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DEFINING A PERSON: THE NURSE AT RISK FOR COMPASSION FATIGUE

by

ELLEN JOHNSTON

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Nursing
in the College of Nursing
and in The Burnett Honors College
at the University of Central Florida
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Thesis Chair: Dr. Diane Andrews

Abstract

The intent of this thesis was to examine compassion fatigue in nurses through analysis of research studies conducted within the past five years in an effort to identify predisposing factors to the experience of compassion fatigue. Individual and institutional factors were identified as well as current strategies to assist with management of compassion fatigue. Findings indicated that being new to practice, having a trait negative affect, being younger in age, having a history of exposure to trauma and working in high emotionally stressful units predisposed individuals to the experience of compassion fatigue. Institutional factors included a lack of managerial support, organizational commitment, group cohesion, work engagement and conflicting expectations of the nurse. Institutional interventions to assist in mitigating compassion fatigue include improving managerial support, developing group cohesion and communication and providing continuing education opportunities. Institutions can also assist by offering training in resiliency techniques such as negative thought pattern identification, meditation, peer-to-peer discussions, journaling about traumatic experiences, identification and maintenance of personal/professional boundaries and physical wellness through exercise and yoga. These proposed interventions address institutional accountability in health care worker wellness as defined by the quadruple aim. Such interventions also address use of Watson's Caring Theory to emphasize the importance of nurse wellness as essential to creating caring nurse-patient relationships.

Dedication

I would like to thank my sister and her husband, Anne and Andy Chrest. I could not have done this without you. Thank you for being such amazing people in my life; I am truly honored to be part of yours.

I would like to thank my mother, Mary Copeland. You have been a rock and incredibly supportive in this adventure. I cannot thank you enough and express how much I admire you, your generosity and positivity.

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Introduction

As the demand for qualified nurses continues to increase in health care, the demand on nurses also increases to meet escalating needs of high patient loads, increasing patient acuity and increased staffing demands. With an increased demand on time and a reduced ability to reflect and cope with ongoing trauma experienced through patient care, nurses are at risk for psychological distress which can turn into compassion fatigue. Compassion fatigue (CF) is a term used to describe a cluster of symptoms experienced with repeated exposure to stress and trauma such as frequent forgetfulness, inability to concentrate, fatigue and physical illness which could lead to hostility and a lack of caring (Ledoux, 2015).

CF in nurses has been shown in recent research to be common among high acuity or high stress nursing units such as forensic nursing, emergency, oncology, pediatrics, critical care departments and hospice (Potter, Debshields & Rodriguez, 2013). Since the exposure of nurses to traumatic events is inevitable, developing interventions that assist nurses with mitigating adverse effects becomes necessary to be both acknowledged and supported in their training and in continued professional development. Interventions to mitigate compassion fatigue also increase job retention of nurses and promotes a more positive work environment (Meyer, Li, Klareistenfeld & Gold, 2015). They also benefit the patient. Studies have shown caring behaviors from nurses create positive patient satisfaction experiences and better advocacy (Potter et al., 2013).

There is not one single concept or point of origin which determines how or why one person is more susceptible to develop compassion fatigue than another, rather there are a multitude of factors (Flarity et al., 2016). To create a better picture of who this susceptible

individual could be, it is necessary to examine contributing factors on individual and institutional levels and to examine interventions related to mitigating the effects of compassion fatigue. This may enable effective tools to be implemented in support those experiencing and reduce the risk of those susceptible to CF.

Problem

CF is a critical issue requiring intervention and recognition not only from the nurse, but also from the institutions in which they work. CF affects everyone involved in the health care system: the nurse, the patient and the institution. In light of an impending national nursing shortage, it is imperative for hospitals to address nurse work environments in order to attract nurses and retain nurses within the professional workforce (Shang, Freise, Wu & Aiken, 2013).

Interventions to address CF can aid in reducing burnout, improving job satisfaction and minimizing turnover (Kutney-Lee, Wu, Sloane & Aiken, 2013). In a recent study by Neff, Cimiotti, Heusinger and Aiken (2011) 10,951 nurses in a southeastern state were surveyed on their work environment and characteristics. Of those working within a hospital setting, 24.4% reported low job satisfaction and 18% reported an intent to leave. High turnover and vacancy rates lead to poorer patient outcomes and is disruptive to patient care. “If health care organizations want their staff to take better care of their patients, it is incumbent upon leaders of those organizations to give them the tools to take better care of themselves” (Potter et al., 2013, p. 332). High levels of stress, long shifts and rotating between day and night shifts are common within the nursing profession and attributed as increased risk factors in developing CF (Sawatsky & Enns, 2012). For the nurse, CF can cause issues neurologically altering executive function and control of emotions (Potter et al., 2013). This can result in diminished performance and errors in

practice related to assessment, vigilance, attention to detail, burnout, problem solving, memory and communication (Raftoupolus, Charalambous & Talias, 2012). For the patient, unaddressed CF can result in adverse care events, reduced patient satisfaction and increased mortality rates (Mason et al., 2014). For hospitals, CF is expensive. CF has been associated in increased nurse tardiness and absences which ultimately affect quality of care, cost of care and patient-centered modalities (Raftoupolus et al., 2012).

CF involves the entire health care system and one aspect cannot be addressed without addressing the others. Nurses have frequent and intense empathetic engagement with the patients and their families and are susceptible to incurring CF. Maiden, Georges and Connelly (2011) assert if early interventions for CF are not made, CF can irrevocably change the nurses' capacity for compassionate care. Collaborative interventions are necessary to assist nurses in ongoing strategies for success throughout the nurse-patient health care journey.

Purpose

The purpose of this literature review to (1) identify individual factors related to the experience of compassion fatigue; (2) identify institutional factors related to the experience of compassion fatigue; (3) identify current strategies related to management of compassion fatigue.

Background

Compassion fatigue, burnout (BO), secondary traumatic stress (STS), work engagement and compassion satisfaction are relatively recent phenomenon which nurses, researchers and clinical environments are attempting to address. Compassion fatigue is often multifaceted and contributing factors are not always correlated to work place encounters. In order to understand

CF better, differentiating these terms is necessary and important in research as they not only differ by definition but also by time of onset within the nurses' career.

CF is a condition which can affect nurses in all units within the hospital. It is a contemporary term which describes frequent exposure to trauma experienced vicariously by health care providers (Boyle, 2011). In 1995, Figley was one of the first to formally define CF, describing it as a unique condition, comprised of both secondary traumatic stress disorder (STSD) and burnout (BO). Figley (2002) stated compassion fatigue is the "cost of caring." This cost occurs when caregivers incur trauma when utilizing innate behaviors of compassion and empathy during patient care and family interaction. The continuous exposure to vicarious trauma can lead to poor self-care and self-sacrifice of the nurse. This lends CF to be distinct from, but correlated to BO and STSD (Lombardo & Eyre, 2011).

BO, the first part of CF, is a repercussion from the combination of continuous emotional and social strain within the work environment, taking on both a physical and emotional toll (Ledoux, 2015). Nurses experiencing CF can appear apathetic and struggle to find meaning or satisfaction from their work, similar to BO. Throughout this negative cascade, a nurse will feel the resources are not available to meet the demands of work and become exhausted (Potter et al., 2013; Raftopoulos et al., 2012). From this exhaustion, patient care can be depersonalized, potentially leading to a breakdown in patient services, absenteeism and lower work morale which can also affect retention (Maslach, Jackson & Leiter, 1996).

The need to define CF evolved from the necessity to differentiate a more acute experience of fatigue, which contrasts with BO. CF is associated with coping disabilities related to nursing and compassionate care (Yu, Jiang & Shen, 2016). BO is a more generalized term

which can be experienced in a variety of work environments regardless of the professionals' exposure to vicarious trauma and different from CF in that the onset occurs over a longer period of time. (Flarity et al., 2016). STSD and CF in contrast are defined as occurring over a shorter period (Lombardo & Eyre, 2011).

STSD, the second part of CF, occurs when the nurse experiences vicarious trauma. This creates feelings of despair and anxiety. STSD has a sudden onset and is acquired through caring for others experiencing trauma (Potter et al., 2013; Sacco, Ciurzynski, Harvey & Ingersoll, 2015). STSD is an especially crucial aspect of CF because human beings cannot easily psychologically detach from observing the pain and suffering of others. Secondary trauma reduces the emotional processing capacity of the nurse, interfering with the ability to be engaged within their duties (Flarity, Gentry & Mesnikoff, 2013).

Work engagement is described as the ability to be dedicated to duties within this occupation (Keyko, Cummings, Yonge & Wong, 2016). Engagement is a term gaining more recent popularity and is highly relevant to CF. Nurses who are engaged demonstrate better coping mechanisms, improved mental health and increased performance (Mason et al., 2014). The more engaged a nurse is the lower the risk of burnout; CF decreases, ultimately improving health care outcomes of the patient (García-Sierra, Fernández-Castro & Martínez-Zaragoza, 2016).

Similar to work engagement, compassion satisfaction (CS) is a term which defines positive emotions related to work related quality of life for nurses (Flarity et al., 2013). It describes the connection a nurse has with the patient which can create a sense of pride or achievement in their work. When levels of CS are low, the risk of CF can increase as well as

impact motivational factors, turnover, BO and STS (Hunsaker, Chen, Maughan & Heaston, 2015). CS has also been correlated as being a strong predictor of patient satisfaction and can have a profound effect on work engagement and CF (Li, Early, Mahrer, Klaristenfeld, & Gold, 2014).

Method

A literature review was completed using CINAHL, PsychInfo and MEDLINE databases. Inclusion criteria were nurs*, compassion fatigue OR secondary traumatic stress disorder AND burnout with additional search terms of retention, engagement, intervention* and strateg*. Results were additionally refined to peer reviewed, English language and locations of research in the United States, Canada, Western Europe and Australia (to find similar cultural assessments of psychological phenomenon). Articles were also restricted to publications within 5 years of December 2016 except for original concept definitions of the topic and nursing theory. Exclusion criteria included articles not published in a peer reviewed journal, non-English language, commentary articles, and articles published more than 5 years ago. Research articles available in ClinicalKey also led to additional referential research through suggested articles by the database tool. Seminal articles and materials from trusted sources were also used.

The literature review was evaluated using the conceptual framework of the quadruple aim (a reconceptualization of the triple aim). to address CF, BO and STSD identification and interventions. This aim seeks to improve the health and experience for the patient/population, reduce health care costs and improve the work environment of health care professionals (Bodenheimer & Sinsky, 2014). Watson's self-care deficit theory was utilized to support the conceptual framework to address practice dilemmas. Watson's theory encompasses the need for

self-care within transformative role of the nurse to excel at communication, the nurse-patient relationship and the different aspects of healing required as a health care practitioner (Watson & Foster, 2003). This assists in addressing the conflict between nurse theory and practice in relation to CF with the quadruple aim as the foundation of the literature review perspective.

Findings

Sixteen studies were included in this literature review (Table 1) encompassing CF, BO and STS. Selected studies discussed either the predisposing factors of experiencing CF, the impact of CF within the work place or interventions to assist in mitigating CF. All studies were published within the past five years. Given the difficulty of quantifying the phenomenon of CF, all studies had qualitative descriptive elements. Six of the studies were cross sectional (Branch & Klinkenberg, 2015; Craigie et al., 2016a; Hunsaker et al., 2015; Sacco et al., 2015; Sawatzky & Enns, 2012; Ray, Wong, White & Heaslip, 2013), four non-experimental using a correlational or predictive design (Hunsaker et al., 2015; Mason et al., 2014; Neville & Cole, 2013; Ray et al., 2013), one exploratory (Flarity et al., 2013) and one longitudinal (Meyer et al., 2014). Two studies used narratives analyzed using a phenomenological method (Potter, Pion, & Gentry, 2015; Craigie, et al., 2016b), and one used interviews (Perez et al., 2015). In total, 13 used surveys (Branch & Klinkenberg, 2015; Craigie et al., 2016a; Flarity et. al, 2013; Flarity, Nash, Jones & Steinbruner, 2016; Hunsaker et al., 2015; Li et. al, 2014; Mason et al., 2014; Mealer et al., 2014; Meyer et. al, 2014; Neville & Cole, 2013; Sacco et al., 2015; Sawatzky & Enns, 2012; Ray et al., 2013).

The sample size ranged from 15 participants to 278. The hospital units studied included oncology (Branch & Klinkenberg, 2015; Potter et al., 2015), emergency department (Flarity et al., 2013; Hunsaker et al., 2015; Sawatzky & Enns, 2012), forensic (Flarity et al., 2016); intensive care (Branch & Klinkenberg, 2015; Mason et al., 2014; Mealer et al., 2014; Sacco et al., 2015), palliative care (Perez et al., 2015), mental health (Ray et al., 2013), new to practice nurses (Li et al., 2014; Neville & Cole, 2013) and generalized without unit specificity (Craigie et

al., 2016a; Craigie et al., 2016b; Sikka, Morath & Leape, 2015). Age range, educational background, and degrees acquired included novice to expert level practitioner.

Individual Factors of Compassion Fatigue

Personal factors can impact the development of CF. Those at the greatest risk to develop CF work with chronically ill children (Branch & Klinkenberg, 2015), have a history of trauma (Li et al., 2014; Meyer et al., 2014; Ray et al., 2013), are new to practice nurses (Hunsaker et al., 2015; Li et al., 2014; Meyer et al., 2014), have a trait negative affect (Craigie et al., 2016a) and are younger (Sacco et al., 2015). While some of these factors are environmental, others are more innate to the individual.

Research by Branch and Klinkenberg (2015) indicated CF is present in many clinical settings (intensive care, emergency, pediatric and oncology). They determined however those working with chronically ill children are at the greatest risk for developing compassion fatigue. They hypothesized constant exposure to the suffering of children on top of work place stressors and personal issues was the most challenging to cope with. Nurses in this unit reported the lowest CS scores and higher BO and STS than the other units in the study.

Li et al. (2014) looked at 251 new to practice nurses and determined current stress, pre-existing post traumatic stress disorder (PTSD) symptoms, a history of traumatic events, or indirect trauma can predict CF and STS in new to practice nurses. During the first three months of bedside practice, 89.2% of nurse residents directly or indirectly experienced a traumatic event; 7.3% met the diagnostic criteria for PTSD and 11.2% for partial PTSD. The PTSD symptoms from this three-month exposure contributed to 49% of variance in CF scores, indicating a relationship between trauma and CF. Hunsaker et al. (2015) also discovered new to practice

nurses were more susceptible to CF ($r = -.134$, $p = .027$) based on the struggle to develop speed and skill within their practice, suggesting a formal mentoring program to assist in easing their transition into nursing. The nurses who were least susceptible to CF, indicated through higher levels of CS ($r = .269$, $p = .001$) and lower BO ($r = -.182$, $p = .003$) had the most years working as nurses, shorter shift lengths and good managerial support.

Meyer et al. (2014) had similar findings stating that after controlling for pre-existing stress, new stress and exposure to trauma in new to practice nurses significantly increased compassion fatigue ($b = 2.66$, $SE = 0.59$, $p < .001$) and lower levels of compassion satisfaction ($b = -0.18$, $SE = 0.08$, $p < .05$). Ray et al. (2013) also discovered those with a history of trauma, had higher CF scores ($M = 13.63$, $SD = 6.67$) than those without ($M = 11.36$, $SD = 6.74$) as well as higher degrees of emotional exhaustion ($M = 2.58$, $SD = 1.35$). This research also suggests those with a history of trauma may identify more closely with their patients, increasing their risk for CF.

In regard to psychological predisposition, Cragie et al. (2016a) determined trait negative affect (TNA) as a pervasive and stable disposition which can impact the ability to cope with stressful experiences. Those with TNA experience negative thoughts, moods, emotions and neuroticism at a higher rate, especially when confronted with challenges. Those with higher degrees of TNA had higher rates of CF, STS and BO. “The amount of unique variance accounted for by TNA in burnout was over 3 times the magnitude when compared with the amount of unique variance accounted for in STS ($sr^2 = 20.1\%$ and 5.9% , respectively)” (p. 92).

Sacco et al. (2015) was interested in understanding the demographics more in depth, determining female nurses had higher CS than male nurses ($F_{1,208} = 4.5$; $p = .04$). For nurses

working on single-acuity units, 56% had higher CS than those working on mixed-acuity units, (35%). Nurses 20 to 29 years old had the highest rate of STS ($p = .04$). Nurses 40 to 49 years old had the least amount of CS regardless of gender ($p = .03$). Of nurses with the most CS, 73%, were above 50 years old. Nurses who were younger demonstrated CS ranging from 34%-42%. The research suggested based on the inverse relationship between CF, knowledge and skill, the older the nurse was, the lower the risk for CF. This implies the younger the nurse, the more at risk to experience CF.

Institutional Factors of Compassion Fatigue

Aside from personal characteristics which can impact CF, the institution in which the nurse works can also impact its development. Results indicated a change in management or lack of managerial support impacted CF (Hunsaker et al., 2015; Sacco et al., 2015), organizational commitment and group cohesion (Li et al., 2014), workload and conflicting expectations (Perez et al., 2015) and work engagement (Mason et al., 2014; Sawatzky & Enns, 2012) as contributing factors.

Hunsaker et al. (2015) examined surveys from 278 emergency department nurses and determined poor manager support predicted higher levels of BO ($\beta = -.373$, $p < .01$) and CF ($\beta = -.230$, $p < .01$). Sacco et al. (2015) determined nurses who had a recent change in management (within the last year) had notably less CS and increased rates of BO ($F_{1,188} = 14.6$; $p < .001$). Similar to management and infrastructure, Li et al. (2014) found organizational commitment and group cohesion assisted in mitigating the effects of CF and STS, accounting for a 22% variance in burnout reports ($R^2 = 0.22$, $F(1,172) = 46.920$, $p < .001$). Organizational commitment can be a strong predictor of turnover.

Through a qualitative study of 15 nurses in a palliative care environment Perez et al. (2015) identified nurse work load as a contributing factor in CF, determining many nurses go without taking breaks due to feeling pressured for time. This left an inadequate amount of time to process emotionally intense events. Competing demands between administrative duties, patient needs and staff requests were also a challenge. Conflicting expectations from management, peers and patients, patient families as well as the unpredictability of scheduling increased CF, BO and STS. In addition, the study discovered nurses were compromising their professional and private boundaries, failing to recognize when they were overwhelmed. Without nurses understanding cues of being overstimulated, it is hard to provide self-care interventions.

In a pilot study of 26 surgical intensive care unit nurses, Mason et al. (2014) determined work engagement and a nurses' dedication to their work environment increased CS as measured by the ProQOL-5 compassion satisfaction subscale ($r = 0.49$, $p < .05$). These same nurses also demonstrated decreased CF and BO using the ProQOL-5 burnout subscale ($r = -0.49$, $p < .05$). Sawatzky and Enns (2012) surveyed 261 emergency department nurses and also linked engagement as a key factor in retention of nurses. "Engagement emerged as a convincing predictor for each of the intermediary factors, including job satisfaction ($p < 0.0001$), compassion satisfaction/fatigue ($p < 0.0001/p = 0.0003$) and burnout ($p < 0.0001$)" (p. 702). Their suggested interventions included focusing on positive work engagement factors such as ensuring stable and collaborative management practices, providing continuing education opportunities and improving staffing resources.

Interventions to Assist in Mitigating CF

CF impacts the nurse on both individual and institutional levels. The most often recommended intervention suggested to help mitigate its effects is resiliency workshops (Craigie et al., 2016; Flarity et al., 2013 Flarity et al., 2016, Mealer et al., 2014; Potter et al., 2015). Craigie et al. (2016) presented a one day compassion fatigue resiliency educational workshop (one 12-hour day) and introduction to mindfulness seminars (three, 1.75 hour sessions) as well as four weeks of mindfulness skill seminars (1.5 hour sessions) with 21 nurses. They discovered a 30% reduction in TNA, stress and burnout when evaluated using standardized measures over three follow-up points. Their research suggests a combination of resiliency workshops as well as mindfulness skill seminars are an effective and practical co-subject resiliency regimen.

Flarity et al. (2013) conducted a CF resiliency seminar (4 hours) with 73 emergency department nurses followed by a secondary level of intervention which provided educational resources in coping with CF. Participant results were evaluated by pre and posttests with 10% reporting higher degrees of CS, 34% less BO symptoms and 19% fewer STS symptoms. Flarity et al. (2016) also conducted a similar study with 55 forensic nurses and discovered a 21% improvement using pre and posttests to evaluate CF, CS, STS and BO within this population, suggesting their resiliency interventional seminar could be appropriate for different kinds of nursing units.

Mealer et al. (2014) developed a two-day educational workshop covering resiliency training on how to manage psychological distress frequent to intensive care nurses which also included written exposure therapy to discuss distressing experiences. The workshop also fostered developing a positive social network and provided event-triggered counseling sessions and

strategies to overcome traumatic events. The training program showed a reduction in the PTSD symptom score after intervention in both the control and intervention groups, indicating the usefulness of the training. Potter et al., (2015) looked at the facilitators of a resiliency program and evaluated if they could also benefit from the program personally and professionally. All participants noted self-improvement in managing stress and mitigating CF through teaching resiliency programs.

An additional suggestion is for institutions to support nurses by providing free or reduced cost access to programs which promote wellness such as gym memberships and yoga classes (Neville & Cole, 2013). The authors determined health promotion behaviors increased CS and decreased CF and BO. The barrier to utilizing this intervention was the cost of health and wellness centers for the nurse. They suggest institutions collaborate with nurses in finding ways to reduce the cost of these programs in order to make them more accessible.

Discussion

Based on this integrative literature review on compassion fatigue, it was determined a combination of personal and institutional variables can create a higher risk for a nurse to develop CF. The goal was to examine the current body of knowledge to determine those at the highest risk for CF, the impact of CF on individuals and institutions, and current recommendations to diminish and/or manage the experience of CF. Integration of this knowledge can suggest interventions in the hopes of better identifying those at risk and targeting strategies to best assist those affected.

Individual Attributes

The review determined individual attributes of the nurse such as personality and age can contribute to stress, fatigue and the experience of CF. Cragie et al. (2015) discovered consistent negativity and persistent negative emotional responses for stressors increased the likelihood a nurse would develop compassion fatigue. The authors suggest skill training to focus the nurse on the positivity of caring, the practice of mindfulness and coping self-efficacy, and resiliency training.

Ray et al. (2013) identified higher compassion fatigue and emotional exhaustion in nurses with a history of trauma and suggested additional support or supervision to these nurses. They hypothesized those who experienced trauma in the past may more strongly identify with patients, which can increase compassion fatigue. Pairing these nurses with a mentor may help mitigate CF development.

Age and experience of the nurse are also factors in developing CF. Hunsaker et al. (2015) and Sacco et al. (2015) found the higher the expression of compassion satisfaction, the lower the

expression of compassion fatigue. Sacco et al. (2015) also determined secondary traumatic stress was more prevalent in younger nurses than older ones, similar to the findings from Ray et al. (2013).

While it is evident a large degree of susceptibility to compassion fatigue lies within the nurse's individual attributes, there are also institutional factors which impact CF. Personality, age and career stage can certainly help identify those at greatest risk for CF, but the appropriateness of individual choice related to the work environment is a risk factor yet to be addressed in the literature. Nurses working on patient care units considered to be high stress can have a decrease in productivity, higher absenteeism and higher job turnover (Branch & Klinkenberg, 2015). Based upon Branch's and Klinkenberg's research, CF contributes to those outcomes. Matching individual attributes, risk for CF and work setting may help reduce the negative outcomes associated with CF.

Identifying the work setting which best fits the nurse's interest and individual attributes may have a positive impact on compassion satisfaction and help reduce compassion fatigue (Meyer et al., 2014; Sacco et al., 2015). Branch and Klinkenberg (2015) during a post-hoc analysis determined nurses in cardiology units had minimal staff and management turnover as well as longer periods of stability. They hypothesized, nurses may be more successful if they are working within a unit that is a better match to their interests and style.

Work Environment

Institutional risk for CF appears to be related to leadership stability, work environment, work engagement and teamwork. Instability or changes within the past year related to leadership reduced compassion satisfaction and increased burnout and compassion fatigue (Hunsaker et al.,

2015; Sacco et al., 2015). Health care workers who were pressured by time, experienced unpredictable schedules or undefined roles or had competing expectations demonstrated elevated distress which resulted in a violation of their personal boundaries (Perez et al., 2015). This created increased fatigue and burnout in the health care workers. A work environment where leadership supports the nurse and provides adequate staffing decreases burnout, increases job satisfaction and decreases intent to leave (Kutney-Lee et al., 2013; Potter et al., 2013; Mason et al., 2014; Van den Heede et al., 2013).

Sawatsky and Enns (2012), describe work engagement as the passion nurses have in their work. They determined low work engagement was a primary factor influencing intent to leave. Similar to work engagement, organizational commitment (how an individual identifies with the institution they work for based on alignment with institutional goals and values, investment into effort for the institution and a sense of belonging to the institution) has also been correlated to predicting turnover when low (Li et al., 2014). Similarly, Li et al., discovered organizational commitment strongly relates to group cohesion. The ability to work positively and productively with team members determined strong group cohesion, helping increase compassion satisfaction and decrease PTSD, assisting in preventing CF. This is important as group cohesion impacts satisfaction of the nurse and patient, enhances group learning and ultimately increases the efficacy of the nurse (Bontrager, Hart & Mareno, 2016).

Potter et al., (2013) indicated there is a strong correlation between work engagement and patient experience/satisfaction; however, it is hard to improve on patient experience when the health care worker is experiencing CF. This illustrates the importance of CF management. Mason et al., 2014 found with increased work engagement, compassion satisfaction increased.

Compassion satisfaction is a vital component in mitigating CF (Neville et al., 2013) and strategies which assist in mitigating CF by fostering advancement and offering positive intraprofessional communication are key factors in retaining nurses.

Interventions

CF has been mainly studied in psychology and traumatology as it is similar to PTSD and suggested interventions to mitigate it are similar including mindfulness practices (meditation, guided imagery and music), workshops to teach identification of CF and interventional coping techniques (Flarity et al., 2016). Furthermore, within institutions, chaplains, social workers, mental health practitioners, employee assistance programs and debriefing sessions are interventions offered in an effort to address what is known about the symptoms of Compassion fatigue (Flarity et al. 2013).

More specifically related to nursing practice, studies within this literature review supported resiliency training as an effective intervention to help mitigate compassion fatigue. Resiliency training involves interventions which help the nurse identify negative or harmful emotional patterns and then teach positive ways to cope and redirect thoughts, feelings and emotions (Cragie et al., 2016b). With new to practice nurses being susceptible to CF, teaching and developing coping strategies is paramount in helping them cope with trauma (Meyer et al., 2015; Neville et al. 2013; Sacco et al., 2015). In addition, resiliency training can help nurses connect with organizational beliefs and objectives (Potter et al., 2013).

Additional suggested interventions include active participation in committees and governance, increasing the line of communication between nurses and administration, preceptor programs for new to practice and new to unit nurses, and continuing education programs (Shang

et al. 2013). Sharing personal experiences with colleagues can help those nurses work through unresolved issues and help in developing an action plan to get the support they need to cope with challenging issues (Lombardo et al, 2011; Mason et al. 2014).

Quadruple Aim

Interventions require a combination of personal and professional collaboration to provide effective results. The triple aim, developed by Berwick and colleagues in 2008 was created to prioritize principles that would guide the delivery of health care. They include improving population health, cost reduction and the improvement of the patient experience. (Sikka, Morath & Leape 2015). What has been recently proposed as missing from the triple aim was a fourth aim, to improve satisfaction with the work environment of health care professionals (Bodenheimer & Sinsky, 2014).

When health care professionals are psychologically fatigued, patient centered care can be compromised, resulting in an increased risk for error in patient care practices (Bodenheimer & Sinsky, 2014). Economic and positive health care outcomes strongly motivate the focus on the triple aim, however it does not address the moral aim of creating an environment that is also fair and reasonable to the health care worker (Sikka et al., 2015).

When addressing a work environment that may compromise the health of its workers, compassion fatigue becomes a key factor. “Recent research studies have found that compassion fatigue, moral distress, and staffing ratios impact nurse turnover rates, sick time usage, and productivity. These factors may also affect patient satisfaction, patient outcomes, and mortality rates” (Mason et al., 2014, pp. 216-217). As all aspects of patient care are interrelated, the triple aim becomes an ineffective paradigm as it does not address the needs of health care workers

(Sikka et al., 2015). Including the health and well-being of health care workers within the priorities established for efficient and effective health care delivery gives rise to a re-conceptualized paradigm, the quadruple aim, accounting for the impact of CF and the work environment on health care delivery outcomes.

Jean Watson and Caring Theory

Jean Watson developed caring theory, stressing the importance of empathy and interpersonal communication abilities as priorities in nursing practice. Watson's theory denotes 10 caritas, or areas of caring focus (Watson, 2010). The caritas describes the nurses' role in caring to be both a personal and professional endeavor, where if the nurse is not of sound mind, their ability to have empathetic engagement with the patient is compromised (Watson & Foster, 2013).

The cost of a failure in empathetic engagement can result in compassion fatigue (Lombardo & Eyre, 2011). Figley (1995) defined compassion fatigue as the cost of caring. Figley also stated caregivers can feel they are losing a sense of self when in service to others due to a lack of empathetic engagement. The ability to address conflicts between what nursing is and what nurses do largely dictates institutional practice and cultural dilemma interventions (Watson & Foster, 2013). In order for a nurses to be effective caregivers, not only do they need to care for self, but the institution must meet an obligation to support them. The quadruple aim prioritizes the need for institutions to mitigate compassion fatigue. The caring theoretical framework addresses the importance of prioritizing personal needs of the nurse to care for self through self-management of CF in order to promote a caring relationship with the patient.

Limitations

The primary limitation of this study is the lack of generalizability throughout the nursing population as each nursing unit studied had varying degrees of CF, BO, STS and CS. Some of the sample sizes were as small as 15 (Perez et al., 2015; Potter et al., 2015), causing difficulty in developing significant relationships and statistical representation. Another limitation was the use of self-reported data (Potter et al. 2015) posing potential biases in the findings. Thirteen of the 16 studies (Branch & Klinkenberg, 2015; Craigie et al., 2016a; Flarity, Gentry, & Mesnikoff, 2013; Flarity et al., 2016; Hunsaker et al., 2015; Li et al., 2014; Mason et al., 2014; Mealer et al., 2014; Meyer et al., 2014; Neville & Cole, 2013; Sacco et al., 2015; Sawatzky & Enns, 2012; Ray et al., 2013) used surveys and tests to determine factors relevant to compassion fatigue which limits findings based on the reliability of these tests and surveys. Finally, the scope of the literature review discussion is limited based on author's conceptual understanding of the literature as a novice researcher.

Recommendations

The literature review found both individual attributes and work environment factors which can contribute to compassion fatigue. Changes in leadership within the past year has been shown to contribute to compassion fatigue in nurses (Hunsaker et al., 2015; Sacco et al., 2015). The research reviewed has been based on the nurses' perceptions and perspectives. However, if leadership is part of the puzzle in mitigating compassion fatigue, investigating leadership perceptions of nurses' workloads, communication, teamwork, engagement and opportunities for advancement in relation to compassion fatigue prevalence and risk factors would be beneficial.

Research has shown (Kutney-Lee et al., 2013; Potter et al., 2013; Mason et al., 2014; Van den Heede et al., 2013) work environments that have adequate leadership support have less burnout, increased job satisfaction and decreased intent to leave. If training and assistance can be given to our nurse leaders, who shape and support policies and procedures, more proactive guidelines can be created in support of nurses. The quadruple aim provides support for leaders to keep the well-being of health care workers a priority.

The alignment of nurses within work settings also requires further analysis. Nurses have better work outcomes when working on a unit that more closely matches their style and interest. The literature does not address how to effectively match nurses with work settings. Further understanding of the impact of the match between nurses and work settings on compassion fatigue may offer a means to increase nurse retention, reduce turnover and increase work engagement.

Meyer et al. (2014) and Sacco et al. (2015) determined work settings that are a good fit for the nurses' interest and attributes can positively affect compassion satisfaction and reduce

compassion fatigue. Providing opportunities for advancement and growth are known strategies to increase work engagement and employee satisfaction (Sawatsky & Enns, 2012). Considering unit fit for nurses might also be warranted in addressing retention compassion satisfaction and compassion fatigue.

Finally, resiliency training is proving to be an effective intervention for a wide variety of nurses and units (Flarity et al., 2013; Flarity et al., 2016; Potter et al., 2015) but it is not readily available. It is important to understand why these interventions are not more widely supported and implemented. In 2013, Flarity et al. studied an educational program to address and provide tools for emergency room nurses to help mitigate compassion fatigue such as joining boards and councils, preceptor programs and continuing education. Their study determined resiliency training enhances compassion satisfaction and reduces secondary traumatic stress and burnout symptoms. Potter et al. (2013) asserted “nurses must develop resiliency skills that will enable them to manage day-to-day stressors in an effective manner” (p. 186). If resiliency training has proven to be an effective intervention, it seems incumbent for institutions to assist by providing strategies that foster the acquisition of resiliency skills.

Conclusions

Compassion fatigue manifests as a combination of personal and issues. While nurses cannot always avoid stress in caring for patients, resiliency training and increased engagement in the work environment can assist in fostering the needs of nurses. This can be accomplished by successfully integrating resiliency programs within institutions, and the possibility of adapting these programs to suit the needs of each unit. In addition, determining if nurse-unit fit, impacts compassion fatigue may promote hiring practices that benefit both the nurse and the institution.

Compassion fatigue impacts the nurse, the institution and the patient. Addressing the consequences of compassion fatigue satisfy the priority of the re-conceptualized quadruple aim to improve population health, costs and satisfaction with patient care, and to improve the work environment of health care professionals. Doing so provides nursing professionals the ability to care for themselves, thus enhancing their ability to care for others.

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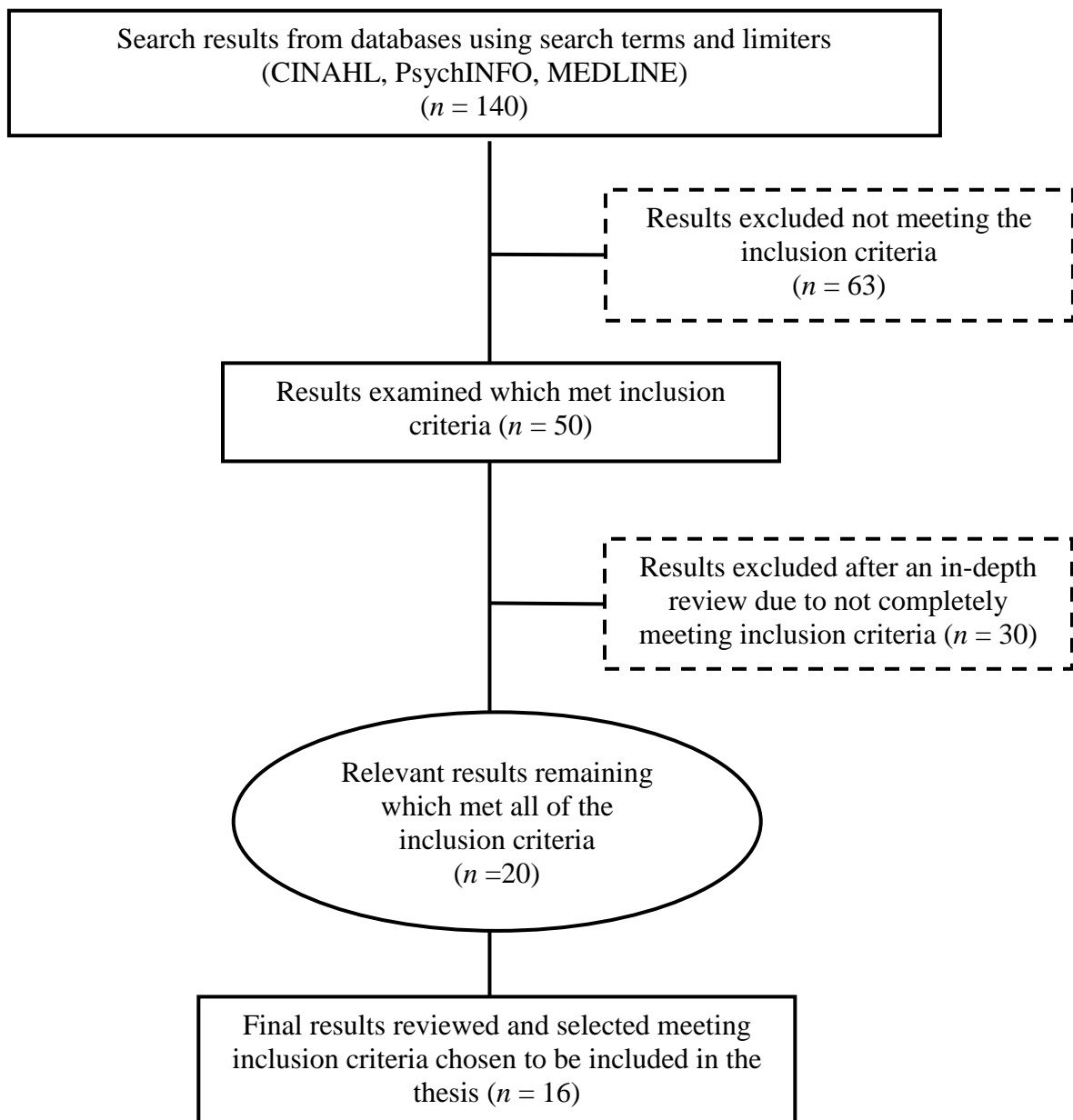
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APPENDIX A: SELECTION METHOD OF LITERATURE

Figure 1: Selection Method of Literature

Key Search Terms = nurs*, compassion fatigue OR secondary traumatic stress disorder AND burnout with additional search terms of retention, engagement, intervention* and strateg

Limiters = peer reviewed, English language and locations of research in the United States, Canada, Western Europe and Australia. Articles were also restricted to publications within 5 years of December 2016 except for original concept definitions of the topic and nursing theory.



APPENDIX B: TABLES OF EVIDENCE

TABLE 1. Summary Table of Research Literature on Compassion Fatigue

Study	Design, Sample Size and Scales	Participants and Setting	Aim	Key Findings	Suggested Interventions	Theme Relevancy
Branch, C. & Klinkenberg, D., (2015).	Descriptive, cross-sectional survey N=274 The Professional Quality of Life Scale Version 5	Medical care professionals in hematology, oncology and cardiology units at St. Louis Children's Hospital, MO.	To identify compassion fatigue prevalence by comparing demographic variables and the risk of developing compassion fatigue.	CVICU had the highest score of CS. PICU had the highest degree of BO and STS and lowest CS. EU has less STS than PICU and higher CS scores.	Resiliency program to address coping mechanisms of the RN.	This applies to predisposing factors of CF based and finding of unit. This finding is important to identify who is most at risk for developing CF.
Craigie, M., Osseiran-Moisson, R., Hemsworth, D., Aoun, S., Francis, K., Brown, J., Hegney, D. & Rees, C. (2016a).	Cross-sectional with a self-administered questionnaire N=273 The Professional Quality of Life Scale Version 5, Depression Anxiety Stress Scales, Spielberger State-Trait Anxiety Inventory Form Y2	Direct-care RNs at one metropolitan tertiary acute-care hospital in Western Australia.	To compare the relationships of TNA and CS with CF, BO and STS.	Higher TNA was associated with higher CF, BO and STS. Higher CS resulted in lower CF, BO and STS. TNA may increase the risk of CF in RNs. Higher CS reduced CF and BO but not STS.	Research in how to mitigate TNA influences and resiliency training.	This applies to common causes and predisposing factors of CF.
Craigie, M., Slatyer, S.,	Qualitative using the Mindful self-	RNs from a teaching hospital	Determining the efficacy of a	45% had high BO pre-intervention which	MSCR may be a feasible intervention to	This applies to suggested

TABLE 1. Summary Table of Research Literature on Compassion Fatigue

Study	Design, Sample Size and Scales	Participants and Setting	Aim	Key Findings	Suggested Interventions	Theme Relevancy
Hegney, D., Osseiran-Moisson, R., Gentry, E., Davis, S., Dolan, T. & Rees, C. (2016b).	care and resiliency intervention (MSCR) N=21 Narratives analyzed using phenomenological method	in Western Australia.	compassion fatigue prevention educational workshop in combination with a series of mindfulness training seminars.	reduced to 15% post intervention.	improving resilience and wellness of RNs.	interventions to combat CF.
Flarity, K., Gentry, J., & Mesnikoff, N. (2013).	Qualitative using a resiliency training seminar N=73 The Professional Quality of Life Scale Version 5 pre/post intervention	RNs from 2 EDs in Colorado Springs, CO.	Examine the effectiveness of a resiliency training program to combat CF and BO and increase CS.	Positive response to developing a self-help method to resolve CF issues and prevent future occurrences.	Organizational prevention programs to help increase CS to reduce CF.	This applies to suggested interventions to combat CF.
Flarity, K., Nash, K., Jones, W., & Steinbruner, D. (2016).	Exploratory study N=55 The Professional Quality of Life Scale Version 5	Forensic RNs (FN) from an urban hospital emergency department, Level II trauma center.	Investigate the prevalence of CF in FNs and implement a training seminar to offset CF.	73% had moderate to high BO/STS with low CS but lower levels of CF than previous studies suggesting FNs already have some protective mechanisms in place.	CF intervention seminars is an effective and sustainable intervention.	This applies to suggested interventions to combat CF.

TABLE 1. Summary Table of Research Literature on Compassion Fatigue

Study	Design, Sample Size and Scales	Participants and Setting	Aim	Key Findings	Suggested Interventions	Theme Relevancy
	pre/post intervention					
Hunsaker, S., Chen, H., Maughan, D., & Heaston, S. (2015).	Cross-sectional study using a nonexperimental, descriptive, and predictive design N=278 The Professional Quality of Life Scale Version 5	ED RNs throughout the United States.	To determine prevalence and demographic components of CS, CF and BO in ED RNs.	High CS, low CF. Lower manager support predicted higher levels of BO and CF. The older the RN and/or the more years practices, the higher the CS, the younger the RN, the higher the BO. Masters and Doctoral prepared RNs had lower levels of BO. RNs who worked 8-10 hour shifts had higher CS and lower BO.	Increased awareness of CF and investigation into interventions which support more work satisfaction.	This addresses the themes of predisposing factors of CF in relation to demographics and the consequences.
Li, A., Early, S. F., Mahrer, N. E., Klaristenfeld, J. L., & Gold, J. I. (2014).	Descriptive statistical tests N=251 Life Events Checklist, PTSD Checklist Civilian Version during training and 3 months after	New to practice pediatric RNs at the Children's Hospital in Los Angeles, CA.	To determine if organizational commitment would protect against and moderate CF and BO.	Stress and PTSD were less likely to reduce CS and trauma was less likely to cause BO when group cohesion was high. Group cohesion was determined to be considered a protective factor and organizational commitment can	Promotion of group cohesion and organizational commitment, learning adaptive coping skills and the management of job and personal stress through nursing programs and hospital-based curriculum.	This applies consequences and suggested interventions to combat CF.

TABLE 1. Summary Table of Research Literature on Compassion Fatigue

Study	Design, Sample Size and Scales	Participants and Setting	Aim	Key Findings	Suggested Interventions	Theme Relevancy
				promote positive outcomes for RNs.		
Mason, V. M., Leslie, G., Clark, K., Lyons, P., Walke, E., Butler, C., & Griffin, M. (2014).	Nonexperimental, descriptive, correlational design survey N = 26 The Professional Quality of Life Scale Version 5, Utrecht Work Engagement Scale, Moral Distress Scale	SICU trauma RNs in a northeastern urban city.	To examine CS, CF and moral distress based on level of education and work engagement through Jean Watson's caring theory.	Work engagement was positively correlated to the increase of CS and the decrease of CF and BO. Moral distress was prevalent with SICU RNs. When moral distress was high, work engagement was low.	Continued research with these variables using a larger sample size to determine additional contributing factors as well as education on self-care, continuing education, hospital resource management and behavior change.	This addresses the themes of predisposing factors of CF in relation to demographics, consequences and suggested interventions to combat CF.
Mealer, M., Conrad, D., Evans, J., Jooste, K., Solyntjes, J., Rothbaum, B., & Moss, M. (2014).	Randomized and controlled 12-week intervention study using descriptive statistics N=27 Connor-Davidson Resilience Scale, Posttraumatic Diagnostic Scale, Hospital Anxiety	Intensive care unit (ICU) RNs from an academic institution.	To determine the feasibility of resilience training to ICU RNs.	Resilience training is feasible and acceptable to ICU RNs.	Resilience training through promoting cognitive flexibility, improving coping skills and the response to fear, improving social network support, exercising, written exposure therapy and promoting humor.	This applies to suggested interventions to combat CF.

TABLE 1. Summary Table of Research Literature on Compassion Fatigue

Study	Design, Sample Size and Scales	Participants and Setting	Aim	Key Findings	Suggested Interventions	Theme Relevancy
	and Depression Scale, Maslach Burnout Inventory, Client/Patient Satisfaction Questionnaire- 8					
Meyer, R. M. L., Li, A., Klaristenfeld, J., & Gold, J. I. (2015).	Longitudinal study (6 months) N=251 Life Events Checklist, Versant Voyager™, Compassion Fatigue Self-Test, The Professional Quality of Life Scale Version 5, Mueller McCloskey Satisfaction Scale	RNs from the Versant™ RN Residency Program at Children's Hospital in Los Angeles, CA.	To better understand the effects of stress exposure on BO, CS and job satisfaction and whether CF effected these associations.	Exposure to stressful events increased BO and CF. The degree of CF impacted the degree of BO and CS.	CF should be acknowledged and supported, resilience training to develop coping strategies within the hospital system would be beneficial.	This addresses the themes of predisposing factors of CF in relation to demographics and the consequences.
Neville, K., & Cole, D. A. (2013).	Nonexperimental, descriptive, correlational design N=214 Professional Quality of Life Scale Version 5,	Full-time, part-time, and per-diem RNs employed by HMC as staff RNs, clinical RN leaders, and ARNP at	To evaluate the relationship and effectiveness of health promotion behaviors in relation to CS, CF and BO.	Health promotion and spiritual growth promoted CS. Spiritual growth had the highest inverse relationship between CS, CF and BO. Financial cost of investing in health	Reduction of cost in health promotion programs for RNs.	This applies to suggested interventions to combat CF and ties into Jean Watson's caring theory.

TABLE 1. Summary Table of Research Literature on Compassion Fatigue

Study	Design, Sample Size and Scales	Participants and Setting	Aim	Key Findings	Suggested Interventions	Theme Relevancy
	Psychometric Evaluation of the Health Promoting Lifestyle II Scale	Hunterdon Medical Center in Flemington, NJ.		promotion behaviors was the most cited factor not participating.		
Perez, G. K., Haime, V., Jackson, V., Chittenden, E., Mehta, D. H., & Park, E. R. (2015).	Qualitative study N=15 Interviews	Palliative care clinicians (PCC) Massachusetts General Hospital in Boston, MA.	To identify interventions for a targeted resiliency program for PCCs which evaluated stressors, coping strategies and training needs among this population.	Time pressures, variability of schedules and role demands and feelings of powerlessness were the main contributors to stressors creating a violation of the personal and professional boundaries of the clinicians.	Resiliency training using mind-body strategies such as meditation, thought redirection strategies, developing a healthy work-life balance and health education on the physiology of the stress response.	This applies to suggested interventions to combat CF and ties into Jean Watson's caring theory.
Potter, P., Pion, S., & Gentry, J. E. (2015).	9-month post intervention follow up qualitative study N=15 Narratives analyzed using phenomenological method	Resiliency training course facilitators for Oncology RNs at an urban medical center in the Midwestern United States.	To evaluate the efficacy of an interventional program based on the facilitator's perceptions personally and professionally.	Facilitators described improved emotional health, increased energy, empathy and confidence.	CF facilitator programs should be considered by institutions to develop programs for their health care providers.	This applies to suggested interventions to combat CF and ties into Jean Watson's caring theory.

TABLE 1. Summary Table of Research Literature on Compassion Fatigue

Study	Design, Sample Size and Scales	Participants and Setting	Aim	Key Findings	Suggested Interventions	Theme Relevancy
Ray, S. L., Wong, C., White, D., & Heaslip, K. (2013).	Nonexperimental, cross sectional study with a predictive survey design N=169 Professional Quality of Life Scale Version 4, Areas of Work Life Survey, Maslach Burnout Inventory-General Survey	Frontline mental health care professionals (FMHPs) at one community mental health site, one community mental health crisis site, and one mental health outpatient and one inpatient mental health unit at a hospital site in Southwestern Ontario, Canada.	To determine the relationships between CS, CF, BO and conditions based on the Maslach and Leiter 6 areas of work life: workload, control, rewards, community, fairness and values.	High degree of fit and high CS resulted in low levels of CF and BO. Person-job match increased levels of CS, reducing CF and predicted lower BO. CF was higher in those with a trauma history.	Professionals with a history of trauma may need additional support and interventions to mitigate CF and emotional exhaustion. Building supportive working relationships with more senior colleagues.	This addresses the themes of predisposing factors of CF in relation to demographics, consequences and suggested interventions to combat CF.
Sacco, T. L., Ciurzynski, S. M., Harvey, M. E., & Ingersoll, G. L. (2015).	Cross-sectional design N=221 Professional Quality of Life Scale Version 5	Adult, pediatric, and neonatal critical care RNs in an academic medical center in the United States.	To establish the prevalence of CF and describe organizational and unit demographics.	Female RNs and those working on single-acuity units reported higher CS; mixed-acuity units had higher BO. The lowest CS group was aged 40-49 years old and those who had a change in management within the last year. The highest level of CS was	Modifying institutional factors culture of meaningful recognition, professional development and debriefing and personal factors such as teaching skilled communication and	This addresses the themes of predisposing factors of CF in relation to demographics, consequences and suggested interventions to combat CF.

TABLE 1. Summary Table of Research Literature on Compassion Fatigue

Study	Design, Sample Size and Scales	Participants and Setting	Aim	Key Findings	Suggested Interventions	Theme Relevancy
				in RNs over 50 years old. RNs 20-29 has higher STS scores. The older the RN, the higher the knowledge, the less the risk was for CF.	effective decision making.	
Sawatzky, J.-A. V., & Enns, C. L. (2012).	Cross-sectional survey N=261 Perceived Nurse Working Environment Scale, Engagement Composite Questionnaire, Professional Quality of Life Scale Version 5	ED RNs in urban community and tertiary hospitals in Manitoba, Canada.	To explore contributing factors that predict RN retention in ED units.	Degree of engagement predicted intent to leave and was associated with job satisfaction, CS, CF and BO.	Developing strategies for retention by strengthening leadership, promoting positive organization perceptions, collaboration with ED physicians, development of competence in staff by promoting continuing education.	This applies to suggested interventions to combat CF.