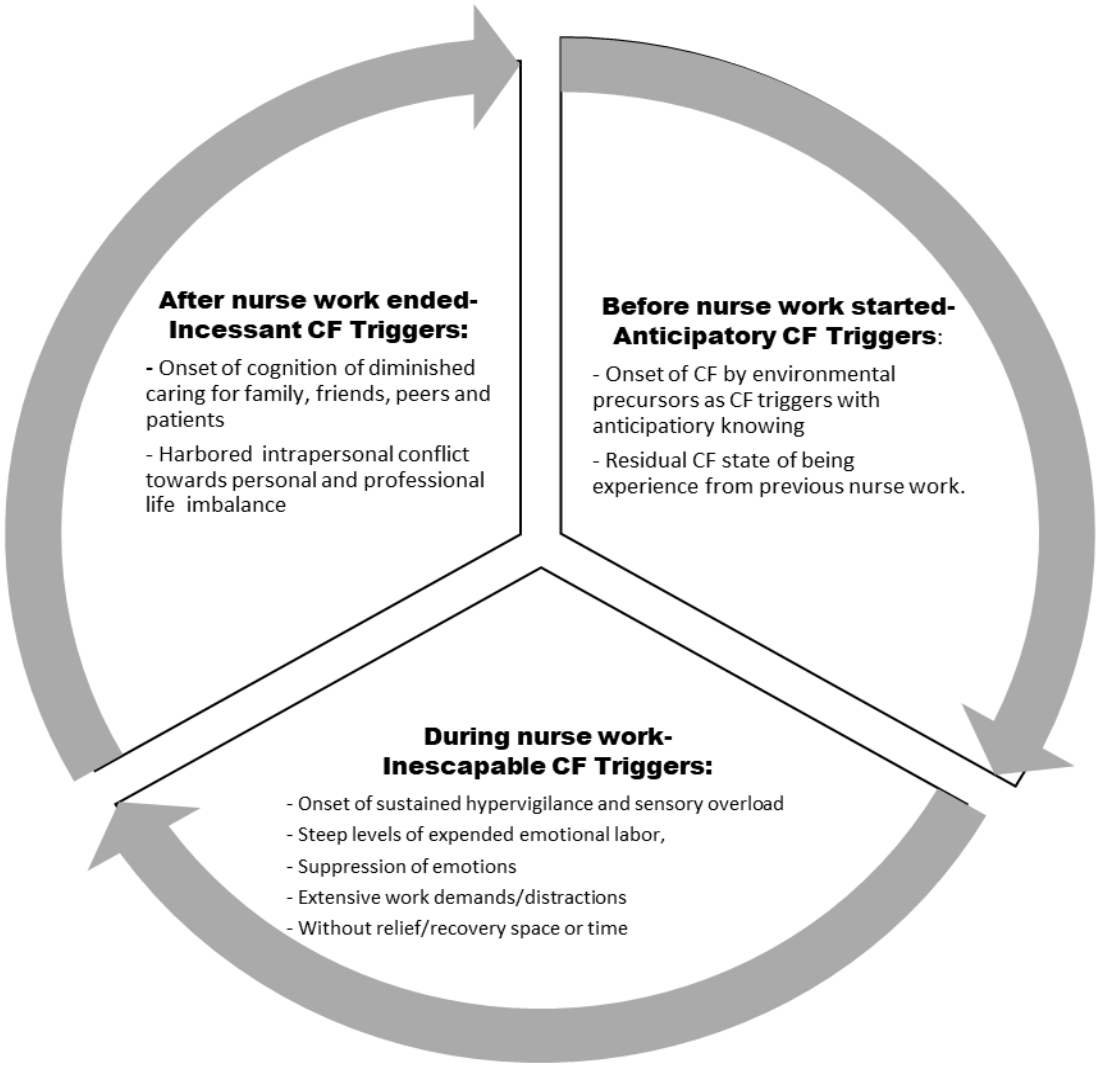

Figure 4. Revolving critical care nurse temporal work-life cycle related to perceived experience of compassion fatigue.

work as inescapable CF triggers of caring for suffering patients as their everyday duty; and after the nurse left work for the day with incessant CF triggers that accumulated during the workday and remained with the nurse in their personal life. We came to realize

that the impact of CF in critical care nurses permeate the whole life of the nurse and not just during the worked shift. Ironically, without protection from CF critical care nurses caring for suffering patients become themselves suffering nurses. The continuing cycling of CF triggers day after day is illustrated in Figure 4. Future research should *hear* more nurse voices to gain even more insight into CF reality leading to amelioration of the damaging effects of CF for nurses' professional and personal lives.

Trustworthiness

Trustworthiness was established using Lincoln and Guba's (1985) criteria for qualitative research: credibility, transferability, dependability, and confirmability. Credibility was demonstrated through prolonged engagement with the participants, repeated sessions with participants, triangulation of data from different sources, and member checking. Thick description from procedures, participant characteristics, and findings facilitate transferability for the reader to determine applicability to other settings. Dependability was demonstrated through a detailed audit trail. Confirmability was demonstrated through audit trails, triangulation of data, and reflexivity of the participants and researcher. In addition, I used my reflexive journal to bracket my thoughts to minimize the influence bias may have on data interpretation.

Limitations

Findings from this study were interpreted within the context of critical care type nurses in a single-site hospital and are not generalizable to other nursing care settings. A concerning recruitment issue was that some the nurses may have chosen not to let their

voice be heard because of a silencing response from guilt, fear of the stigma of admitting to having CF, or fear of retribution (Sheppard, 2015). However, if nurses do not come forward and admit that they are experiencing symptoms of CF, they are likely not to engage in interventions intended to relieve those symptoms and remain suffering and marginalized.

Conclusion

In this study the voices of critical care nurse who experienced CF was raised to co-create a better understand of the relationship between the nurse's work environment and compassion fatigue and to make plans to disseminate findings to nursing leadership which were agreed upon and planned. The findings from multiple data sources in this photovoice study revealed new knowledge into CF as it is experienced by critical care nurses that were missing in existing CF understanding: compassion fatigue is a revolving temporal work-life cycle in vulnerable nurses. Given the underlying health care environment of the constant need to find ways to improve quality and safe patient care, the pursuit of resolving CF in critical care nurses and all clinical nurses needs to embrace the value of creating opportunities for dialogue and action among peer nurses, nursing leadership, and other hospital policy-makers for positive practice change.

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CHAPTER IV

SUMMARY

In this study, the phenomenon of compassion fatigue in critical care nurses was examined using Photovoice as a type of participatory action research methodology and guided by the emancipatory framework of Paulo Freire (1997/2000). This investigation into critical care nurses' CF reality became "a common striving towards awareness of reality and towards self-awareness, which makes this investigation a starting point for the educational process or for cultural action of a liberating character" (Freire (1970/2000, p. 107). The phrases *awareness of reality* and *cultural action of a liberating character* are significant in reflecting on my experience throughout the process and progress of this study. The phrases are significant because in learning what participatory action research is I reached a deeper level of learning than I had anticipated. For me, and I believe for my participants also, there was a shared experience that reached unexpected awareness of CF reality which, together, we intend to initiate a movement of cultural action of a liberating character for critical care nurses. This study was the first step in engaging critical care nurses in becoming catalysts for change related to ameliorating the negative impact of CF on their professional and personal lives. This chapter includes a discussion of the emergent themes and subthemes as co-created knowledge from the study participants and me, my reflective thoughts of the participants in the interviews and focus group session, study ethics, study strengths and limitations and recommendations for future research.

Thematic Findings

This study uncovered CF as existing in nurses in a revolving temporal work-life cycle (Figure 6) that negatively impacts the nurses' professional and personal lives with little to no relief from exhaustion and exposure to patient suffering. In 2010, Coetzee and Klopper stated compassion fatigue was the final stage of a process in nurses that progressed through three stages: compassion discomfort, compassion stress, and compassion fatigue. Later in 2017, Coetzee and Laschinger (2017) stated it was the balance or imbalance of resources that influences the etiology of CF. Building further upon Coetzee and Klopper's (2010) and Coetzee and Laschinger's (2017) approach to CF, this study demonstrates the detrimental role unrelieved emotional, physical, and mental exhaustion from nurse work plays on the whole life of a nurse. Looking through the lens of the participants' eyes three overarching themes and nine subthemes were identified as contributing factors to critical care nurse experience with their reality of CF. The thematic analysis from participant responses was guided by the SHOWED interview questions developed by Wang and Burris (1997) and resulted in the co-created knowledge gained from the identified themes and subthemes.

Theme 1: Before nurse work begins – Anticipatory CF triggers. Two subthemes were identified in the temporal theme of what happens to the critical care nurse as they enter the work space related to CF: *environmental precursors as CF triggers with anticipatory knowing* and *residual CF experience from previous worked shift(s).* Several nurses shared feelings of anticipating the busyness of the day from seeing

simple items such as trash and linen overflowing from carts from the previous shift meeting the many needs of patients or the filled waiting rooms as the nurse walks into their unit. One nurse stated the smells and sounds of patient groans and multiple alarms meeting this nurse as she entered her work unit set a tone of despair for the 12-hour work shift. Nurse's sensory perceptions amplify the perceived work demands before accepting their patient care assignments. These anticipatory perceptions of despair in combination with nurses' feelings of unrelieved exhaustion from previously worked shift contribute to perceived experiences of CF.

Theme 2: During nurse work – Inescapable CF triggers. Five subthemes were identified on what happens to the critical care nurse during their work shift: *sustained hypervigilance and sensory overload; steep level of expended emotional labor; suppression of emotions; extensive work demands/distractions;* and *yearning for respite space and time.* The participants spoke about the need to stay vigilant about their patients. The participant's descriptions of their workday revealed the continuous intensity the critical care environment demanded of nurses. For example, though several participants shared the need to have a little sanctuary-type space for just a few minutes to 'regroup' themselves, they stated they did not want to leave their patients to go to the nearby lounge. The irony is that the nurses recognize a personal need to take a break during the workday but choose not to take time away from their patient(s). Several participants identified alarm fatigue as an issue because each patient had several technology-based monitors attached with each having alarms. Two participants discussed the difficulty of

caring for a patient that is actively dying and their family and caring for a patient who is going home. It is noteworthy that three of the seven participants took a picture of an outside scene such as a sunset as one of their meaningful photographs. One participant described feeling of being "trapped in a little black box" of the critical care unit. The photographic scene appeared to be a desire to escape to someplace open and serene. Overall, the critical care patient care work environments expose nurses to inescapable triggers with no relief leading to perceived experiences of CF.

Theme 3: After nurse work ends – Incessant CF triggers. Two subthemes were identified on what happens to the critical care nurse after their nurse work: *cognition of diminished caring for family, friends, peers, and patients* and *harbored intrapersonal conflict towards professional and personal life imbalance.* Several participants stated they 'felt bad' that they could not take care of patients the way the participant wanted. Several participants also remarked they 'felt bad' that they did not have anything left to give family and friends after a worked shift. The incessancy of CF in the nurse's life was illustrated by two of the participants who shared either their family members or their counselor identified that the participant spoke constantly about work when away from work though the participant was not aware of doing so. It is noteworthy that the subtheme findings in this study are consistent with Sheppard's (2015) statement that nurses felt they were saturated by their emotions, unable to disconnect from work and from patients, and had a longing for social support yet actively pushing others away. These perspectives maintain that CF is generated from the critical care nurse's work

position and work environment that transcends into the nurse's personal life and then back into their professional life in a constantly revolving temporal work-life cycle.

Reflections on Participant Interview and Focus Group Session

Drawing from notes in my field book, I feel it is important to note that from my observation, each participant's behavior during the interview and focus group session can be characterized as being with candor, frankness, and readiness to talk. Because the participants were asked to reflect and take photographs over a two-week period, it became evident the participants had spent some time reflecting on their photographs, their chosen titles and the written meaning they would give each photograph. In the interview, there was no pause or delay in the participant responses to interview questions. Each participant had a calm demeanor and they genuinely wanted to share their thoughts and photographs with me. Only one participant became teary-eyed when talking about one of their photographs about some patients not having family and that she, as a nurse, becomes the needed 'family member' to support the patient during their time in the critical care unit. I gave her some time to process the moment and offered to stop the interview, but the participant stated the desire to complete the interview and we did. This same participant contacted me twice after the interview to check when the focus group was being scheduled to not miss it demonstrating engagement in the study process. Another participant met twice with me for the interview at the participant's request because during the first interview, the participant decided not to use two of the photographs and wanted something more meaningful. I agreed to the meet a second time

to complete the interview and the participant asked that the photographs be placed in a particular order to tell her CF story. Again, this was another example of a participant staying engaged and reflective of their CF experience over a prolonged time.

I believe I built a trusting relationship with each of my participants and me that began in the orientation session and was built stronger during the study in several scheduled face-to-face encounters and through email communications. The day after one of the participant's interview, I received a heartfelt thank you text message thanking me for allowing her to be in this study that she shared had merit in addressing compassion fatigue and potential for change. In PAR establishing a trusting relationship between the researcher and the participants (Truglio-Londrigan, 2015) to establish a safe and comfortable relationship so that the authentic word of CF reality from the participants' critical consciousness is revealed and not remain unspoken and hidden. The participant level of reflection, engagement, and commitment to the study and design was high contributing to the credibility of the results.

The focus group session was held in a large classroom located in the middle of the hospital but not in a patient care unit and away from typical people traffic. This location helped protect the participants' privacy. I had sent direction to the participants and upon arriving for the session, many commented that they did not know this room existed. The classroom had a large conference type table with chairs and plenty of space for participants to view and rearrange the photographs. The focus group discussion began with SHOWED questions to be answered in general about experiences with CF and

thoughts on actions. I did note that the participants had some difficulty answering the last SHOWED question *What can we do?* in the interviews but were more progressive in the focus group. This may be contributed to the increasing comfort level that they may have felt in sharing openly with other participants as the focus group progressed as well as the additional time between interview and focus group for reflection.

It is noteworthy that the consensus of what action to be taken next was to present to critical care nursing administrators and directors, and that the participants wanted the May 2019 Nurses' Week to be focused on CF to include an art display of their photographs. One participant suggested having an opportunity for viewers of the photographs to write their own thoughts about CF on a slip of paper to place in a box for nursing leadership to review. The participant stated allowing nurse viewers to write their CF meaning would allow more nurses to be actively involved in creating a CF awareness within the culture of nursing at this facility. The participants also felt strongly that new nurses are not adequately educated about CF and they suggested that CF information be included in the New Nurse Residency curriculum.

This consensus decision of the participants is a departure away from informing individual nurses in critical care to informing the nurses throughout the hospital facility. This was different than suggested actions stated in the individual interviews. During the interviews the participants had a more limited range of answers to the SHOWED question *What can we Do?* with responses such as have an in-service, provide CF training off the patient care units, or provide literature in the nurses' lounges. As a group,

the participants demonstrated a shift in thought from the individual nurse or unit to be more inclusive of all nurses such as the recommendation of a CF focus in the upcoming Nurses' Week and including CF information in the New Nurse Residency Program. This shift in thought and perspective in the participants suggests that the photograph viewing and discussion as a group during the focus group generated the change in perspectives. This change in perspectives and increased sense of empowerment was a transformational moment I observed in the participants is called critical consciousness. Freire (1997/2000) considers critical consciousness as the discernment one must have to perceive the reality in a situation not being closed but as a limiting situation that can be changed. The sense of connectedness the participants created during the focus group became apparent in their ease of discussions with each other though none knew each other before the focus group session.

The next step in the focus group was the viewing of the photographs. Throughout the focus group session there was a palpable eagerness among the participants to view all the photographs. I observed them as they moved around the table and began to cluster photographs into a timeline. The participants huddled two or three at a time around certain photographs and pointed to different photographs. The participants were observed to be at ease discussing their thoughts about the photographs with each other. They were particularly intrigued with the photographs on alarm fatigue and 'sanctuary space' and 'my little black box' and 'in a black hole'. It was as if they could identify with each other and knew exactly what each were experiencing through viewing the photographs

together. The participants were then shown the conceptual model of CF in a temporal work-life cycle I had conceptualized from the participants' work in the study. All the focus group participants agreed with the temporal work-life cycle conceptual model but shared they had not thought of CF as a continual issue in their whole life.

The participants were instructed that they could present the findings with me at a scheduled critical care service administrative and directors meeting but to seriously consider any professional or personal consequences from revealing their participation in this CF study. A few participants indicated they might be interested in co-presenting. The group decision was for me to contact each participant when the meeting with nursing leaders and administrators was scheduled. During the contact with each participant of the scheduled presentation meeting, I will remind the participants there is no obligation to be at the presentation and that there may be risks in revealing their identity as a study participant. I will leave the decision of being present at the critical care service administrative and directors meeting to the participant. The lead critical care administrator informed me she will place me on the December 2018 critical care directors meeting. The participants were interested also in reading the articles I planned to write from the study. I also agreed share my written findings with them.

At the end of the focus group, I asked the participants to share their experiences as a participant in the study. During the focus group I did not use a formal questionnaire but rather leaned on a facilitated discussion allowing opportunity for each participant to express their thoughts about being in this study. All the participants thought being in the

study was a positive experience and gained personal insight into their CF experience through the Photovoice method. Some of the participants stated deciding on subject matter meaningful to their CF was difficult at first but after reflecting on their meaning of CF taking the photographs became easier. I believe the focus group ended with members recognizing their contributions to making a small group research study endeavor successful.

Ethics

After receiving written consent to conduct this study from each administrative Director (see Appendices A, B, C), ethical approval was provided by the Internal Review Board (IRB) of the hospital health system and Texas Woman's University with direct oversight provided by the hospital health system (see Appendices D, E, F, G, H, I). Each informed consent was reviewed and approved by the hospital health system's compliance officer before going to the hospital health system IRB. The compliance officer required that the hospital health system policy about taking photographs in the hospital be included in the informed consent and highlighted which was included for the compliance officer's review and approval. To further emphasize the need for the participants to comply with their facility's policy on taking photographs in the hospital or grounds of the hospital, the facility's policy was verbally reviewed in the ethical photography training with handout (see Appendix J) each participant received prior to taking photographs for this study as well as consent forms for any people in any photograph taken. Participants were instructed at the interview I needed a signed permission to photograph and use the

photograph in this study form from any person in a photograph (see Appendix K). Otherwise, the photograph with a person in it would not be used nor collected. Participants were instructed that at the focus group they would be asked to indicate which, if not all, photographs they gave me permission to use in any publication or public display of the photographs with their pseudonym names.

Written and verbal informed consents (see Appendices L, M, N) were obtained prior to volunteering participants taking photographs or participating in the audio-recorded interviews and the focus group discussion. The protection of study participant's privacy from public divulgement is a key factor in conducting ethical research. All electronic documents (narrative, data analysis, and photographs) were kept on my password protected and firewalled computer. I maintained confidentiality by using pseudonyms chosen by each of the participants and written on their demographic sheet (see Appendix O) associated with their interview narrative and photographs to protect the participant's identity. The nature of compassion fatigue requires the participant to reflect on current as well as past experiences with recognizing and responding to personal feelings felt while caring for suffering patients. The recall of distressing events may create emotional responses to memory triggers (Stringer & Genat, 2004). If the participant demonstrated emotional distress during the interview, I provided enough time for the person to come to a point of comfort and encouraged the participant to communicate with the institution's Employee Assistive Program (EAP) per the institution's policy. I also had contacted a local clinical psychologist who had experience

in counseling nurses with symptoms of compassion fatigue and agreed to be an outside source for counseling emotional distress, if the participate wanted to contact him and contact information was provided to participants at the orientation session (see Appendix P). This outside psychological resource was provided in case the participant wanted help but did not want to use the facility's EAP. I am not aware that any participant accessed any psychological service.

Trustworthiness

Trustworthiness was established using Lincoln and Guba's (1985) criteria for qualitative research: credibility, transferability, dependability, and confirmability. Credibility was demonstrated through prolonged engagement with the participants, repeated sessions with participants in an orientation, interview, and focus group meetings, triangulation of data from different sources of photographic evidence, written meanings by the participants for each photograph, verbatim transcripts of the interviews and member checking. Thick description from procedures, participant characteristics, and findings facilitate transferability, which is the criteria that allows reads to determine the usefulness and applicability of the findings beyond this sample. Dependability was demonstrated through a detailed audit trail using a methodological journal, reflective journal, and field book. Confirmability was demonstrated through audit trails, triangulation of data, and reflexivity of the participants and researcher. In addition, I used my reflexive journal to bracket my thoughts to minimize the influence bias may have on data interpretation.

Strengths and Limitations

Strengths of the study included the participants' commitment to the study and their fidelity to nursing practice. It needs to be noted how difficult it is for nurses to 'add anything to their plate' with the various work schedules and work demands as well as homelife demands. I think some of the photographs with the associated titles and meanings show related to such factors as alarm fatigue, multiple monitors, meeting patient family needs, and meeting personal family needs. Sometimes I am amazed at what data I have been able to collect considering the competing demands of the nurses. Another strength of the study is the trusting relationship developed over multiple interactions between the participants and me, which enabled the participants to feel 'safe' in sharing thoughts and feelings about their personal experiences with CF.

Adhering to the Photovoice method was a strength to this study because it facilitated the collection of rich data. The use of agendas for the orientation, interviews, and focus group meetings fostered consistency in the delivery of information to the participants over the course of the study (see Appendices Q, R, S). This study was also underpinned with Freire's philosophical framework of critical consciousness which provided a context for me to value the nurses' voices and experiences with CF and reach new knowledge about CF to be shared with nursing leadership and hospital policy-makers in dialogue to address CF. In addition, the photographs as data provided evidence of CF through the images taken by participants and enabled the 'voices' of the nurses to

not only be heard but also to be seen leading the participants to become catalysts for change in nursing practice.

The critical care service nurses worked a variety of shifts on different days of each other to staff 24/7 patient care units. The flexibility of the Photovoice method allowed me to work around the variety of participant work schedules and added to the strength of the study. Because of the flexibility of the Photovoice method, critical care nurses were able to be participants over the multiple meetings with me that a more rigid study design would not have been as amenable to the participants' work schedules and retention in the study.

A limitation consisted of the difficulty in recruitment of participants who work a variety of 12-hour work shifts and on several critical care units. Initially, I planned to recruit from the five critical care units but after three months it became evident I would need to expand my recruitment to more critical care type units. I received a study modification approval from the hospital health system and the TWU IRB to recruit from the three intermediate (step down) units and from the emergency care unit. I also received a study modification approval to shift from relying only on the distributed recruitment flyer (see Appendix U) to holding scheduled orientation meetings on several individual units with recruitment information sent to nurses by their director to be more conducive to the nurses' work schedules and to begin building a trusting relationship with potential participants (see Appendix V). I found this face-to-face recruitment approach to be more productive probably because CF experience is a sensitive and emotional topic and I

became known to the nurses and was not a stranger. Relying on recruitment with a distributed information flyer may have deterred potential participants who did not know the researcher. The recruitment study modifications allowed the building of trusting relationships between me and the participant. After the recruitment modifications, the study unfolded in a manner to address CF in critical care nurses that was practical and reality-based to add to the developing body of CF knowledge.

Another limitation was a silence response that may have prevented nurses from coming forward to participate because the term compassion fatigue can be viewed as negative and stigmatizing. Sheppard (2015) found nurses felt the loss of compassion was shameful and stigmatizing and not something nurses would want to admit to self and others. One participant in this study did withdraw because of the fear of being discovered as participating in a CF study from their director. A limitation may have occurred if any critical care service director was disinterested in the study which may have influenced potential participants to not participate or to have received study information who may have participated otherwise.

In the focus group meeting, I asked the participants *What photographs did you not take but wished you had taken?.* Four participants readily answered that they wanted to take photographs of people but did not take those photographs though they knew they could with a person's written consent. One participant stated that to take a photograph of a person who seemed to have compassion fatigue felt like an intrusion. Thus, the

participants self-imposed limit to taking photographs of things restricted data sources that otherwise may have added deeper CF understanding.

Future Studies

The dearth of qualitative studies on compassion fatigue has resulted in a lack of exploration and understanding of the personal perceived experiences of nurses with CF. Sheppard (2015) was unable to locate any studies with nurses sharing their stories about CF in their own words to bring attention to the problem of CF in nurses. Lombardo and Eyre (2011) stated an essential first step to implementing effective interventions to decrease CF is to cultivate an awareness of the problem. Thus, there is need to conduct more qualitative studies with nurses to increase awareness of CF as experienced by nurses and to challenge past conceptual models related to CF as new knowledge is gained. For example, Ledoux (2015) suggested that compassion fatigue as nurse suffering may not be from caring for suffering patients but rather compassion fatigue may exist where there is obstruction to the nurse caring of the patient. Thus, changes in the work environment and its impact on nurse experience with CF is an area needing study. In addition, CF research is needed to study nurses who do not experience CF or recover from CF easily than other nurses to find effective CF prevention measures nurses have employed. Another nurse group needing more study is nursing leadership. Knowledge gained about nursing leadership experience with CF could be beneficial in nurse leadership development so that the nurse leader could better recognize CF presence in the self and in the staff nurses. The implication is that future research is needed to know

more about CF and the factors that may be obstructing the nurse from carrying out their duty in caring for the suffering patient.

More research is needed in the emerging area of CF impact on the nurse's personal life from nurse work and the nurse work environment. As a research methodology in nursing, Photovoice can contribute to opening more dialogue between nurses and nursing leadership leading to mutual engagement in developing interventions of modifying the nurse's work environment with the intent of mitigating the effects of CF or preventing CF. Examples of nurse work environment modifications could be staffing for coverage and space for nurses to experience respite time during a shift, reassigned time to non-patient care or reduced acuity care to give nurses time away from the small day-to-day stressors that occur in a critical care unit, regular assessment of burnout or secondary traumatic stress by professional counselors who can intervene with therapeutic interventions, having access to professional counselors on call to all shifts and weekends, cultivating a culture that allows nurses to feel comfortable about discussing their CF experience with their supervisor, sending nurses home (with pay) after their patient dies, creating more 'greenspace' at entryways into units, minimize multiple acuity diagnoses critical care units, and factor intense family needs into patient assignments rather than just patient acuity. For effective work environment modifications to be realized, nurses and nurse leaders need to create opportunities to dialogue and to jointly design the modifications.

Conclusion

After hearing so many participants share their reality of compassion fatigue, it was evident that CF had impacted these nurses through their shared stories and photographs of their experiences with CF. The participants used the term compassion fatigue as I did for this study to have a common term used by nurses to name the emotional, physical, and mental exhaustion the nurse can feel from caring for suffering patients in a high-intensity work environment. It may well be that the term *compassion fatigue* has become a literary joining of many terms that nurses have used to describe or explain feelings of work-related exhaustion. It may be that a finite definition of compassion fatigue in nursing will not encompass nurse exhaustion because of the nature of nursing work with patients within complex healthcare environments. Planned presentation of findings at the critical care nursing leadership meeting and the presentation of photographs at the upcoming Nurses' Week begin a significant emancipatory dialogue between critical care nurses and nursing leadership concerning CF experiences.

The challenge for nursing is to acknowledge that compassion fatigue exists and that the resolution of compassion fatigue resides within intentional dialogue between nurses who provide patient care with nursing leadership and hospital policy-makers. This Photovoice study that was grounded in Freire's critical consciousness philosophy provided the medium to raise the voices of nurses about their experiences with CF. The process of taking photographs that represented CF allowed the nurse participants to break

their silence and describe how CF impacts both their professional and personal lives in a cyclical temporal fashion, and highlights aspects of the work environment that contribute to CF. This study revealed that nurses are vulnerable to CF because of the nature of nurse work with suffering patients and that CF impacts the nurses' personal life as well as their professional life. The damaging effects of CF as experienced by nurses will not be prevented or mitigated without shared efforts of nurses who provide patient care and nurse leaders administrators working collaboratively in dialogue and interventions. In this study new knowledge was found and illustrated in the conceptual model of the revolving temporal work-life cycle of vulnerable nurses with CF will give direction to nurse leadership and hospital policy-makers in developing interventions more specific to the temporal element of the nurse's work-life cycle related to ameliorating CF. New knowledge was found also in the impact of the work environment on nurse compassion fatigue that is not in the nurses' power to control alone without nursing leadership collaboration. Nurse insights, including visual images, into compassion fatigue as the emotional, physical and mental exhaustion nurses experience from carrying out their duty in caring for suffering patients in complex healthcare environments can guide the formulation of effective CF interventions.

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Table 1 (Chapter 1 Table 1)

Compassion Fatigue Manifestations in Nurses

Physical	Emotional/Mental	Spiritual	Workplace Performance	Sources
Weariness, without energy, burnout	Lessened enthusiasm, apathetic, callousness, indifference, irritable, impaired ability to concentrate	Lack of spiritual awareness, poor judgment, disinterest in introspection	Diminished performance, accident prone, desire to quit	Coetzee & Klopper, 2010
Headaches, digestive problems, muscle tension, sleep disturbances, fatigue, cardiac symptoms of chest pain, palpitations	Mood swings, restlessness, irritability, anxiety, oversensitivity, excessive use of substances: nicotine, alcohol, illicit drugs, depression, anger and resentment, memory issues, Poor concentration	Judgment, lack of joyfulness	Avoidance or dread of working with certain patients, reduced ability to feel empathy towards patients and families, frequent sick days	Lombardo & Erye, 2011
Skip breaks and lunch, staying late, find work exhausting and equate to working 24 hours 7 days a week	Feeling powerless to help, push away from potential source of support,	Losing hope, no longer caring	Requesting a transfer, quitting hospital nursing, becoming a nurse practitioner, leaving the profession	Sheppard, 2015

Table 2 (Chapter 1 Table 2)

Synthesized Comparison of Study Frameworks used as Guides

	Philosophical Underpinnings Guiding Study Framework	**Methodology for Study & Interpretive Findings**
	Critical Consciousness *(Paulo Freire, 1970/2000)*	**Photovoice as Participatory Action Research** *(Breda, 2015; Wang & Burris, 1997; Plunkett, Leipert, & Ray, 2013)*
Epistemology	Knowledge is gained through action and reflection cycle (praxis) with marginalized or underrepresented participants	Knowledge is socially constructed by the participants as local knowledge and collaboratively interpreted with the researcher from multiple data sources, including photographs.
Goals	To uncover real problems and actual needs for new knowledge to be created.	To enable people to describe their perceived needs in everyday life and become advocates for their own and their community's well-being
	To identify aspects around real situations and real people who reflect critically.	To identify a community's strengths and concerns through dialogue and the robust form of communication-the visual image.
	To achieve praxis: the reflection and action upon the world (work environment of nurses) to transform it.	To foster critical dialogue in small and large groups for building the capacity for action.
	To link knowledge to actions with intent to change at a local level and beyond.	To frame the problem to reach policy-makers for meaningful and transformative social change.

Table 3 (Chapter 2 Table 1)

Summary of work-related factors affecting nurse compassion fatigue (emotional, mental, physical exhaustion) in critical care services

Author(s), year	Research design and setting	Sample size	Work-related factors reported with construct of compassion fatigue or related construct	Score
		WORK DESIGN FACTORS		
Bellagamba et al. (2015)	Quantitative: descriptive cross-sectional design with self-administered questionnaire in a public referral university hospital in southern France as a single-site; *Job Strain (JS) & Mental Quality of Life (MQL)*	*N* = 77/145 were nurses (ICU, ER)	**Job Strain and Mental Quality of Life**: job strain associated with *inadequate rest between shifts rather than just working hours, inadequate staffing*; Job Strain related to *dysfunctional work environments*. Decreased mental quality of life influenced by working frequently with dysfunctional environments, employer's institutions organizational model of communication & staffing levels.	1
Donnely (2014)	Quantitative: cross-sectional study compared critical care nurses with non-critical care nurses with self-administered questionnaire in Ireland as single-site; *Bianchi Stress Questionnaire*	*N* = 86/135 were critical care nurses (ICU, ER)	**Work-related Stress:** Stress related to *redeployment (floating*) to work in other areas. Perceived stressors included having *administrative duties, death of patient and trying to achieve work-life balance.*	2
Gurses et al. (2009)	Quantitative: cross-sectional design in 17 intensive care units with structured questionnaire and at multi-site; Author developed questionnaire measuring performance obstacles, workload, perceived quality and safety care and *Quality Work Life (QWL)*	*N* = 265 (ICU)	**Quality and Safety of Care & Quality of Work Life:** Predictors of high work load: *poor physical work environment, effectiveness of supply chain management, seeking for patient charts, dealing with family-related issues and patient admissions. Age: older nurse reported ↑ quality and safety of care and ↓fatigue & stress; Night shift reported ↑fatigue & stress.*	2
Hunsaker et al. (2015)	Quantitative: descriptive, predictive study of nurses throughout U. S.; *Professional Quality of Life*	*N* = 284 (ER)	**Compassion Fatigue, Burnout, & Compassion Satisfaction:** *Low*	2

	(ProQOL)		*Manager support* was a significant predictor of ↑ levels of burnout & compassion fatigue; ↑levels of manager support contributed to ↑ levels of compassion satisfaction.	
Kelly & Todd (2017)	Quantitative: cross-sectional descriptive study at a Single site; *Professional Quality of Life (ProQOL) & ACN's Healthy Work Environment Assessment (HWEA)*	*N* = 105 (Critical Care)	**Compassion Fatigue, Burnout, & Compassion Satisfaction:** Areas with perceived *authentic leadership* had ↓ burnout levels and ↑ compassion satisfaction levels.	2
Mooney et al. (2017)	Quantitative: nursing unit specialization compared specific personal/professional factors between intensive care and oncology nurses; *Professional Quality of Life* (ProQOL)	*N* = 68 ICU nurses n = 18 oncology nurses	**Compassion Satisfaction & Compassion Fatigue:** ICU nurses exhibited significantly ↓ levels of CS & significantly ↑levels of burnout; compassion fatigue was significantly indistinguishable between the two groups; *reasoning behind low support-seeking when resources are available need to be determined.*	2
Mealer et al. (2017a)	Qualitative: focus group interviews assessing the feasibility and acceptability of a mindfulness-based cognitive therapy program.	*N* = 33 nurses in 11 focus groups	**Resilience:** themes were barriers to mindfulness-based cognitive therapy adherence, incentives for adherence, preferred qualifications of instructors, and didactic content.	2
Mealer et al. (2017b)	Quantitative: sample drawn from AACN members randomly selected and mailed survey; *Posttraumatic scale (PDS)* and an abbreviated version of the *Conner-Davidson Resilience Scale (CD-RISC)*	*N* = 744 (Critical Care)	**Resilience & PTSD**: Nurses who worked in any type of critical care unit other than medical unit and had ↑ resilience scores were 18%-50% less likely to experience post-traumatic stress syndrome (PTSD) than nurses with ↓ scores; critical care nurses with graduate degrees were more likely to experience PTSD than bachelor prepared nurses. *Mixed medical-surgical critical care units* scored lowest on control of practice, perceived *inadequacy of staffing*, support for education, and clinical competence.	2
Sacco et al. (2015)	Quantitative: cross-sectional study in a tertiary care academic medical center from all critical care units; Professional Quality of Life scale (ProQOL)	*N* = 221 (ICU)	**Compassion Fatigue, Burnout, & Compassion Satisfaction**: Nurses 40-49 years old had significantly ↑burnout (*P* = .002) and ↑ STS (*P* = .01) than other age groups. Nurses	2

			on *mixed acuity units had ↑ burnout (P = .04) than nurse on single- acuity units*. Nurses working with a *change in nursing management* had ↑ levels of burnout than nurses without change.	
Steinberg et al. (2017)	Quantitative: pilot study measuring feasibility of a Workplace mindfulness-based intervention at a level 1 trauma center*; Maslach Burnout Inventory, Professional Quality of Life scale (ProQOL), Ulrecht Work Engagement scale*	*N* = 32 (SICU)	**Burnout, Compassion Fatigue, and Work Engagement**: *emotional exhaustion & burnout* scores were negatively correlated with vigor (*r* = -0.53; 95% CI, -0.69 to -0.33; *P*<.001) and dedication (*r* = 0.50, 95% CI, -0.66 to -0.29, *P*<.001) scores. The number of days of self-reported decreased *productivity* was lower after the mindfulness-based intervention although the difference was not statistically significant.	2
WORK CLIMATE FACTORS				
Altaker et al. (2018)	Quantitative: descriptive correlational and regression analysis in national ICUs; *Moral Distress Scale-Rev., Psychological Empowerment Index, & Hospital Ethical Climate Survey*	*N* = 238 (ICU)	**Moral Distress**: *Poor ethical climate. unintegrated palliative care teams, and nurse empowerment* associated with ↑moral distress. Having access to a palliative care team experienced higher levels of moral distress.	2
Berg et al. (2016)	Mixed method design with focus group and used *Professional Quality of Life (ProQOL)*	*N*= 12 (Trauma)	**Compassion Fatigue & Burnout:** Reported stress triggers were *situational (abuse, pediatric, & geriatric), interacting with family, events like personal situations, failure to act as cohesive team, and conflicts with management.*	1
Cho & Kang (2017)	Quantitative: cross-sectional predictive study from 7 hospitals in Gyeong-Nam province of South Korea; *Type D Scale-14, Posttraumatic Diagnostic Scale, & Conner-Davidson Resilience Scale*	*N* = 179 (ICU)	**PTSD:** *Type D personality* was positively correlated to post traumatic stress disorder (PTSD) (*r* = .58, *p*< .001) and negatively correlated to resilience (*r* = -.43, *p*<.001). Reported 18.2% of critical care nurses in study could be considered at high risk for PTSD.	2
de Cassia Fogaca et al. (2010)	Quantitative: descriptive, cross-sectional in a single-site; *Effort-Reward Imbalance (ERI*) Brazilian version.	*N* = 20	**Occupational Stress**: *Balance between effort and reward* was higher in neonatal nurses than pediatric nurses;	1

		(PICU & NICU)	Effort-Reward Imbalance describes situations with no reciprocity between effort and reward at work.	
Dominguez-Gomez and Rutledge (2009)	Quantitative: exploratory comparative design in three community hospitals in California using *Secondary Traumatic Stress Scale*	*N* = 67 (ER)	**Secondary Traumatic Stress:** Post traumatic stress disorder (PTSD) domain of intrusive thoughts-46% *thought their work with patient when not intending* to: 52% reported *avoiding clients*; 43% reported *diminished activity* and *emotional numbing*; 50%reported being *easily annoyed* and had *difficulty sleeping*. 85% reported at least one symptom of STS.	2
Kelly and Lefton (2017)	Quantitative: descriptive online survey in 14 hospitals with recognition program and 10 without recognition programs; *Professional Quality of Life (ProQOL)*	*N* = 726 (ICU)	**Compassion Fatigue, Burnout, & Compassion Satisfaction**: Predictors for burnout: ↑ *job stress,* ↓ *job satisfaction and* ↓ *job enjoyment*; those nominated for DAISY award reported ↓burnout.	2
Lee et al. (2015)	Quantitative: descriptive study of perceptions of staffing adequacy, and perceived utility of given list of resilience resources and *Safety Attitudes Questionnaire*	*N* = 893 nurses & n = 24 nurse leadership (PICU)	**Teamwork Climate & Utilization of Resources:** Leadership overestimated staff use of *resilience resources*; 2 most impactful resources were *1-on-1 discussions with colleagues & informal social interactions with colleagues out of hospital*; an underused resource was *being sent home after the death of a patient*. Staff with lower *team climate* scores were more likely to use out-of-hospital social mechanisms for coping.	1
Metzler & Huckabay (2004)	Quantitative: descriptive study using *Moral Distress Scale and Maslach Burnout Inventory* in 2 hospitals	*N* = 60 (Critical Care)	**Moral Distress & Burnout:** The frequency of moral distress involving *futile care* was directly and significantly related to the experience of emotional exhaustion ($r = 0.317$, $p = .05$). Age Related: nurses 18-30 had ↑ levels of *depersonalization* than those 46-60; nurses with bachelor's degree or higher experienced more painful feelings.	2
Moola et al. (2008)	Qualitative: focus group interviews in five hospitals in Tshwane metropolitan area of South Africa	*N* = 10 (Critical Care)	**Burnout:** Burnout related to perception of job-related situations (Includes *personality type*). Themes: the inability to function as a result of stress levels, the	2

			inevitability of stress, role uncertainty, *need from operational support systems, emotional support, critical incident stress debriefing, supportive interrelationships, communication, assertiveness, teamwork.*	
Quenot et al. (2012)	Quantitative: longitudinal, monocentric, before-and-after interventional study in a French hospital: *Maslach Burnout Inventory & Centre for Epidemiologic Studies Depression Scale*	*N* = 29 (Critical Care)	**Burnout & Depression**: Intensive communication strategy regarding *end-of-life practices* in ICU reduced burnout 50% *Giving greater meaning to work* ↑level of personal accomplishment.	1
Verdon et al. (2008)	Mixed method: *Maslach Burnout Inventory* & Interviews with members of the ICU team related to organizational concerns and relationship concerns with patients, family and peers.	*N* = 97 (ICU) *N* = 10 interviews (ICU)	**Burnout:** 28% participants showed high level of burnout; 37% a medium level; Multivariate analysis showed concerns of the *lack of patient cooperation* ($p = 0.002$); the *organization of the service* ($p = 0.01$); the *rapid patient turnover* ($p = 0.008$) as significant independent factors. *91% of nurses had difficulty expressing their feelings or expectations to colleagues for fear of conflict, or creating bad atmosphere, or being judged by colleagues.*	2

Note. CI = confidence interval; ICU = intensive care unit; ER = emergency room; SICU = surgical intensive care unit; PICU = pediatric intensive care unit; NICU = neonatal intensive care unit.

Table 4 (Chapter 3 Table 1)

Relationship of Research Questions to the Adapted Photovoice SHOWED questions of Wang and Burris (1997).

Research Questions	SHOWED Interview Questions
What insights do critical care nurses have in recognizing and responding to compassion fatigue?	What do you ***S**ee* here? What is really ***H**appening* here?
What unmet support do critical care nurses feel is needed to protect against and prevent the development of compassion fatigue?	How does this relate to ***O**ur* lives? ***W**hy* does this concern, situation, strength exists?
What actions can be identified to raise compassion fatigue awareness in other critical care nurses and nursing leadership to prevent compassion fatigue?	How can we ***E**ducate* others and policy-makers through our new understanding? What can we ***D**o about it*?

Figure 1 (Chapter 2 Figure 1).

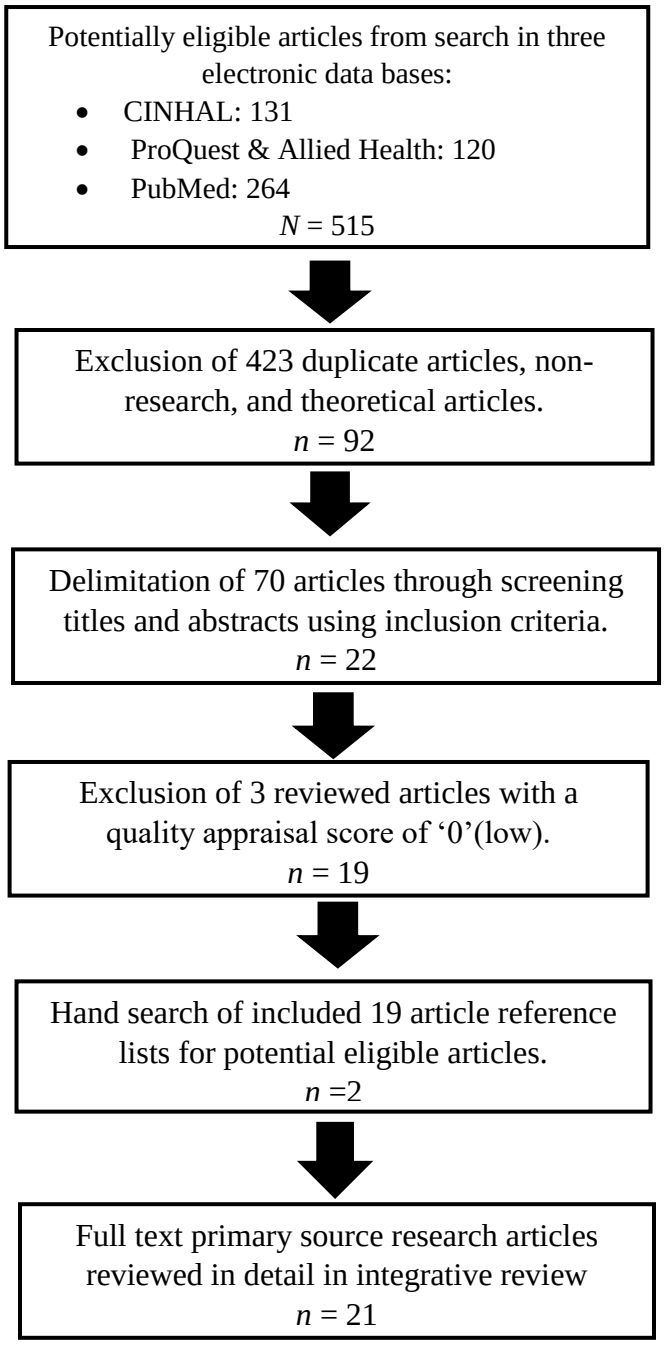


Figure 1. Flow chart of search identification and exclusion process for this integrative review.

Figure 2 (Chapter 2 Figure 2).

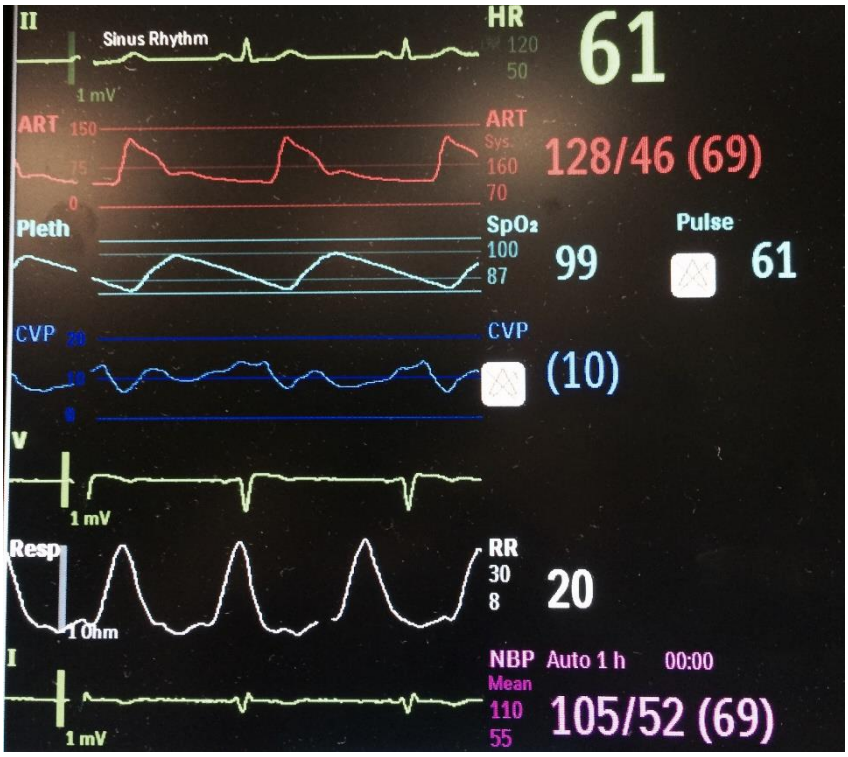
Quality criterion	Score
1. Quantitative or qualitative studies judged to have a rigorous design with primary focus of compassion fatigue (or related concept) only on critical care service nurses regarding work-related factors.	2
2. Quantitative or qualitative studies judged to have a rigorous design with a primary focus of compassion fatigue (or related concept) on critical care service nurses along with other healthcare providers regarding work-related factors.	1
3. Quantitative or qualitative studies judged to be of low quality based on a selected design yet offered subject relevancy with compassion fatigue (or related concept) on critical care service nurses regarding work-related factors.	0

Figure 2. Criteria used to appraise the quality of literature review guided by Whittemore and Knafl (2005) of eligible primary sources.

Figure 3 (Chapter 3 Figure 1).

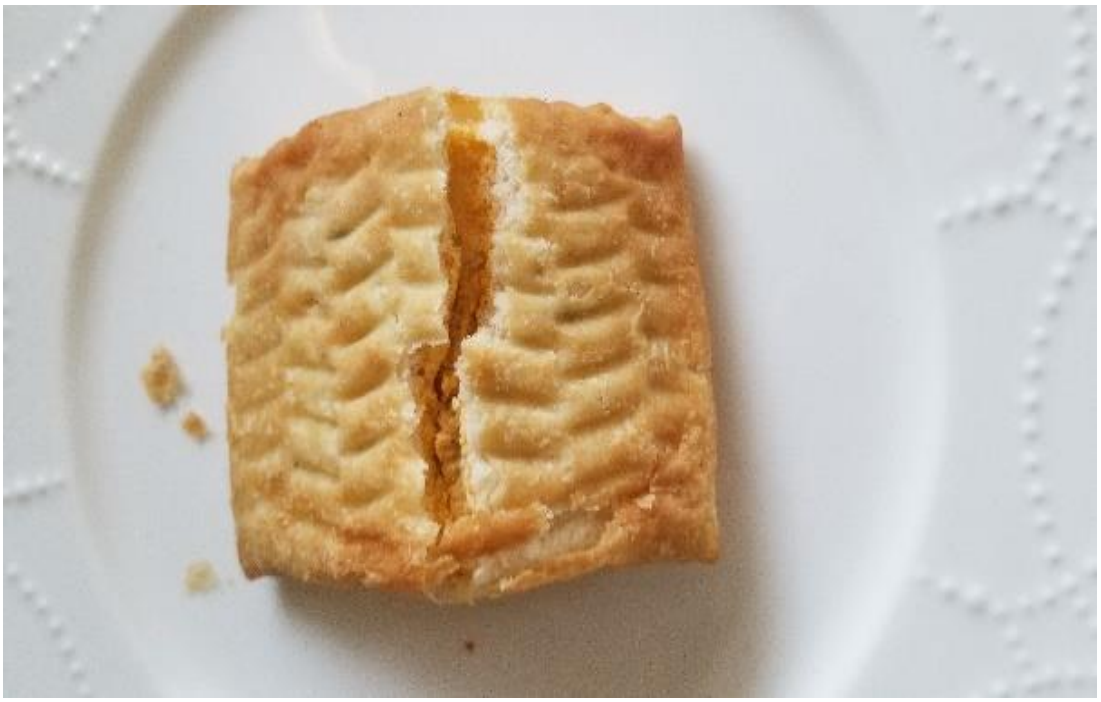
The Long Walk (Dakota)

Figure 3 (Chapter 3 Figure 2)



Alarm Fatigue (Dakota)

Figure 4 (Chapter 3 Figure 3)



Cold on the Inside (Corrine)

Figure 6 (Chapter 3 Figure 4).

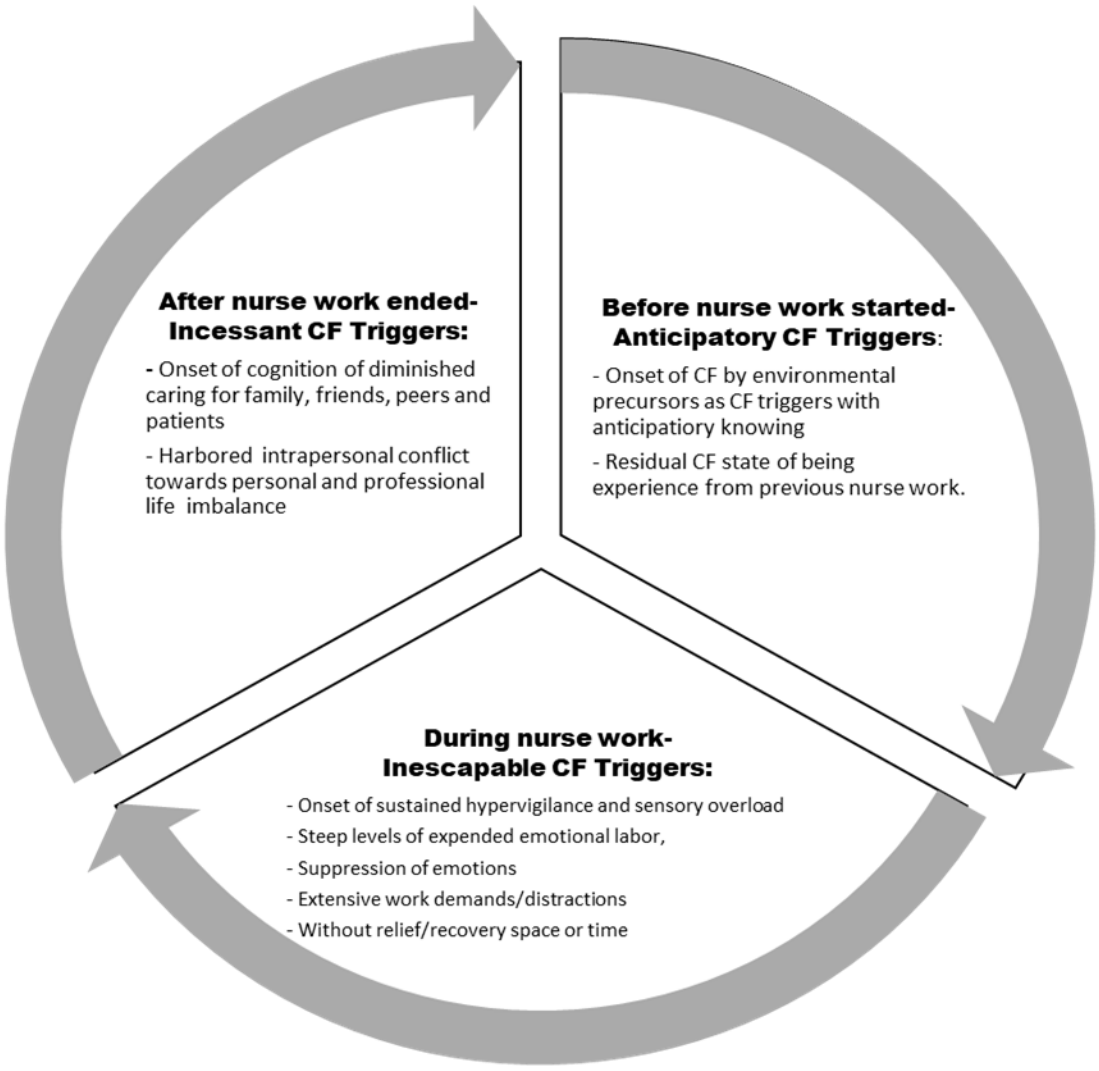
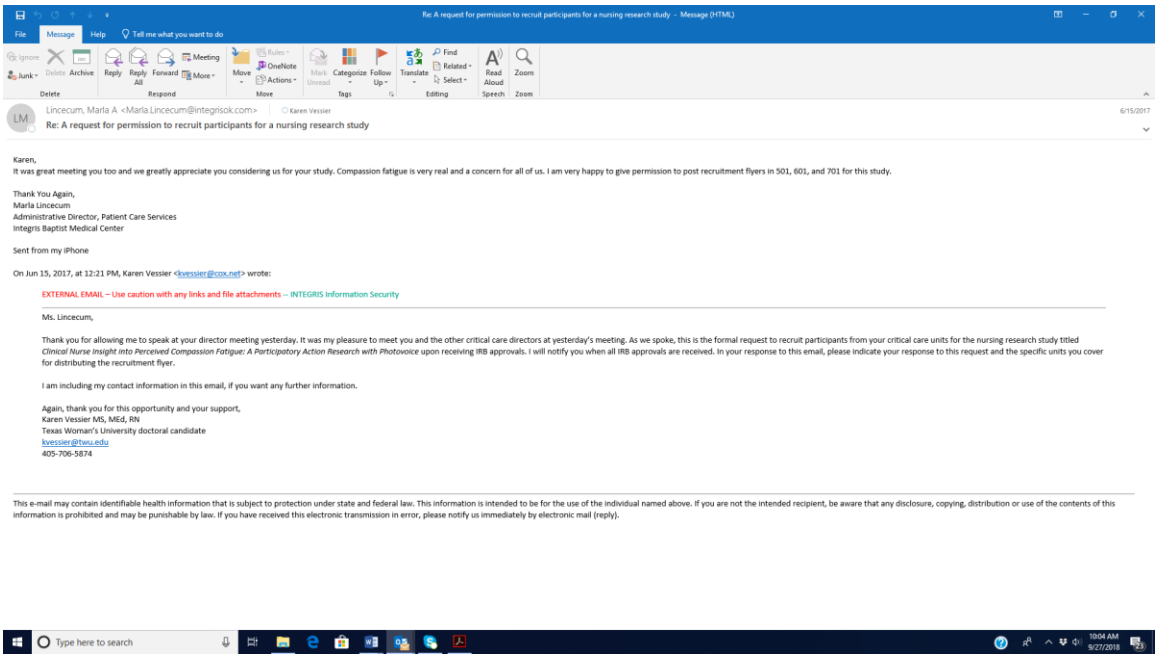


Figure 4. Revolving critical care nurse temporal work-life cycle related to perceived experience of compassion fatigue.

APPENDIX A



Re: A request for permission to recruit participants for a nursing research study - Message (HTML)

File Message Help Tell me what you want to do

Ignore Junk Delete Archive Reply Reply All Forward Meeting More Move Rules OneNote Actions Mark Unread Categorize Follow Up Translate Find Related Select Read Aloud Zoom

Delete Respond Move Tags Editing Speech Zoom

LM Lincecum, Marla A <Marla.Lincecum@integrisok.com> Karen Vessier 6/15/2017

Re: A request for permission to recruit participants for a nursing research study

Karen,
It was great meeting you too and we greatly appreciate you considering us for your study. Compassion fatigue is very real and a concern for all of us. I am very happy to give permission to post recruitment flyers in 501, 601, and 701 for this study.

Thank You Again,
Marla Lincecum
Administrative Director, Patient Care Services
Integris Baptist Medical Center

Sent from my iPhone

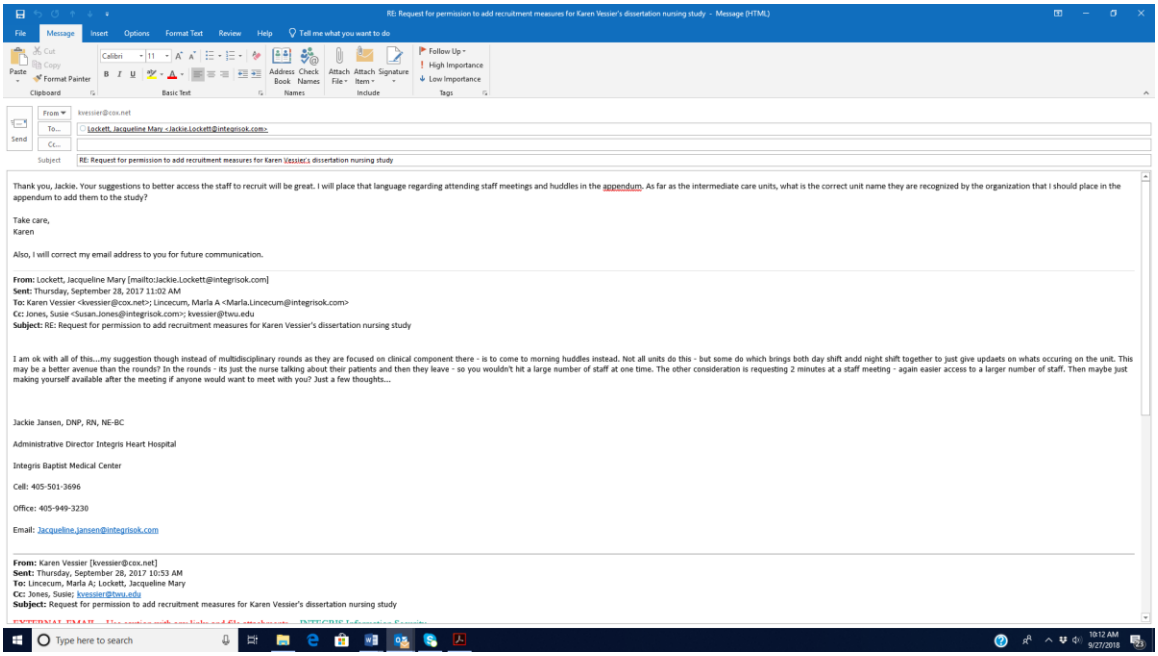
On Jun 15, 2017, at 12:21 PM, Karen Vessier <kvessier@cox.net> wrote:

> EXTERNAL EMAIL -- Use caution with any links and file attachments -- INTEGRIS Information Security
>
> Ms. Lincecum,
>
> Thank you for allowing me to speak at your director meeting yesterday. It was my pleasure to meet you and the other critical care directors at yesterday's meeting. As we spoke, this is the formal request to recruit participants from your critical care units for the nursing research study titled *Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice* upon receiving IRB approvals. I will notify you when all IRB approvals are received. In your response to this email, please indicate your response to this request and the specific units you cover for distributing the recruitment flyer.
>
> I am including my contact information in this email, if you want any further information.
>
> Again, thank you for this opportunity and your support,
> Karen Vessier MS, MEd, RN
> Texas Woman's University doctoral candidate
> kvessier@twu.edu
> 405-706-5874

This e-mail may contain identifiable health information that is subject to protection under state and federal law. This information is intended to be for the use of the individual named above. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of the contents of this information is prohibited and may be punishable by law. If you have received this electronic transmission in error, please notify us immediately by electronic mail (reply).

Type here to search 10:04 AM 9/27/2018

APPENDIX B



RE: Request for permission to add recruitment measures for Karen Vessier's dissertation nursing study - Message (HTML)

File Message Insert Options Format Text Review Help Tell me what you want to do

Paste Cut Copy Format Painter — Clipboard

Calibri 11 — Basic Text

Address Book Check Names — Names

Attach File Attach Item Signature — Include

Follow Up High Importance Low Importance — Tags

Send

From kvessier@cox.net

To... Lockett, Jacqueline Mary <Jackie.Lockett@integrisok.com>

Cc...

Subject RE: Request for permission to add recruitment measures for Karen Vessier's dissertation nursing study

Thank you, Jackie. Your suggestions to better access the staff to recruit will be great. I will place that language regarding attending staff meetings and huddles in the appendum. As far as the intermediate care units, what is the correct unit name they are recognized by the organization that I should place in the appendum to add them to the study?

Take care,
Karen

Also, I will correct my email address to you for future communication.

From: Lockett, Jacqueline Mary [mailto:Jackie.Lockett@integrisok.com]
Sent: Thursday, September 28, 2017 11:02 AM
To: Karen Vessier <kvessier@cox.net>; Lincecum, Marla A <Marla.Lincecum@integrisok.com>
Cc: Jones, Susie <Susan.Jones@integrisok.com>; kvessier@twu.edu
Subject: RE: Request for permission to add recruitment measures for Karen Vessier's dissertation nursing study

I am ok with all of this....my suggestion though instead of multidisciplinary rounds as they are focused on clinical component there - is to come to morning huddles instead. Not all units do this - but some do which brings both day shift andd night shift together to just give updaets on whats occuring on the unit. This may be a better avenue than the rounds? In the rounds - its just the nurse talking about their patients and then they leave - so you wouldn't hit a large number of staff at one time. The other consideration is requesting 2 minutes at a staff meeting - again easier access to a larger number of staff. Then maybe just making yourself available after the meeting if anyone would want to meet with you? Just a few thoughts....

Jackie Jansen, DNP, RN, NE-BC

Administrative Director Integris Heart Hospital

Integris Baptist Medical Center

Cell: 405-501-3696

Office: 405-949-3230

Email: Jacqueline.jansen@integrisok.com

From: Karen Vessier [kvessier@cox.net]
Sent: Thursday, September 28, 2017 10:53 AM
To: Lincecum, Marla A; Lockett, Jacqueline Mary
Cc: Jones, Susie; kvessier@twu.edu
Subject: Request for permission to add recruitment measures for Karen Vessier's dissertation nursing study

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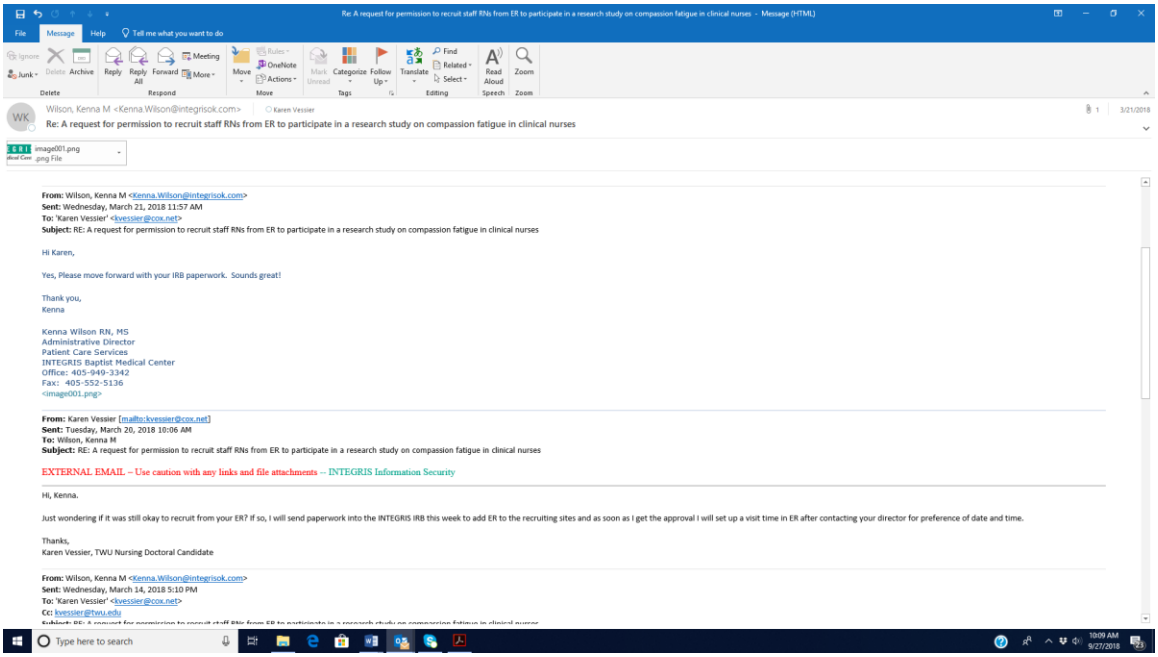
10:12 AM 9/27/2018

APPENDIX C



Re: A request for permission to recruit staff RNs from ER to participate in a research study on compassion fatigue in clinical nurses - Message (HTML)

File Message Help Tell me what you want to do

Ignore Junk Delete Archive Reply Reply All Forward Meeting More Move Rules OneNote Actions Mark Unread Categorize Follow Up Translate Find Related Select Read Aloud Zoom

Delete Respond Move Tags Editing Speech Zoom

Wilson, Kenna M <Kenna.Wilson@integrisok.com> Karen Vessier 3/21/2018

Re: A request for permission to recruit staff RNs from ER to participate in a research study on compassion fatigue in clinical nurses

image001.png .png File

From: Wilson, Kenna M <Kenna.Wilson@integrisok.com>
Sent: Wednesday, March 21, 2018 11:57 AM
To: 'Karen Vessier' <kvessier@cox.net>
Subject: RE: A request for permission to recruit staff RNs from ER to participate in a research study on compassion fatigue in clinical nurses

Hi Karen,

Yes, Please move forward with your IRB paperwork. Sounds great!

Thank you,
Kenna

Kenna Wilson RN, MS
Administrative Director
Patient Care Services
INTEGRIS Baptist Medical Center
Office: 405-949-3342
Fax: 405-552-5136
<image001.png>

From: Karen Vessier [mailto:kvessier@cox.net]
Sent: Tuesday, March 20, 2018 10:06 AM
To: Wilson, Kenna M
Subject: RE: A request for permission to recruit staff RNs from ER to participate in a research study on compassion fatigue in clinical nurses

EXTERNAL EMAIL – Use caution with any links and file attachments -- INTEGRIS Information Security

Hi, Kenna.

Just wondering if it was still okay to recruit from your ER? If so, I will send paperwork into the INTEGRIS IRB this week to add ER to the recruiting sites and as soon as I get the approval I will set up a visit time in ER after contacting your director for preference of date and time.

Thanks,
Karen Vessier, TWU Nursing Doctoral Candidate

From: Wilson, Kenna M <Kenna.Wilson@integrisok.com>
Sent: Wednesday, March 14, 2018 5:10 PM
To: 'Karen Vessier' <kvessier@cox.net>
Cc: kvessier@twu.edu

Type here to search 10:09 AM 9/27/2018

APPENDIX D

INTEGRIS

June 27, 2017

Karen Vessier, MS, MEd, RN
2600 Pine Valley
Edmond, OK 73012

RE: Your application dated June 23, 2017 regarding study number 17-022: Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice

Dear Ms. Vessier:

The INTEGRIS Health Institutional Review Board has reviewed your request for expedited approval of the new study listed above. This type of study qualifies for expedited review under FDA and DHHS (OHRP) Category 6 and Category 7 regulations.

The following have been approved by the IRB:

- Protocol: As submitted with the initial application
- Consent: June 26, 2017 version
- Accrual of up to 10 subjects

You may conduct your study as described in your application effective immediately. The study is subject to continuing review on or before June 27, 2018, unless closed before that date. If the study is closed prior to the continuing review date, notification regarding the closure and a final report must be submitted to the Board.

Please note that any changes to the study as approved must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. If you have any questions or require further information, please contact the IRB Coordinator at 405.949.4184 or via e-mail at irb@integrisok.com.

Sincerely,

RCBrown

R.C. Brown, M.D., Chairman
INTEGRIS Health, Inc. Institutional Review Board

APPENDIX E

INTEGRIS

November 14, 2017

Karen Vessier, MS, MEd, RN
2600 Pine Valley
Edmond, OK 73012

RE: Your application regarding the following study: Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice (Unfunded Study) 17-022

Dear Ms. Vessier:

The IRB received on November 1, 2017 and reviewed on November 14, 2017 your application for revision of the study listed above. This type of revision qualifies for expedited review under FDA and DHHS (OHRP) regulations and *IRB Review Procedures and Administrative Operations Policy* Section 3.2.2.3(a).

The IRB approves this amendment which includes the following changes:

- Revised Protocol, undated
- Revised Informed Consent, undated
- Revised recruitment e-mail to be sent to nurses working in 801, 901, 8E, 8W and 9W, October 2017
- E-mail from Jackie Lockett giving permission to recruit nurses on 8E, 8W and 9W

You may continue to conduct your study as revised effective immediately. The date for continuing review remains unchanged at June 27 2018, unless closed before that date.

Please note that any further changes to the study must be promptly reported and approved. If you have any questions or require further information, please contact the IRB Coordinator at 405.949.4184 or via e-mail at irb@integrisok.com.

Sincerely,

R.C. Brown, M.D., Chairman
INTEGRIS Health, Inc. Institutional Review Board

APPENDIX F

INTEGRIS

May 8, 2018

Karen Vessier, MS, MEd, RN
2600 Pine Valley
Edmond, OK 73012

RE: Your application regarding the following study: Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice (Unfunded Study) (17-022)

Dear Ms. Vessier:

The IRB received on April 25, 2018 and reviewed on May 8, 2018 your application for revision of the study listed above. This type of revision qualifies for expedited review under FDA and DHHS (OHRP) regulations and *IRB Review Procedures Policy* Section 3.4.4(a).

The IRB approves this amendment which includes the following changes:

- Protocol revision, as submitted with the April 25, 2018 IRB application
- Informed Consent revision, as submitted with the April 25, 2018 IRB application

You may continue to conduct your study as revised effective immediately. The date for continuing review remains unchanged at June 27, 2018, unless closed before that date.

Please note that any further changes to the study must be promptly reported and approved. If you have any questions or require further information, please contact the IRB Coordinator at 405.949.4184 or via e-mail at irb@integrisok.com.

Sincerely,

DocuSigned by:
R.C. Brown, M.D.
B65B5B544E46421...

R.C. Brown, M.D., Chairman
INTEGRIS Health, Inc. Institutional Review Board

Appendix G

June 12, 2018

Karen Vessier, MS, MEd, RN
2600 Pine Valley
Edmond, OK 73012

RE: Your application for Continuing Review for the following study: Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice (Unfunded Study) (17-022)

Dear Ms. Vessier:

The IRB reviewed your application for Continuing Review of the study listed above on June 12, 2018. This type of Continuing Review qualifies for expedited review under FDA and DHHS (OHRP) Category 6 and Category 7 regulations.

The Board approves the following:

- IRB application dated: June 6, 2018
- Protocol: As revised June 27, 2018
- Consent: November 14, 2017
- Removal of Susie Jones as a Sub-Investigator
- Addition of Kenna Wilson as a Sub-Investigator

The IRB approves this Continuing Review for the term of twelve months (June 27, 2019) and requires an annual report in one year or a final report in the event the study is closed prior to that time. Proposed changes in the approved study documents must be submitted to the IRB for review and approval.

This IRB is in compliance with the regulations of the FDA as described in 21 CFR parts 50 and 56, as well as the ICH and GCP Guidelines for IRB's.

If you have any questions or require further information, please contact the IRB Coordinator at 405.949.4184 or via e-mail at irb@integrisok.com.

Sincerely,

R.C. Brown, M.D., Chairman
INTEGRIS Health, Inc. Institutional Review Board

APPENDIX H

Institutional Review Board
Office of Research and Sponsored Programs
P.O. Box 425619, Denton, TX 76204-5619
940-898-3378
email: IRB@twu.edu
http://www.twu.edu/irb.html

DATE: July 19, 2017

TO: Ms. Karen Vessier
Nursing

FROM: Ms. Tracy Lindsay, Director of Operations
Office of Research & Sponsored Programs

Re: Institutional Authorization Agreement (IAA) Processed for Clinical Nurse Insight Into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice (Protocol #: 19627)

An IAA for the above referenced study between Texas Woman's University and INTEGRIS Health has been processed as an expedited study. The INTEGRIS Health IRB is the designated IRB providing the review for this study. According to our records, this protocol was most recently approved by the INTEGRIS Health IRB on 6/27/2017.

A current protocol file with all correspondence between the researcher and the INTEGRIS Health IRB must be maintained at TWU. Therefore, you are required to place on file any documentation regarding this study including modifications, extensions, notifications of adverse events, etc.

If you have any questions, please contact the TWU IRB.

cc. Dr. Anita Hufft, Nursing
Dr. Becky Spencer, Nursing
Graduate School

APPENDIX I

Institutional Review Board
Office of Research and Sponsored Programs
P.O. Box 425619, Denton, TX 76204-5619
940-898-3378
email: IRB@twu.edu
https://www.twu.edu/institutional-review-board-irb/

DATE: June 27, 2018

TO: Ms. Karen Vessier
Nursing

FROM: Ms. Tracy Lindsay, Director of Operations
Office of Research & Sponsored Programs

Re: Institutional Authorization Agreement (IAA) Updated for Clinical Nurse Insight Into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice (Protocol #: 19627)

An IAA for the above referenced study between Texas Woman's University and INTEGRIS Health was processed as an expedited study. The INTEGRIS Health IRB is the designated IRB providing the review for this study. According to our records, this protocol was originally approved by the INTEGRIS Health IRB on 6/27/2017. The TWU IRB has received an updated approval letter and has revised our records to indicate that the most recent approval date is 6/27/2018.

A current protocol file with all correspondence between the researcher and the INTEGRIS Health IRB must be maintained at TWU. Therefore, you are required to place on file any documentation regarding this study including modifications, extensions, notifications of adverse events, etc.

If you have any questions, please contact the TWU IRB.

cc. Dr. Anita Hufft, Nursing
Dr. Becky Spencer, Nursing
Graduate School

APPENDIX J

Ethical Photography Information Sheet

Photovoice in research has increased in recent years and has presented ethical issues to be addressed when conducting a study with Photovoice. The following guidelines for ethical photography is drawn from guidelines offered by the Centers for Disease Control and Prevention and adapted for this study.

Ethical photography practice is required in this study:

1. Photographer's will not take photographs that indict, stigmatize, or embarrass, or shame individuals or groups.
2. Participants should take photographs during their normal daily routines, in familiar public places, near work and school, and at home.
3. If participants are taking pictures while in the hospital, participants will not take pictures of patients or any INTEGRIS identifiable item. Photographs of patients or of INTEGRIS identifiable items will be removed from the study by the principle investigator.
4. If participants are taking pictures outside the INTEGRIS complex and an individual is in the picture, the participant must obtain a signed photograph release form from the individual and give to the principle investigator. The participant will provide the photographed individual with a copy of the photograph release form.
5. *For any and all photographs taken on any INTEGRIS Health, Inc. campus, whether inside or outside, photographer is still subject to INTEGRIS Health, Inc. policies and procedures. Specifically, the photographer is subject to and should read the following corporate compliance policies: Portable Devises Policy, SYS-IM-105, and Privacy of Health Information, SYS-IM-112. Participation in this study does not relieve the photographer of their responsibilities as an employee of INTEGRIS Health to maintain the confidentiality and privacy of patient identifiable information.*
6. The principle investigator will inform photographers in advance that the photographs may be used in public displays, presentations, or publications.
7. The principle investigator will inform participants that they are given permission to ask that their images not to be used, shared, or distributed. And, if requested by the participant, the photographs will be destroyed according to an established IRB-approved protocol.

Adapted from Bugos et al. (2014).

APPENDIX K

Consent Form for People Who May Appear in Photographs

Research Study Title: Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice

Principle Investigator: Karen C. Vessier MS, MEd, RN, Doctoral Candidate

Purpose of the photographs: You are being asked to give permission to have your photograph taken for use in a research study exploring the physical and emotional exhaustion nurses experience from compassion fatigue. The findings from this study will be used to raise awareness of the effects of compassion fatigue in other nurses and hospital administrators.

If you are asked to have your photograph taken as part of the study and agree to do so, please read the following:

What is involved? Your participation will take less than ten (10) minutes. During this time, the photographer may take pictures that contain images of you. The pictures will be sent electronically to Karen and will be discussed with the photographer and other study participant photographers and how the photographs relate to the physical and emotional exhaustion nurses experience from compassion fatigue. Your name or other identifying information will not be known or listed with photographs and reports. All pictures and information will be maintained in a confidential manner. It is good to remember that despite efforts to maintain confidentiality, there is always the chance that someone may recognize you in the photograph. **Your willingness to be photographed is voluntary and you may decline. Minors (under the age of 18) may not be photographed for this study.**

What will happen to the photographs? There is the possibility that some of the pictures will be included in public exhibitions or presentations. The pictures become the property of the photographer. However, if you decide later that you do not want your picture discussed or displayed anywhere, you may contact the primary investigator Karen Vessier @ (405) 706-5874 and she will immediately remove your pictures from the collection. You do not have to give any reasons for withdrawing your consent.

What if I have other questions? You may contact the principle investigator, Karen C. Vessier at (405) 706-5874.

This study has been approved by the Institutional Review Boards of INTEGRIS Health System and Texas Woman's University.

Agreement Statement: I have read and understand the information about this study using photographs. By signing this consent form, I agree to voluntarily have my photograph taken. I also understand and agree that permission is given to use my photograph(s) for this study and any possible exhibits, presentations, publications, and/or other educational purposes and that no identifying information will be used.

I have been offered and given a copy of the consent form in case I have questions or concerns later.

Please print your name and then sign on the lines below.

"Photographee"
Printed signature: _____

Signature: _____ Date: _____

"Photographer"
Printed signature: _____

Signature: _____ Date: _____

APPENDIX L

INFORMED CONSENT TO PARTICPATE IN RESEARCH

Subject: Compassion Fatigue

Principle investigator: Karen C. Vessier MS, MEd, RN
kvessier@twu.edu 405/706-5874

TWU Faculty Advisor: Becky Spencer PhD, RN, IBCLC
BSpencer@twu.edu 940/898-2406

Co-investigator: Susie Jones PhD, APRN-CNS, CCRN-P, CCRN-P, CCM
for INTEGRIS susie.jones@integrisok.com 405/951-8214

Title: Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice

Introduction: You are being asked to volunteer for a research study because you have been identified as a registered nurse working in one of the six critical care units at INTEGRIS Baptist Medical Center. The purpose of this study is to engage you in dialogue and reflection of the reality of experiencing compassion fatigue in the hospital setting. For this study compassion fatigue involves the physical and emotional exhaustion you experience from exposure to unavoidable work place stressors in the scope of carrying out your duty to the suffering patient.

This research is being conducted as a dissertation study of Texas Woman's University doctoral student, Karen Vessier. You are being asked to participate in this research because you: (1) identify self as a registered nurse, (2) identify self as having primary employment in one of the hospital's six critical care patient units, (3) identify self as having had experience with physical and emotional exhaustion from exposure to unavoidable workplace stressors in the scope of carrying out your duty to the suffering patient, (4) have unencumbered access to a smartphone for taking photographs, and (5) identify self as being 18 years of age or older.

Length of your participation: Your participation in the study will be about 4-6 months divided as follows: 1 two (2) hour group orientation session, 1 hour and a half (1 ½) individual interview, 2 group sessions (photo-sharing and dissemination of findings of approximately 2 hours each for total time of about 8 hours over a 4 to 6-month period plus time to take photographs for an estimated time of 9 hours.

Where the study is being conducted and target number of participants: The study is being conducted at INTEGRIS Baptist hospital critical care units with a target population of 10 registered nurses.

Study Procedures: As a participant in this study you are asked to consent to participate in four meetings with the researcher. At the completion of the last group session, your participation in the study will end.

Group Session: Orientation	You will sign a consent form and complete a demographic questionnaire, be oriented to the research study, basic photography, ethical photography and practice taking photos, describing meaningfulness of the photos, and transfer a practice photo to the researcher's dropbox.	2 hours
Individual Interview	After 2 weeks of taking photos and writing descriptions to the photos in your provided logbook, you will be contacted by the researcher to arrange for an interview. At the interview your photos will be screened on your smartphone and eligible photos you choose will be transferred to the researcher's dropbox. You will then be asked a few questions and your responses will be digitally audio-recorded. The researcher will collect your logbook for transcribing.	1.5 hours
Group Session: Photo-sharing	You will share photographs, titles and descriptions you choose to share in a group meeting with other participants and discuss the emerging themes.	2 hours
Group Session: Dissemination of Findings and Photos	You will discuss and make decisions about how to display your photographic images, titles, and descriptions for other nurses and policy-makers.	1.5-2 hours

Cost for taking part in this study: Participation in this study is at no cost to the participants.

Payment for taking part in this study: You will be compensated with a $25 gift card by the principle investigator at the individual interview for participating in both the group orientation session **and** the individual interview and another $25 gift card at the group dissemination of findings session for participating in both the group photo-sharing and the group dissemination of findings sessions.

Possible benefits to you for taking part in this study: The general benefit of this study is the participant may gain a deeper understanding of compassion fatigue and specific support to better manage compassion fatigue in their practice. Specific benefits for the participant are the gift cards.

About participating in this study: Your participation is voluntary. You may stop participating in the study at any time. Your decision to participate, not participate, or discontinue participation will not affect your employment or performance evaluation at INTEGRIS Health, Inc. in any way. No personal identifiable information will be used as a result of your participation in this study. No data is shared with your employer. Reports will only present data in aggregated format and are not linked to individual data.

Potential Risks:

(1) Loss of time: You are informed in the recruitment flyer and informed consent content of the study expected length of time of approximately 8-9 hours over a 4 to 6-month period in one study orientation meeting, one individual interview and two group sessions. You are also informed your participation is voluntary and you may stop at any time without consequences.

(2) Discomfort or fatigue: You may experience some discomfort discussing and sharing your personal compassion fatigue experience. You are informed your participation is voluntary and you may stop at any time without consequences. You are not video-taped in this study. You are informed of the multiple meeting times and length of study and that individual interviews can be at a place and time convenient to you as a participant. In addition, you will be provided a referral list of local psychologists at orientation for you to contact, if needed for any emotional discomfort.

(3) Loss of confidentiality: *Confidentiality will be protected to the extent that is allowed by law. No identification of the participant's real name or identity is*

used. There is a potential risk for loss of confidentiality in all email, downloading, and internet transactions. You are asked to call or email the researcher for communication purposes or to ask questions. You are asked on your demographic profile to identify an alias to be used with a photograph, title and description. Your identification is not connected with any data of photographs, titles of photographs, photograph descriptions or in transcribed transcripts. Only the researcher has access to the data. No data is shared with your employer and will not be used in your job performance evaluation. Only your chosen 'alias' is connected to any photograph you take and any transcription of the digitally audio-recorded interview. Any downloaded material will be kept on the researcher's password protected laptop computer and in a locked file cabinet of the researcher. Anonymity is not possible in this study as you and other participants will meet in group sessions and see each other. During the orientation and group sessions, you and other participants will be asked to keep membership and conversations confidential outside the group sessions. There is potential for photographs to have identifiable information. All of your photographs are screened with the researcher at the beginning of the individual interview for identifiable information and you may choose to remove any of your photographs from group or public viewing at any time during the study. Results of the study will be reported in aggregate form only. Secured computer data will be erased within three years of study completion along with destruction by shredding of any downloaded transcripts.

Responsibilities:

For any and all photographs taken on any INTEGRIS Health, Inc. campus, whether inside or outside, photographer is still subject to INTEGRIS Health, Inc. policies and procedures. Specifically, the photographer is subject to and should read the following corporate compliance policies: Portable Devises Policy, SYS-IM-105, and Privacy of Health Information, SYS-IM-112. Participation in this study does not relieve the photographer of their responsibilities as an employee of INTEGRIS Health to maintain the confidentiality and privacy of patient identifiable information.

Questions Regarding the Study: *The researchers will try to prevent any problem that could happen because of this research. You should let the researchers know at once if there is a problem and they will help you. Researcher contact information is located at the top*

of the informed consent. However, Texas Woman's University does not provide medical services or financial assistance for injuries that might happen because you are taking part in this research. If you have any questions about your rights as a participant in this research or the way it has been conducted, you should contact the INTEGRIS Health, Inc. Institutional Review Board at 405/949-4184 or Texas Woman's University Office of Research and Sponsored Programs at 940/898-3378 or via email at IRB@twu.edu. You should keep a copy of this document for your records.

Voluntary Statement

I have been given an opportunity to ask questions about this research study. If I have additional questions about taking part in this study, I may contact Karen Vessier at kvessier@twu.edu or 405-706-5874.

I understand that my participation in this study is voluntary. I know that I may quit the study at any time without affecting my employment or performance evaluation at INTEGRIS Health, Inc. or losing any benefits to which I might otherwise be entitled through my employment, If I have questions about my rights as a research subject in this study, I may contact the researchers and

INTEGRIS Health, Inc. Institutional Review Board
330 Northwest Expressway
Oklahoma City, OK 73112
Monday through Friday, 8:00 a.m. to 5:00 p.m.
405-949-4184

By signing this consent, I have not waived any of my legal rights or released the parties involved in this study from liability of negligence. I have read and understand the above information. I have been given a copy of the informed consent information page.

Participant Signature

_____Date_____

You will be given a copy of this signed and dated consent form to keep. If you have any questions about the research study you should ask the researcher; their phone numbers are at the top of this form. If you have questions about your rights as a participant in this research or the way this study has been conducted, you may contact the Texas Woman's University Office of Research and Sponsored Programs at 940-898-3378 or via email at IRB@twu.edu.

APPENDIX M

INFORMED CONSENT TO PARTICPATE IN RESEARCH

Subject: Compassion Fatigue

Principle investigator: Karen C. Vessier MS, MEd, RN
kvessier@twu.edu 405/706-5874

TWU Faculty Advisor: Becky Spencer PhD, RN, IBCLC
BSpencer@twu.edu 940/898-2406

Co-investigator: Susie Jones PhD, APRN-CNS, CCRN-P, CCRN-P, CCM
for INTEGRIS susie.jones@integrisok.com 405/951-8214

Title: Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice

Introduction: You are being asked to volunteer for a research study because you have been identified as a registered nurse working in a critical care or intermediate care unit at INTEGRIS Baptist Medical Center. The purpose of this study is to engage you in dialogue and reflection of the reality of experiencing compassion fatigue in the hospital setting. For this study compassion fatigue involves the physical and emotional exhaustion you experience from exposure to unavoidable work place stressors in the scope of carrying out your duty to the suffering patient.

This research is being conducted as a dissertation study of Texas Woman's University doctoral student, Karen Vessier. You are being asked to participate in this research because you: (1) identify self as a registered nurse, (2) identify self as having primary employment in one of the hospital's six critical care patient units, (3) identify self as having had experience with physical and emotional exhaustion from exposure to unavoidable workplace stressors in the scope of carrying out your duty to the suffering patient, (4) have unencumbered access to a smartphone for taking photographs, and (5) identify self as being 18 years of age or older.

Length of your participation: Your participation in the study will be about 4-6 months divided as follows: 1 hour and a half (1 ½) individual or small group orientation session, 1 hour and a half (1 ½) individual interview, 2 group sessions (photo-sharing and dissemination of findings of approximately 2 hours each for total time of about 8 hours over a 4 to 6-month period plus time to take photographs for an estimated time of 9 hours.

Where the study is being conducted and target number of participants: The study is being conducted at INTEGRIS Baptist hospital critical care units with a target population of 10 registered nurses.

Study Procedures: As a participant in this study you are asked to consent to participate in four meetings with the researcher. At the completion of the last group session, your participation in the study will end.

Individual or Small Group Session: Orientation	You will sign a consent form and complete a demographic questionnaire, be oriented to the research study, basic photography, ethical photography and practice taking photos, describing meaningfulness of the photos, and transfer a practice photo to the researcher's dropbox.	1.5 hours
Individual Interview	After 2 weeks of taking photos and writing descriptions to the photos in your provided logbook, you will be contacted by the researcher to arrange for an interview. At the interview your photos will be screened on your smartphone and eligible photos you choose will be transferred to the researcher's dropbox. You will then be asked a few questions and your responses will be digitally audio-recorded. The researcher will collect your logbook for transcribing.	1.5 hours
Group Session: Photo-sharing	You will share photographs, titles and descriptions you choose to share in a group meeting with other participants and discuss the emerging themes.	2 hours
Group Session: Dissemination of Findings and Photos	You will discuss and make decisions about how to display your photographic images, titles, and descriptions for other nurses and policy-makers.	1.5-2 hours

Cost for taking part in this study: Participation in this study is at no cost to the participants.

Payment for taking part in this study: You will be compensated with a $25 gift card by the principle investigator at the individual interview for participating in both the individual or small group orientation session **and** the individual interview and another $25 gift card at the group dissemination of findings session for participating in both the group photo-sharing and the group dissemination of findings sessions.

Possible benefits to you for taking part in this study: The general benefit of this study is the participant may gain a deeper understanding of compassion fatigue and specific support to better manage compassion fatigue in their practice. Specific benefits for the participant are the gift cards.

About participating in this study: Your participation is voluntary. You may stop participating in the study at any time. Your decision to participate, not participate, or discontinue participation will not affect your employment or performance evaluation at INTEGRIS Health, Inc. in any way. No personal identifiable information will be used as a result of your participation in this study. No data is shared with your employer. Reports will only present data in aggregated format and are not linked to individual data.

Potential Risks:

(4) Loss of time: You are informed in the recruitment flyer and informed consent content of the study expected length of time of approximately 8-9 hours over a 4 to 6-month period in one study orientation meeting, one individual interview and two group sessions. You are also informed your participation is voluntary and you may stop at any time without consequences.

(5) Discomfort or fatigue: You may experience some discomfort discussing and sharing your personal compassion fatigue experience. You are informed your participation is voluntary and you may stop at any time without consequences. You are not video-taped in this study. You are informed of the multiple meeting times and length of study and that individual interviews can be at a place and time convenient to you as a participant. In addition, you will be provided a referral list of local psychologists at orientation for you to contact, if needed for any emotional discomfort.

(6) Loss of confidentiality: *Confidentiality will be protected to the extent that is allowed by law. No identification of the participant's real name or identity is used. There is a potential risk for loss of confidentiality in all email, downloading, and internet transactions.* You are asked to call or email the

researcher for communication purposes or to ask questions. You are asked on your demographic profile to identify an alias to be used with a photograph, title and description. Your identification is not connected with any data of photographs, titles of photographs, photograph descriptions or in transcribed transcripts. Only the researcher has access to the data. No data is shared with your employer and will not be used in your job performance evaluation. Only your chosen 'alias' is connected to any photograph you take and any transcription of the digitally audio-recorded interview. Any downloaded material will be kept on the researcher's password protected laptop computer and in a locked file cabinet of the researcher. Anonymity is not possible in this study as you and other participants will meet in group sessions and see each other. During the orientation and group sessions, you and other participants will be asked to keep membership and conversations confidential outside the group sessions. There is potential for photographs to have identifiable information. All of your photographs are screened with the researcher at the beginning of the individual interview for identifiable information and you may choose to remove any of your photographs from group or public viewing at any time during the study. Results of the study will be reported in aggregate form only. Secured computer data will be erased within three years of study completion along with destruction by shredding of any downloaded transcripts.

Responsibilities:

For any and all photographs taken on any INTEGRIS Health, Inc. campus, whether inside or outside, photographer is still subject to INTEGRIS Health, Inc. policies and procedures. Specifically, the photographer is subject to and should read the following corporate compliance policies: Portable Devises Policy, SYS-IM-105, and Privacy of Health Information, SYS-IM-112. Participation in this study does not relieve the photographer of their responsibilities as an employee of INTEGRIS Health to maintain the confidentiality and privacy of patient identifiable information.

Questions Regarding the Study: *The researchers will try to prevent any problem that could happen because of this research. You should let the researchers know at once if there is a problem and they will help you. Researcher contact information is located at the top of the informed consent. However, Texas Woman's University does not provide medical services or financial assistance for injuries that might happen because you are taking part*

in this research. If you have any questions about your rights as a participant in this research or the way it has been conducted, you should contact the INTEGRIS Health, Inc. Institutional Review Board at 405/949-4184 or Texas Woman's University Office of Research and Sponsored Programs at 940/898-3378 or via email at IRB@twu.edu. You should keep a copy of this document for your records.

Voluntary Statement

I have been given an opportunity to ask questions about this research study. If I have additional questions about taking part in this study, I may contact Karen Vessier at kvessier@twu.edu or 405-706-5874.

I understand that my participation in this study is voluntary. I know that I may quit the study at any time without affecting my employment or performance evaluation at INTEGRIS Health, Inc. or losing any benefits to which I might otherwise be entitled through my employment, If I have questions about my rights as a research subject in this study, I may contact the researchers and

INTEGRIS Health, Inc. Institutional Review Board
330 Northwest Expressway
Oklahoma City, OK 73112
Monday through Friday, 8:00 a.m. to 5:00 p.m.
405-949-4184

By signing this consent, I have not waived any of my legal rights or released the parties involved in this study from liability of negligence. I have read and understand the above information. I have been given a copy of the informed consent information page.

Participant Signature

_____Date_____

You will be given a copy of this signed and dated consent form to keep. If you have any questions about the research study you should ask the researcher; their phone numbers are at the top of this form. If you have questions about your rights as a participant in this research or the way this study has been conducted, you may contact the Texas Woman's University Office of Research and Sponsored Programs at 940-898-3378 or via email at IRB@twu.edu.

APPENDIX N

INFORMED CONSENT TO PARTICPATE IN RESEARCH

Subject: Compassion Fatigue

Principle investigator: Karen C. Vessier MS, MEd, RN
kvessier@twu.edu 405/706-5874

TWU Faculty Advisor: Becky Spencer PhD, RN, IBCLC
BSpencer@twu.edu 940/898-2406

Co-investigator: Susie Jones PhD, APRN-CNS, CCRN-P, CCRN-P, CCM
for INTEGRIS susie.jones@integrisok.com 405/951-8214

Title: Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice

Introduction: You are being asked to volunteer for a research study because you have been identified as a registered nurse working in a critical care, intermediate care, or emergency care unit at INTEGRIS Baptist Medical Center. The purpose of this study is to engage you in dialogue and reflection of the reality of experiencing compassion fatigue in the hospital setting. For this study compassion fatigue involves the physical and emotional exhaustion you experience from exposure to unavoidable work place stressors in the scope of carrying out your duty to the suffering patient.

This research is being conducted as a dissertation study of Texas Woman's University doctoral student, Karen Vessier. You are being asked to participate in this research because you: (1) identify self as a registered nurse, (2) identify self as having primary employment in one of the hospital's critical care, intermediate care or emergency care units, (3) identify self as having had experience with physical and emotional exhaustion from exposure to unavoidable workplace stressors in the scope of carrying out your duty to the suffering patient, (4) have unencumbered access to a smartphone for taking photographs, and (5) identify self as being 18 years of age or older.

Length of your participation: Your participation in the study will be about 4-6 months divided as follows: 1 hour and a half (1 ½) individual or small group orientation session, 1 hour and a half (1 ½) individual interview, 2 group sessions (photo-sharing and dissemination of findings of approximately 2 hours each for total time of about 8 hours over a 4 to 6-month period plus time to take photographs for an estimated time of 9 hours.

Where the study is being conducted and target number of participants: The study is being conducted at INTEGRIS Baptist hospital critical care, intermediate care and emergency care units with a target population of 10 registered nurses.

Study Procedures: As a participant in this study you are asked to consent to participate in four meetings with the researcher. At the completion of the last group session, your participation in the study will end.

Individual or Small Group Session: Orientation	You will sign a consent form and complete a demographic questionnaire, be oriented to the research study, basic photography, ethical photography and practice taking photos, describing meaningfulness of the photos, and transfer a practice photo to the researcher's dropbox.	1.5 hours
Individual Interview	After 2 weeks of taking photos and writing descriptions to the photos in your provided logbook, you will be contacted by the researcher to arrange for an interview. At the interview your photos will be screened on your smartphone and eligible photos you choose will be transferred to the researcher's dropbox. You will then be asked a few questions and your responses will be digitally audio-recorded. The researcher will collect your logbook for transcribing.	1.5 hours
Group Session: Photo-sharing	You will share photographs, titles and descriptions you choose to share in a group meeting with other participants and discuss the emerging themes.	2 hours
Group Session: Dissemination of Findings and Photos	You will discuss and make decisions about how to display your photographic images, titles, and descriptions for other nurses and policy-makers.	1.5-2 hours

Cost for taking part in this study: Participation in this study is at no cost to the participants.

Payment for taking part in this study: You will be compensated with a $25 gift card by the
principle investigator at the individual interview for participating in both the individual or small group orientation session **and** the individual interview and another $25 gift card at the group dissemination of findings session for participating in both the group photo-sharing and the group dissemination of findings sessions.

Possible benefits to you for taking part in this study: The general benefit of this study is the participant may gain a deeper understanding of compassion fatigue and specific support to better manage compassion fatigue in their practice. Specific benefits for the participant are the gift cards.

About participating in this study: Your participation is voluntary. You may stop participating in the study at any time. Your decision to participate, not participate, or discontinue participation will not affect your employment or performance evaluation at INTEGRIS Health, Inc. in any way. No personal identifiable information will be used as a result of your participation in this study. No data is shared with your employer. Reports will only present data in aggregated format and are not linked to individual data.

Potential Risks:

(1) Loss of time: You are informed in the recruitment flyer and informed consent content of the study expected length of time of approximately 8-9 hours over a 4 to 6-month period in one study orientation meeting, one individual interview and two group sessions. You are also informed your participation is voluntary and you may stop at any time without consequences.

(2) Discomfort or fatigue: You may experience some discomfort discussing and sharing your personal compassion fatigue experience. You are informed your participation is voluntary and you may stop at any time without consequences. You are not video-taped in this study. You are informed of the multiple meeting times and length of study and that individual interviews can be at a place and time convenient to you as a participant. In addition, you will be provided a referral list of local psychologists at orientation for you to contact, if needed for any emotional discomfort.

(3) Loss of confidentiality: *Confidentiality will be protected to the extent that is allowed by law. No identification of the participant's real name or identity is used. There is a potential risk for loss of confidentiality in all email,*

downloading, and internet transactions. You are asked to call or email the researcher for communication purposes or to ask questions. You are asked on your demographic profile to identify an alias to be used with a photograph, title and description. Your identification is not connected with any data of photographs, titles of photographs, photograph descriptions or in transcribed transcripts. Only the researcher has access to the data. No data is shared with your employer and will not be used in your job performance evaluation. Only your chosen 'alias' is connected to any photograph you take and any transcription of the digitally audio-recorded interview. Any downloaded material will be kept on the researcher's password protected laptop computer and in a locked file cabinet of the researcher. Anonymity is not possible in this study as you and other participants will meet in group sessions and see each other. During the orientation and group sessions, you and other participants will be asked to keep membership and conversations confidential outside the group sessions. There is potential for photographs to have identifiable information. All of your photographs are screened with the researcher at the beginning of the individual interview for identifiable information and you may choose to remove any of your photographs from group or public viewing at any time during the study. Results of the study will be reported in aggregate form only. Secured computer data will be erased within three years of study completion along with destruction by shredding of any downloaded transcripts.

Responsibilities:

For any and all photographs taken on any INTEGRIS Health, Inc. campus, whether inside or outside, photographer is still subject to INTEGRIS Health, Inc. policies and procedures. Specifically, the photographer is subject to and should read the following corporate compliance policies: Portable Devises Policy, SYS-IM-105, and Privacy of Health Information, SYS-IM-112. Participation in this study does not relieve the photographer of their responsibilities as an employee of INTEGRIS Health to maintain the confidentiality and privacy of patient identifiable information.

Questions Regarding the Study: *The researchers will try to prevent any problem that could happen because of this research. You should let the researchers know at once if there is a problem and they will help you. Researcher contact information is located at the top of the informed consent. However, Texas Woman's University does not provide medical*

services or financial assistance for injuries that might happen because you are taking part in this research. If you have any questions about your rights as a participant in this research or the way it has been conducted, you should contact the INTEGRIS Health, Inc. Institutional Review Board at 405/949-4184 or Texas Woman's University Office of Research and Sponsored Programs at 940/898-3378 or via email at IRB@twu.edu. You should keep a copy of this document for your records.

Voluntary Statement

I have been given an opportunity to ask questions about this research study. If I have additional questions about taking part in this study, I may contact Karen Vessier at kvessier@twu.edu or 405-706-5874.

I understand that my participation in this study is voluntary. I know that I may quit the study at any time without affecting my employment or performance evaluation at INTEGRIS Health, Inc. or losing any benefits to which I might otherwise be entitled through my employment, If I have questions about my rights as a research subject in this study, I may contact the researchers and

INTEGRIS Health, Inc. Institutional Review Board
330 Northwest Expressway
Oklahoma City, OK 73112
Monday through Friday, 8:00 a.m. to 5:00 p.m.
405-949-4184

By signing this consent, I have not waived any of my legal rights or released the parties involved in this study from liability of negligence. I have read and understand the above information. I have been given a copy of the informed consent information page.

Participant Signature

_____Date_____

You will be given a copy of this signed and dated consent form to keep. If you have any questions about the research study you should ask the researcher; their phone numbers are at the top of this form. If you have questions about your rights as a participant in this research or the way this study has been conducted, you may contact the Texas Woman's University Office of Research and Sponsored Programs at 940-898-3378 or via email at IRB@twu.edu.

APPENDIX O

Participant Demographic Profile

Participant ID Number: _____

Participant Chosen *'Alias'* _____

1. What is your gender? Male _____ Female _____

2. What is your age? _____

3. Are you a registered nurse? Yes _____ No _____

4. What is your highest academic level of nursing education?
   Diploma _____ Master degree _____

   Associate degree _____ Bachelor degree _____

   Other degree _____; if so, please name the degree _____

5. Number of years of nursing experience? _____ Critical care experience? _____

6. Is your primary employment in one of the hospital's six critical care patient units as a critical care nurse with the primary?

   Yes _____ No _____

7. Do you perceive you have experienced physical and emotional exhaustion from exposure to unavoidable work place stressors in the scope of carrying out your duty to your patients?

   Yes _____ No _____

8. Do you have unencumbered access to a smartphone to take photographs?

   Yes _____ No _____

9. What days are best for you to meeting? M T W T F S S

10. What time of day is best for you to meet? Morning Afternoon Evening
    Specific time? _____

11. What is your preferred way of contact? Phone: _____

    Email: _____

APPENDIX P

Referral List: Psychologists/Psychoanalysts

Bruce Lochner, PhD
Psychologist and Psychoanalyst
1300 E 9th Street
Suite #5
Edmond, Oklahoma 73034
(405) 455-8042

APPENDIX Q

Orientation Meeting Agenda:
Introduction, Photovoice Training, Photovoice Ethics

Goals of the Meeting:

- Explain the purpose of the study
- Review what is known about compassion fatigue
- Explain Photovoice
- Explain the roles and time commitment of the participants
- Give the estimated timeline of the study
- Go over the consent forms and obtain signed consent forms and demographic profile
- Review Photography ethical issues and distribute instruction sheets
- Review basic photography, distribute instruction sheets, practice taking photograph of an abstract concept
- Explain reflective journaling and distribute provided journal
- Answer questions

Facilitation Outline:

- Introduction
- Review what is known about compassion fatigue
- Understanding PAR with Photovoice within the intent of the study
- Explain the roles and time commitment of the participants
- Give the estimated timeline of the study and timeline handout
- Handout and go over consent forms and demographic profiles
- Participants sign consent forms before proceeding and given copies
- Explain photography ethical issues within the design of this study
    - This study examines pictures of objects/subjects the participant finds meaningful in relation to the emotional toil and toll of caring for suffering patients.
- Pictures of people while in the hospital setting are excluded from this study.
  Basic Photography
    - Offer basic instructions on how to take good photos and encourage creativity in depicting the subject matter of study.
    - Provide handout with photo taking tips
    - Practice taking pictures, giving it a title and meaning
    - Instruct participants to take 10-15 photos and choose 5 photos most meaningful to them and give each of the 5 photos a title and description for the individual interview session and the group photo-sharing session.

- Answer questions/ Review timeline for group sessions

APPENDIX R

Individual Meetings with Interview and Photo Sharing

Goals of each Individual Participant Meetings:

- Screen and collect per *AirDrop* the participant's chosen five most meaningful photovoice photos from individual participant into researcher's for viewing during meeting.
- Gather individual participant's CF meaning and any reflection of each of the five photos using the SHOWED interviewing format.
- Collect individual participant's reflection logbook.

Facilitation Outline:

- Greetings
- Review Agenda
- Review Photovoice Ethics
- Screen participant's chosen photographs on their smartphone and have participant airdrop screened photographs into the researcher's dropbox for review.
- With participant's permission begin digitally audio-recording of this session for transcribing transcript
- Discreetly review the participant's chosen 5 most meaningful photos on the researcher's laptop while using SHOWED question from the Photovoice Interview Form facilitate discuss.
- Stop audio-recording of this session
- Discuss tentative plans for the first group session and need for confidentiality and anonymity of participants.
- Ask and answer any questions.
- Provide monetary compensation
- Thank the participant for sharing their stories and perceptions.

APPENDIX S

Focus Group M**eeting: Photo-sharing**
Discussion of Emerging Themes, and Dissemination Plans

Goals of the Meeting:

- Greetings
- Review the intent of the study
- Obtain signed consent forms for use of individual pictures
- Facilitate discussion on data analysis and interpretation
- Answer questions

Facilitation Outline for Photo-sharing Session:

- Introduction
- Review Agenda
- Review Photovoice within the intent of the study
- Share researcher's initial coding and findings and open for discussion.
- Place photographs on table for viewing within the initial coding of themes by the researcher.
- View and reflective dialogue on photographs. Each participant was asked to select 5 photographs (with titles) and description for the individual interviews as the most meaningful to them for viewing at the large group meeting. View each photograph selected by each participant and discuss using SHOWED and reflective description.
- Make group decision on dissemination of findings to critical care nurse leadership and hospital policy-makers.
- Obtain signed consent forms for use of individual photographs in the study, dissemination and future writings of the researcher.
- Answer any questions
- Provide monetary compensation
- Close with appreciation for participating and reminder of decision of dissemination of findings

APPENDIX T

Photographer's Photo Release Form for Public Display or Publication

An essential part of this study is the presentation of our study findings. The study findings will reveal suggestions to educate other nurses and hospital administrations about nurse experience with compassion fatigue. The education of other nurses and hospital administrations may include public exhibits of your photographs or the inclusion of your photographs in printed publications.

If you choose, you have the opportunity to display your photographs and the words you used for a title and to describe each photograph at presentations and public showings. You will not receive any payment for allowing your photograph to be included in the publication.

I would like my photographs to be included in presentations and public exhibit/showings.

Yes _____ No _____

If you choose, you have the opportunity to display your photographs and the words you used for a title and to describe each photograph in printed publications such as journals or educational brochures. Please understand that once the publication has been printed and distributed, you may NOT be able to request that your photograph be removed. You will not receive any payment for allowing your photograph to be included in the publication.

I would like my photographs to be included in publications.

Yes _____ No _____

Participant Signature _____ Date _____

Principle Investigator Signature _____ Date _____

Adapted from Newman (2008).

APPENDIX U

Photovoice Interview Form

Participant Alias: _____ Date: _____

Photo Number: _____

Photo Title: _____

1. **What do you See here?**

   _____
   _____
   _____
   _____
   _____

   Probe: In what way is this photograph depicting CF?

2. **What is really Happening here?**

   _____
   _____
   _____
   _____
   _____

   Probe: Does the setting of the photograph have significance? How?

3. **How does this relate to Our nurse work life?**

   _____
   _____
   _____
   _____
   _____

   Probe: Tell me how often do you feel this occurs in your nurse work life to you? To others? If so, how can you tell?
   In what way does the experience of compassion fatigue impact other parts of your life?

4. **Why does this situation, concern or strength exist?**

_____
_____
_____
_____
_____

Probe: What have you learned helps to minimize the experience of compassion fatigue? Do you feel patients can tell when you are experiencing compassion fatigue and if so how can the patient tell?

5. **What can we do to Educate others about this situation, concern, or strength?**

_____
_____
_____
_____
_____

Probe:

6. **What can or needs to be Done?**

_____
_____
_____
_____
_____

Probe: What specific support do you need to protect against CF?

7. **Tell me about any pictures you wanted to take but did not. Describe your reasons for not taking the picture.**

_____
_____
_____
_____

Appendix V

A PICTURE IS WORTH A THOUSAND WORDS!

CRITICAL CARE NURSES ARE BEING RECRUITED TO VOLUNTEER FOR A RESEARCH STUDY USING PHOTOVOICE

Purpose of the study: To engage the clinical nurse in dialogue and reflection of the reality of experiencing compassion fatigue in the hospital setting to illuminate what is unseen and unknown about compassion fatigue, identify needed support, and participate in decisions on the dissemination of study findings. For this study compassion fatigue involves the physical and emotional exhaustion the nurse experiences from exposure to unavoidable work place stressors in the scope of carrying out their duty to the suffering patient.

Who is eligible:

- Identify self as a registered nurse
- Identify self as having primary employment in one of the hospital's six critical care units
- Identify self as having had experience with the physical and emotional exhaustion the nurse experiences from exposure to unavoidable work place stressors in the scope of carrying out their duty to the suffering patient.
- Have unencumbered access to a smartphone for taking photographs
- Be 18 years of age or older.

As one of the first 10 accepted participants, you will be allowed to use photography in a qualitative study to explore and describe your experience as a clinical nurse with the physical and emotional side of nursing within the nurse-patient relationship. You will use your smart phone to take meaningful pictures related to the purpose of the study and share in an individual interview and in 2 group sessions at the INTEGRIS Baptist Medical Center campus or other convenient place of the participant (Approximately 8 hours for meetings over 4-6 months). To begin, there will be a group orientation and ethical photography training session. Compensation will be provided at the completion of the individual interview and the last group session.

For more information, contact:

* Principle Investigator, Karen C. Vessier MS, MEd, RN kvessier@twu.edu or 405-706-5874
Texas Woman's University Doctoral Candidate

INTEGRIS Research contact
* INTEGRIS Co- Investigator, Susie Jones, PhD, APRN-CNS, CCNS-P, CCRN-P, FCCN
susie.jones@integrisok.com or 405-951-8214

This study has been reviewed and approved by the Internal Review Boards of INTEGRIS Health and Texas Woman's University, Denton, TX

APPENDIX W

To: Critical Care Nurses working in 501, 601, 701, 801, and 901
Subject: A Clinical Nurse Research Dissertation
Date: September 2017

Dear Nurse Colleague,

The literature reveals critical care nurses have some of the highest levels of the state of being called compassion fatigue. My name is Karen Vessier and I am a PhD candidate in Texas Woman's University College of Nursing. In my dissertation study, I am seeking a deeper understanding of the impact compassion fatigue has not only on the clinical nurse's professional life, but their whole life. I seek to know how clinical nurses experience compassion fatigue to better communicate what compassion fatigue is to other nurses and to policy-makers through a Photovoice study. Thus, I am interested in talking with critical care nurses who feel they have experienced compassion fatigue. My dissertation is titled *Clinical Nurse Insight into Perceived Compassion Fatigue: A Participatory Action Research with Photovoice.*

For this qualitative study, I will be orienting and interviewing clinical nurses working in critical care units. Also, part of the data collection will include group meetings to view and discuss compassion fatigue photographs and descriptions by the individual participants and make decisions on method to share the findings within the hospital. As the primary researcher, all efforts will be made to make meetings as convenient as possible to you the participant. In addition, the following link is provided of a three and half minute video of nurses talking about compassion fatigue for your viewing.

https://www.youtube.com/watch?v=kse7UE82UFU&t=45s

If you are interested in being one of the participants for this study, please contact me via email or phone at your convenience. This study has IRB approval from INTEGRIS Health and Texas Woman's University and your Administrative Directors Marla Lincecum and Jackie Lockett. Dr. Susie Jones is also available for study information.

Sincerely,
Karen C. Vessier
Texas Woman's University PhD Candidate
Phone: 405-706-5874
Email: kvessier@twu.edu

APPENDIX X