2019

Determinants of Compassion Fatigue in Acute Care Nursing

Sherry Levering
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Sherry Kalahar

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Eileen Fowles, Committee Chairperson, Nursing Faculty
Dr. Barbara Niedz, Committee Member, Nursing Faculty
Dr. Patricia Schweickert, University Reviewer, Nursing Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2019

Abstract

Determinants of Compassion Fatigue in Acute Care Nursing

by

Sherry Kalahar-Levering

MSN, Walden University, 2012

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

May 2019

Abstract

Nurses experiencing compassion fatigue (CF) are emotionally exhausted, which contributes to decreased nurse retention and patient satisfaction. The focus of this project was to identify factors that contribute to CF. A systematic review was conducted to identify demographic factors that contribute to CF in the acute care setting, clarify the types of care situations that increase CF, and describe the social support networks of nursing units influencing CF. The review included peer-reviewed journal articles published between 2007 and 2018 that focused on registered nurses in the acute care setting. Using the grading of recommendation assessment development and evaluation format, 3 articles in Level of Evidence 1 and 11 articles in Level of Evidence 3 were included in this review. Findings showed that demographic factors such as age, gender, level of education, and years as a nurse contributed to CF. Care situations that contribute to CF include mixed-acuity-level patient units and an increase in administrative duties that are not directly related to patient care. A nursing unit's social support network has a direct impact on reducing CF: Units with peer support and respect have less CF, units with managers who are active and listen to staff have lower CF, and units with a change in management or nursing practice have higher levels of CF. Implications of this study for social change include approaches to help nurses balance care of patients and administrative tasks as well as creating education on factors that lead to CF. Interventions focused on promoting a working environment in which nurses' input is valued may prevent nurses from leaving their jobs or the nursing profession, which could improve patient satisfaction with nursing care.

Determinants of Compassion Fatigue in Acute Care Nursing

by

Sherry Kalahar-Levering

MSN, Walden University, 2012

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

May 2019

Dedication

I dedicate this paper to my mother, Patricia Suchin. You left us in June of 2000, way too soon after a 6-year battle with breast cancer. I miss you every day the pain of losing you has never left but one of the greatest gifts you have ever given me was the desire to never give up on your dreams. You were the best mother, grandmother, and friend to many, and you were also my best friend. Without you I would have never finished nursing school, which would have never made accomplishing this degree possible.

Acknowledgments

Thank you to my husband Marty for believing in me and helping me focus on what I can accomplish. Words can never express how much you mean to me. Love you more.

To my son Tyler, daughter Haylee, my sisters Marcy, Lisa, and Barbara, without your support and encouragement and even a few threats now and then I finally finished this. A special thank you to Tyler and Katie for helping with editing and reviewing my paper.

Thank you to Emma, Shakti, Gail, and Candace sometimes having a few good friends who have just the right thing to say to keep me focused and striving for more.

To the girls of the club Cindy, Jane, Gloria, Cindy, Linda, and Janet—thank you for your words of encouragement even when I wasn't convinced that I could do this.

To Dr. Fowles—I know I have not always been the best or even one of the easiest student, but thank you for knowing the words that I needed to hear to get this done.

Table of Contents

List of Figures

Section 1: Nature of the Project

Introduction

Nursing is a caring profession with the principal goal of taking care of others at their most vulnerable (Ariapooran, 2014). But nurses become emotionaly exhausted and experience a decrease job satisfaction (Berger, Polivka, Smoot, & Owens, 2015) *Compassion fatigue* (CF) is a term used to describe nurses' response of either emotional distancing to turn off their feelings or feeling helpless and anger from watching their patients go through devasting illnesses or trauma (Sheppard, 2015). The nature of this project was to provide a systematic review of the literature to determine what clinical situations or demographic factors contribute to CF, which can asssits managers and directors in the acute care nursing units in providing interventions to combat CF and improve nurse retention and patient satisfaction. In this project, characterisitics of CF are discussed in terms of how CF affects acute care nurisng staff and factors that contribute to developing CF. Section 1 consists of a description of CF , the purpose of the systematic literature review, and the implications for positive social change in the acute care setting.

Problem Statement

CF is frequently encountered by nursing staff in the acute care setting (Ledoux, 2015). CF is often described as "the cost of caring" and can be triggered by one traumatic caring event or an accumulation of multiple events (Wentzel & Brysiewicz, 2017). Nurses who experience CF feel overwhelmed and mentally exhausted, that leads to a decreased level of patient care (McHugh, Kutney-Lee, Cimiotti, Sloane, & Aiken,

2011). Additionally, emotional exaustion from CF contributes to a decrease in patient satisfaction (Hunsaker, Chen, Maughan, & Heaston, 2015). CF can affect the health of acute care nursing staff, leading to negative patient outcomes (Galiana, Arena, Oliver, Sanso, & Bernito, 2017). CF is not limited to one nursing setting. In several situations, CF has been linked to nurse burnout, that leads to nurses wanting to leave the profession along with decreased productivity, ineffective patient care, medical errors, and poor patient outcomes (Berger et al., 2015). The problem of CF is also linked to low nursing morale, exhaustion, impaired job performance, absenteeism, and staff turnover (Sheppard, 2015). Addressing the problem of CF is important to healthcare organizations as they strive to retain nursing staff members and to contribute to positive patient outcomes. Developing nursing units that promote retention of staff starts with identifying factors that contribute to acute care nurse developing CF.

This project addressed the lack of information on the determinants of CF and symptoms of CF. Identifying situations or demographic factors that contribute to CF will assist nursing educators and managers to develop interventions to improve coping skills. The focus of this doctoral project was to identify factors that contribute to CF and to assist with developing interventions to reduce the effects of CF while promoting retention of nursing staff. Retaining experienced nursing staff is necessary to delivering quality nursing care and improving patient outcomes (Mason, Leslie, Lyons, Walke, & Griffin, 2014).

Purpose Statement

Triggers of CF need to be identified to guide the development of effective intervention programs, retain nursing staff and promote quality patient care. Compassion is a response to human suffering that motivates nurses to care for others, CF is the result of negative feelings nurses experience from helping others (Wu, Singh-Carlson, Odell, Reynolds, & Su, 2016). Determining factors that contribute to CF can allow nursing facilities to support nursing staff through early identification of CF symptoms and interventions to help nurses find a work–life balance and compassion satisfaction (CS) with their nursing practice. The purpose of this project was to conduct a systematic review of the literature to determine factors that contribute to nurses developing CF in the acute care setting. The overall goal of the project was to disseminate results to nursing professionals. Areas targeted to present the results of the systematic review include nursing journals with a focus on nursing administration, the Ohio Nurses Association annual professional development conference, and a continuing education module for focused on staff nurses.

This scholarly project addresses a gap in practice through a systematic review of the literature to identify factors contributing to CF and improve the well-being of acute care nursing staff. This project addressed the following practice-related question: What are the demographic and situational determinants of CF in nurses working in an acute care setting? The aim of this project is to decrease CF in the acute care setting while improving patients' satisfaction with the care they receive as well as nurse retention.

Evaluation of this practice-focused question will enable published research to be used to influence the development of CS assessment of acute care nursing staff.

Nature of the Doctoral Project

The systematic review of the literature was gathered from multiple sources. Information was searched from an online university library using CINHL, PUBMED, and EBSCO databases. A local online database was also used to gather the studies to be included in the systematic review; the database is networked with a medium-sized Midwest healthcare organization, three local healthcare systems, two small private colleges, a state community college, the public library metropolitan library and a large state university. Published research was obtained from peer-reviewed journals that are research based. Types of articles included both qualitative and quantitative research studies and systematic reviews.

The grading of recommendation assessment development and evaluation (GRADE) was used as the approach to organize and analyze the evidence for the systematic review. GRADE is a formal process to rate evidence in systematic reviews (Dijkers, 2013). The GRADE process was developed by an international panel of members and has been adopted by organizations including World Health Organization and the Cochrane Collaboration (Dijkers, 2013). The GRADE process is a transparent and structured process for developing evidence summaries for systematic reviews. The advantage of using GRADE is that it requires the systematic reviewer to make explicit judgements of each factor and determines the quality of evidence for each outcome (Dijkers, 2013).

The purpose of the project was to determine factors that contribute to CF in the acute care setting. This addresses a gap in nursing practice and can help healthcare facilities to develop intervention programs that promote CS and reduce turnover of nursing staff (see Drury, Craigie, Francis, Aoun, & Hegney, 2013). There are clear definitions of what CF is but limited information of what contributes to CF. The information gained from this systematic review is targeted toward nursing administrators, nursing leaders, and unit leadership councils. This information could be used to develop a presentation to be used for nursing conferences with a focus on nursing leaders and administrators. The information gained from the review can also be used to develop journal articles with a focus on the factors that determine CF with recommendations on how to develop processes to decrease the occurrence among acute care nursing staff.

Significance

The impact of CF on acute care nursing staff includes decreased job satisfaction, limited ability to feel empathy toward patients and their family members, and increased job turnover (Hunsaker et al., 2015; Sheppard, 2015). Developing intervention programs that promote CS improves job satisfaction, which decreases job turnover (Hunsaker et al., 2015). Fostering CS also improves nurses' ability to build relationships with patients and their family members, which improves patient outcomes and patient satisfaction (Galiana et al., 2017). Stakeholders affected by CF and the potential intervention programs include acute care nursing staff, patients, patient families and healthcare management. Contributions of this systematic review could add to discovery factors that increase the

risk of nurses developing CF and build programs to intervene prior to reaching a status burnout and loss of empathy toward patients.

Preventing CF has the potential for transferability to other parts of healthcare facilities. The problem of CF is experienced in all areas of healthcare, so understanding what contributes to CF will have a positive impact across the healthcare spectrum (Galiana et al., 2017). Finding ways to identify CF will also enable researchers to develop support for those at risk of developing CF. Social change can result from decreasing the effects of CF while promoting job satisfaction and improved work–life balance and decreasing nursing turnover, all which can improve patient outcomes and patient satisfaction. Developing CS protects nursing staff from loss of empathy promoting nurse retention and job satisfaction (Kelly, Baker, & Horton, 2017).

Summary

CF contributes to job dissatisfaction among acute care nursing staff (Ledoux, 2015). Determining factors that contribute to CF supports finding interventions to prevent acute care staff from developing CF. Nurses experiencing CF experience less job satisfaction and lose the ability to feel empathy toward their patients (Hunsaker et al., 2015). Promoting CS in nurses leads to improved patient care and patient outcomes (Drury et al., 2013), as it gives nurses the ability to find balance in their lives while encouraging a safe, caring nursing practice (Ledoux, 2015).

Gathering knowledge about CF can assist with discovering patterns and factors this can reveal more information related to CF in clinical applications. This project's

literature review provides up-to-date knowledge about CF and can ensure a thorough understanding of CF and assists with identifying potential areas for future research.

Section 2: Background and Context

Introduction

CF is considered the "cost of caring" for nurses. Gaining further knowledge about CF and what causes it supports intervention programs to reduce the occurrence among nurses. The purpose of this project was to determine factors that contribute to nurses developing CF, addressing the lack of information on a determinants of CF and guiding potential interventions to reduce the effects of CF while promoting retention of nursing staff. In this section, a review concepts used to evaluate literature selected during the systematic review is presented along with definitions of terms, background of the practice problem, and the relevance of the project toward nursing practice. This section will also include the role of the DNP student in the scholarly project.

Concepts, Models, and Theories

Conducting a systematic review required that I determine a method to rate the quality of the evidence collected. GRADE is a methodology of interpreting the evidence for a systematic review (Guyatt et al., 2011). The GRADE approach was developed by an international group of approximately 200 health professionals, researchers, and guideline developers (Guyatt et al., 2011). The GRADE framework for evaluation of research evidence is used in more than 90 organizations worldwide including the World Health Organization and the UK National Institute for Health and Care Excellence (Dijkers, 2013).

The GRADE approach includes a rating system for determining the of quality of the evidence selected for a systematic review. Quality of evidence is determined by

assigning research evidence into four different categories: high quality, moderate quality, low quality, and very low quality (Guyatt et al., 2008). This framework highlights the implication for summarizing the evidence used, clarifying questions to determine outcomes, and interpreting the evidence used in the systematic review (Guyatt et al., 2011). Advantages of using the GRADE system include separation between quality of evidence and strength of evidence, evaluation of the importance of outcomes of alternative management strategies, and interpretation of strong versus weak recommendations for clinicians, patients, and policy makers (Guyatt et al., 2011).

Definition of Terms

Burnout: A prolonged response to chronic physical or emotional stressors resulting in exhaustion and ineffectiveness (Michalec, Diefenbeck, & Mahoney, 2013).

Compassion fatigue (CF): A condition as a result of caring for patients who are in pain or suffering, which includes emotional distress, apathy, loss of empathy, decreased patient safety, and poor judgement (Sabo, 2006).

Compassion satisfaction (CS): The pleasure and gratitude nurses derive from patient interactions and their roles as nurses, which balances their professional quality of life (Wu et al., 2016).

Secondary traumatic stress disorder: Occurs when a nurse caring for a patient and family who experience trauma feels his or her own pressure, anxiety, stress, and other emotions associated with the traumatic event (Ledoux, 2015).

Relevance to Nursing Practice

The concept of CF was first observed in 1992 by Joinson, who noticed that nurses in a unit had lost their ability to care. In 1995, Figley termed the observed behavior *secondary traumatic stress disorder* (Jakimowicz, Perry, & Lewis, 2017). Nurses are the largest group whose role is taking care of people at their most stressful moments (Ariapooran, 2014). Compassion is a response to human frailty that motivates nurses to act on behalf of others with a sense of duty toward caring for patients (Ledoux, 2015). CF is present in all contexts of nursing, and there is no one area of nursing that is not affected (Ledoux, 2015). Nurses experience CF when they perceive themselves as unable to fulfill their moral responsibility, as they feel they cannot give the care they feel was necessary to their patients (Ledoux, 2015).

CF is comprised of two parts: (a) burnout, which is described as exhaustion, frustration, anger, and depression and (b) secondary traumatic stress disorder, described as the negative consequences secondary to fear and work-related trauma (Wu et al., 2016). CF is caused by a natural and intrinsic response to alleviate pain and suffering, and it results in long-term consequences that are not easy to resolve, whereas burnout is environmentally driven and has a rapid onset and resolution (Wu et al., 2016). A point of differentiation between CF and burnout is that CF is consequence of caring for people who are suffering rather than an environmental response such as seen in burnout (Sabo, 2006). Symptoms of CF include feeling powerless, depression and affective numbness, sleep disturbances, autonomic arousal, memory gaps, dissociation, intrusive thoughts and

images (Ariapooran, 2014). Nurses experience CF after being closely associated with their patients, becoming immersed in their pain and trauma (Wentzel, 2014).

Job stress and job satisfaction influence each other, excessive job stress affects nurses physically and psychologically causing a decreased ability to work effectively (Hee Kim et al., 2017). Job stress and job satisfaction among nurses are directly related to quality of care, poor production performance, premature retirement, sickness absence and loss of highly skilled nurses (Hee Kim et al., 2017). Compassion satisfaction in nursing facilitates is tied to building nurse patient relationships in order to promote a caring environment for both nurses and patients (Wu et al., 2016). Cimiotti et. al suggest an association between CF among nurses and negative patient outcomes that can affect a patient's satisfaction with the care they received (Cimiotti, Aiken, Sloane, & Wu, 2012). Relationships between nurses and patients are directly related to patient satisfaction with nursing care they receive. Promoting CS among nurses in the acute care setting supports improved patient satisfaction, as nursing satisfaction leads to patient satisfaction (Michalec et al., 2013).

Combating CF requires strategies focused on improving standards of practice to reduce the development of CF. Nurses cited the growing burden of administrative activities that are distracting them from their role as caregivers, nurses are spending more time completing time consuming tasks leaving less time for patient care (Morrison & Korol, 2014). Finding ways to improve working condition to promote a CS will lead to an improvement in the quality of nursing care and patient safety (McHugh et al., 2011). Nursing units with higher job satisfaction rates are associated with higher patient

satisfaction with their nursing care (McHugh et al., 2011). Establishing a culture of teamwork in the nursing units has considerable benefits including more positive leadership and improved mentoring of novice nurses (Wu et al., 2016). Nurses who felt that their workplace functioned cohesively experienced lower levels of CF and higher levels of CS, this supports the gap in practice by finding factors that determine who is at higher risk for developing CF (Wu et al., 2016).

Local Background and Context

CF affects nursing at multiple levels from international to local healthcare facilities and across all healthcare settings. Any setting that exposes nurse to patient suffering places nurses at risk of developing CF. Improving the satisfaction of nursing staff has a direct impact on patient satisfaction and nursing retention. Conducting a systematic review regarding factors that contribute CF could be used to establish intervention programs promoting CS. Establishing determinants will promote custom intervention programs by nursing management and healthcare executives.

The negative impact of CF and factors that determine nurses vulnerable for developing CF was reviewed in a large metropolitan area in the Midwest. The city includes a large university with an academic medical center along with a state college and three private liberal arts colleges. The area includes three healthcare organizations that have 4,412 staffed acute care beds combined. All hospitals in the area are nonprofit facilities with a goal of improving the lives of the underprivileged in both the metropolitan and surrounding urban areas.

Role of the DNP Student

As the DNP student, I conducted a systematic review of CF and determining factors that place nurses at high risk for developing CF. I have no relationship with any clinical setting as I work in a health system corporate office. My role in this project is to conduct a systematic review, I have no bias toward this doctoral project topic. The systematic review does not involve any participants or involvement in the clinical setting. As a DNP student information determined from the project will be shared through my affiliation with the Ohio Nurses Association through presentation at annual professional development conference and poster presentation through facilities education departments.

I have been a registered nurse for 20 years with a history of working in long term care and acute care settings. The topic of CF is important to me as with past job roles I have seen many coworkers affected by CF leave jobs or are unable to connect with patients. My motivation for this project is to research factors that contribute to CF to enable intervention programs to be developed. Nurses are the largest sector of healthcare workers exposed to patients in the acute care setting (Ariapooran, 2014). Preserving effective nurse patient relationship through reducing the occurrence of CF is in the best interest of nurses but also the best interest of the patient.

Summary

CF affects all nursing settings. As the nursing shortage continues to grow protecting our current and future nurses is important to supporting safe quality care to our patients. Researching CF will have an impact of nursing by improving CS in nurses. Prompting CS has a direct impact on patient satisfaction and positive patient outcomes.

The DNP project of conducting a systematic review to determine factors that can contribute to CF will support the development of intervention programs. Focusing on reducing CF in the acute care nursing setting can directly impact patient outcomes which promotes CS.

Section 3: Collection and Analysis of Evidence

Introduction

The effects of CF are observed in all nursing settings. Protecting nurses contributes to quality nursing care and retention of nurses. Establishing factors that contribute to CF is better for the patient, nurses, and healthcare facilities. The purpose of this project was to determine factors that contribute to nurses developing CF, identifying factors that can guide interventions to reduce CF and improving nurse retention. The gap in practice that this project addresses is the lack of information on determinants of CF.

Section 3 is focused on where the sources of evidence were collected to conduct the systematic review and the practice-focused questions. The section also provides an outline of how the information for the review was recorded, tracked, analyzed and organized. These steps support an organized way to store and review the data collected.

Practice-Focused Question

The scholarly project aligns with Doctor of Nursing practice by addressing a gap in practice through a systematic review of the literature. This literature review addressed the following practice-related question: What are the demographic and situational determinants of CF in nurses working in an acute care setting? Additional questions addressed with this systematic review include:

1. What demographic factors such as age, gender, educational level contribute to CF?
2. What types of care situations increase the risk of CF?

3. Does the social support network of the nursing unit influence CF?

These practice-focused questions contribute to developing intervention programs focused on reducing the occurrence of CF and promoting CS. The aim of this project is to decrease CF in the acute care setting while improving patient satisfaction and nurse retention.

Sources of Evidence

Gathering evidence for the systematic review required a thorough review of articles, which involved the GRADE process for a standardized review of criteria. I used GradePro GDT online to document the review of the evidence. The GRADE approach involved a rating system for the quality of evidence for each article selected for the systematic review (Guyatt et al., 2008). Evidence was collected from peer-reviewed journals from online databases from both Walden University and a large Midwest healthcare system. Focusing searches on standardized criteria supported the practice-focused problem by limiting research to items that were focused on the topic of CF in the acute care setting. The reference lists from pertinent articles were reviewed to identify additional articles that could meet the inclusion criteria of the systematic review. The GRADE system was used to evaluate and rate the quality of the evidence to ensure quality information.

I also used a a research protocol for a list of inclusion and exclusion criteria for the research. Inclusion criteria included published research in peer-reviewed journals that describe CF in nurses working in the acute care setting. The search range for the systematic review was 2007 to 2018. Exclusion criteria involved studies based on

reserach in hospice, oncology, student nurse education, and infusion centers. Preliminary research collected indicated that nurses in the hospice, oncology, and infusion centers have lower levels of CF, whereas student nurses have a tendency to experience higher levels of CF. Refinement of information started with review of article abstracts to eliminate studies that did not include the use of professional quality of life scale.

Published Outcomes and Research

Relevant information necessary for the systematic review include databases searched, key search terms used, scope of review in terms of date ranges, and how the search was comprehensive. Databases for the systematic review include Ebsco, Pubmed, Cochrance, Cinahl, Psycinfo, Healthcare Source: nursing and Ovid. Key search terms included *compassion fatigue, compassion fatigue nursing, compassion fatigue healthcare, secondary traumatic stress, compassion satisfaction,* and *nurse burnout.* Evidence was collected from 2007 through 2018. To support a comprehensive search, I used an online database that is networked with a medium-sized Midwest healthcare organization, three local healthcare systems, two small private colleges, a state community college, the public library metropolitan library, and a large state university. Articles included both qualitative and quantitative research studies and systematic reviews published between 2007 to 2018.

Evidence Generated for the Doctoral Project

The systematic review did not involve human participants. The review was conducted in accordance with the university's internal review board guidelines for conducting a systematic review (approval no. 02-13-18-0135803). Inclusion criteria will

include published research in peer reviewed journals, which describe CF in nurses working in the acute care setting. Exclusion criteria will intentionally exclude studies that are based on reserach in hospice, oncology, student nurse education and infusion centers. The search range for the systematic review will be 2007 to current date. Refinement of information will start with review of article abstracts to eliminate studies that do not include the use of professional quality of life scale. Information will be searched from an online university library using CINHL, PUBMED, and EBSCO databases. A local online database will also be searched to gather the studies to be included in the systematic review; the database is networked with a medium sized Midwest healthcare organization, three local healthcare systems, two small private colleges, a state community college, the public library metropolitan library and a large state university.

Upon completion of searching and reviewing abstracts, articles will be selected and examined. The GradePRO GDT software was used to log study questions, inclusion factors, exclusion factors, and date of article into the spreadsheet format of the software. Once all data and factors are entered into the spreadsheet the software will assist with compling a summary of findings. The GradePro GDT software is free for any non-comercial appliction usage and approval has been received from the the software developer to use software for this systematic review.

Analysis and Synthesis

The system that will be used for recording, tracking, organizing and analyzing will be the GRADE system, with data entered the GradePro GDT website. The GradePro

GDT site is a tool is available both online and in an offline state. This system will keep all evidence, evaluation and analysis in one place to retrieve and review in an organized process. GradePro supports the use of the GRADE method ensuring research conducted follows the guideline established by GRADE that provides a base to support a reproducible study. The use of an excel spreadsheet was used in addition to the GradePro software to ensure a back-up copy of the research was available. Evidence will be collected to determine factors that contribute to nurses in the acute care setting developing CF. A review will be conducted of documented evidence to determine factors that contribute to CF.

Summary

This project focuses on the issue of CF by addressing a gap in practice through a systematic review of the literature to identify factors contributing to CF to improve the well-being of acute care nursing staff. Conducting a systematic review will provide valuable information for healthcare leaders to establish intervention programs to prevent CF in nursing staff members in the acute care setting. Collecting and tracking research data used in the systematic review are documented in a database to allow research information to be easily retrieved and reviewed. Using a reliable review method including a research protocol provide future researchers a reliable way to reproduce method used to produce results. All steps of the process require documentation to support a reproducible study.

Section 4: Findings and Recommendations

Introduction

Acute care nurses meet patients who are often emotional and vulnerable. Nurses witness not only patient pain and suffering but are present for the patient after a catastrophic diagnosis. CF is the result of a progressive process that develops in nurses after working with patients who are suffering (Salmond, Ames, Kamienski, Watkins, & Holly, 2017). Therefore, this project was focused on identifying factors that contribute to CF to provide information for nursing management and healthcare executives to develop interventions to reduce CF while promoting nurse retention, which can increase patient satisfaction. I conducted a systematic review regarding factors that contribute to CF to address these questions:

1. What demographic factors such as age, gender, educational level contribute to CF?
2. What types of care situations increase the risk of CF?
3. Does the social support network of the nursing unit influence CF?

These practice-focused questions helped the project gather information that can be used to reduce the occurrence of CF and promote CS. The systematic review was conducted using Boolean search terms, then narrowed by established inclusion and exclusion criteria. Once the studies were reduced, a review of the studies abstracts was conducted. Each study was rated per the GRADE.

Findings and Implications

The systematic review was conducted after approval from the Walden University institutional review board. The systematic review was conducted using both the Walden University library advanced search along with using a major Midwest university medical center database library. Boolean search terms included *compassion fatigue, compassion fatigue and nurse, compassion fatigue and nursing, compassion fatigue and acute care, compassion fatigue and nursing and acute care, compassion fatigue and nursing and medical center, secondary traumatic stress, secondary traumatic stress and nursing, compassion satisfaction, compassion satisfaction,* and *nursing*. The advanced search was used to search only peer-reviewed journals.

The library search using *compassion fatigue* resulted in 3,747 full-text articles from scholarly journals. The search was further narrowed by adding an additional search term of *nursing*, which limited the number down to 1,294, which included studies that were determined to not be duplicates from the search of the university medical center library databases. Abstracts reviews were done for the search results, which excluded all items from the established inclusion and exclusion lists. The results where narrowed to 64 using all the inclusion and exclusion criteria. Upon completing a full review of the studies, the number of acceptable studies was 19.

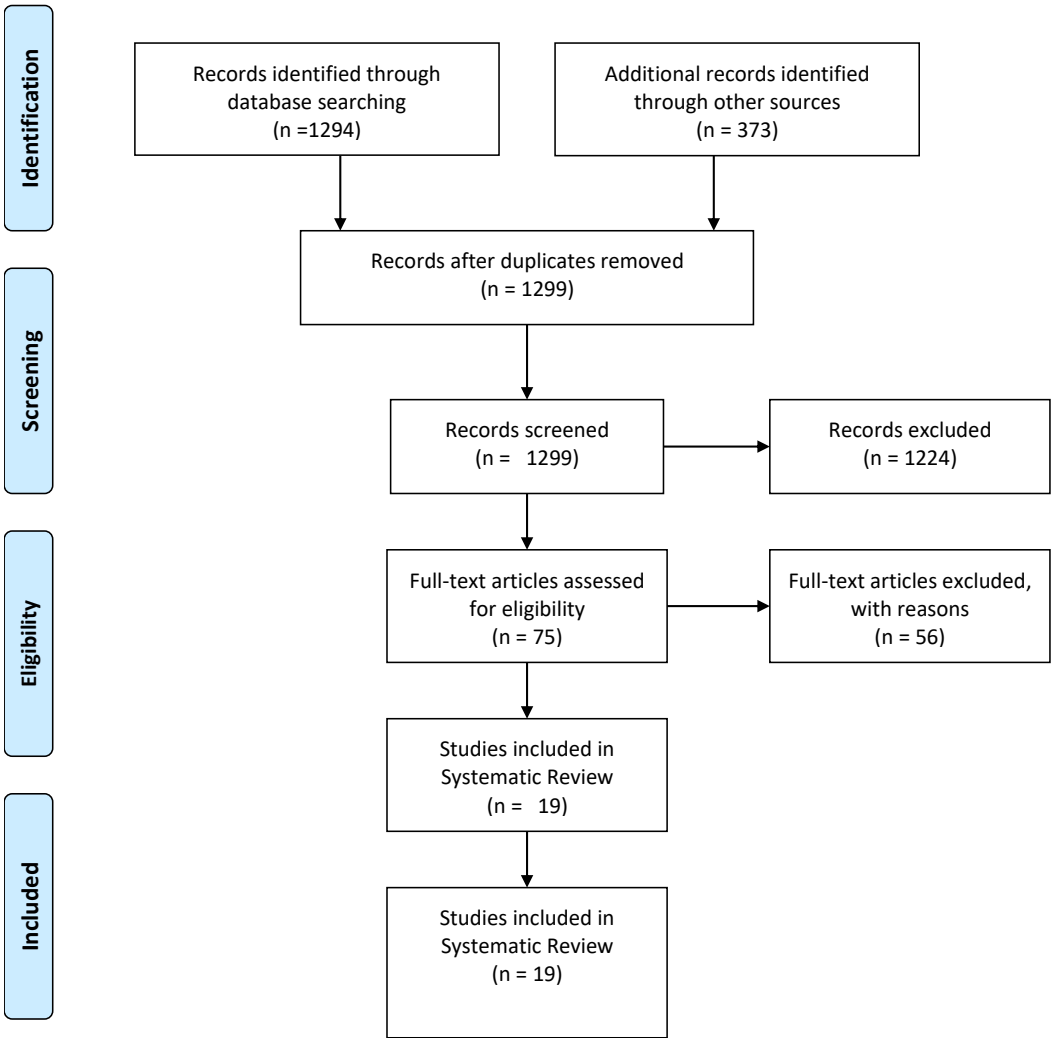

Figure 1. Compassion fatigue systematic review PRISMA.

Exclusion and Inclusion

The articles excluded from this review include studies that involved oncology nurses, nonnurse healthcare workers, or nurses in ambulatory care settings as participants as well as any study that did not use the professional quality of life scale as an assessment tool. Articles that were selected for inclusion for the review included all the of the inclusion criteria (see Appendix A), which involved studies with a focus on the acute care setting and registered nurses and studies that did not include nurses who work in oncology or hospice and did include the professional quality of life scale assessment. The type of research (i.e., qualitative or quantitative) was not set as a criterion for inclusion or exclusion. The results of the systematic review include 24 research studies.

Systematic Review Outcomes

Review Results

Types of studies were narrowed by research type including 10 cross-sectional, six nonexperimental, and three reviews including meta-synthesis, literature review, systematic review, and meta-narrative review. Each study is from a peer-reviewed journal and rated using the GRADE guidelines criteria. GRADE criteria is used to rate studies from high to low based on study type and the risk of bias to the study. Studies are also upgraded or downgraded based on factors found in the study. Using the GRADE approach provided a standardized set of information to rate the quality of the evidence collected for this study. The studies were grouped by type of research conducted, which include: (a) exploratory, (b) correlational, (c) cross sectional, (d) nonexperimental, and (e) reviews. Both qualitative and quantitative research studies were included in the

review. There were 19 studies that met criteria for the systematic review. The studies included five nonexploratory, one nonexperimental, one quantitative, nine cross sectional, three reviews, and one nonexperimental.

Previously Published Systematic Reviews on Compassion Fatigue

Three systematic reviews were included in this project: one systematic review, one meta-narrative review, and one meta-synthesis focused on CF. Demographic factors identified by these articles that contribute to higher levels of CF include younger age (Beck, 2011; Nolte, Downing, Temane, & Hastings-Tolsma, 2017; Sinclair, Raffin-Bouchal, Venturato, Mijovic-Kondejewski, & Smith-MacDonald 2017); lower education levels (Beck, 2011; Nolte et al., 2017); being female (Beck, 2011; Nolte et al., 2017); and fewer years of experience (Beck, 2011; Nolte et al., 2017; Sinclair et al., 2017). The reviews also identified characteristics that emerge in nurses with higher levels of CS such being older (Beck, 2011; Nolte et al., 2017), having higher education levels (Beck, 2011; Nolte et al., 2017), and having more experience (Beck, 2011; Nolte et al., 2017). Additionally, there is an inverse relationship with the age of nurses and level of CF, and women experience higher levels of CF than men (Nolte et al., 2017).

Care situations have also been recognized as a factor that increase levels of CF in nurses. Situations such as caring for patients with multiple needs and difficult workloads (Beck, 2011; Sinclair et al., 2017) can lead to increased levels of CF. Further, other factors that contribute to CF relate to patient care situations such as exposure to patient suffering (Sinclair et al., 2017). In the workplace, factors directly related to patient care can increase risk for CF such as exposure to unreasonable expectations from patients and

their families, witnessing suffering, and becoming overly involved in a patient's care (Sinclair et al., 2017). Factors in the care setting that are not directly related to patient care can also increase levels of CF, which include shortage of staff, difficult workloads, lack of knowledge, and caring for patients with multiple needs (Sinclair et al., 2017).

Social network with other nurses in the nursing unit can also play a role in predicting CF. The network of coworkers, managers, and administration with the nurse caring for patients can contribute to the development of CF. Identified items in the reviews related to the social network of nurses from the nursing unit and included working with respectful coworkers who have common goals with the nurse, having peer support, and being able to consult with peer coworkers (Beck, 2011). Nurses want to have relationships with other nurses they consider peers to reduce CF; therefore, facilities need to create comforting physical spaces and having adequate resources for nurses to facilitate this network development (Beck, 2011). A frequently cited theme from nurses regarding CF factors was the lack of support that they feel from not just managers and administrators but also limited opportunities for professional development and a need for respectful atmosphere between coworkers (Beck, 2011; Nolte et al., 2017; Sinclair et al., 2017). The level of CS in acute care units were noted to be higher in nursing units with strategies to promote teamwork and positive working relationships (Sinclair et al., 2017).

Despite the support from these articles, the limitation of the reviews is that CF is an empirical topic with multiple names. This makes the exhaustive search on the topic difficult when CF is also referred to as *secondary traumatic stress* and *vicarious trauma* (Nolte et al., 2017). The limited ability to draw conclusions and make comparisons

across studies is another limitation because of limited results and small sample sizes (Beck, 2011; Nolte et al., 2017). The empirical nature of CF also presents challenges to find a tool to measure compassion in an individual. Although professional quality of life scale is used to measure the individual's professional quality of life, there are no elements in the tool to assess for compassion (Sinclair et al., 2017).

Exploratory, Descriptive, and Nonexperimental Studies

There were seven articles that included descriptive correlational studies, a nonexperimental study, and one exploratory study. Demographic factors identified as risk factors for developing CF in these studies included the age of nurse, experience level of nurse, and gender of nurse (Kolthoff & Hickman, 2017; Kelly & Lefton, 2017; Mohsin, Shahed, & Sohail, 2017; Hunsaker et al., 2015; Roney & Acri, 2018). Studies revealed that older nurses and increased experience as a nurse are factors associated with higher levels of CS (Mohsin et al., 2017). Younger nurses with less experience have been noted as having decreased levels of CS (Kelly, Runge, & Spencer, 2015; Kolthoff & Hickman, 2017). The highest level of nursing degree obtained is another factor identified that contributed to higher CS levels. Nurses with advanced degrees had higher levels of CS, whereas nurses with associates or bachelor's degrees tended to have higher CF levels and lower CS levels (Hunsaker et al., 2015).

These studies also identified care situations and social networks as influencing CF, though care situations identified in these studies were limited. For example, Neville and Cole (2013) identified an increase in CF in nurses who work in areas where patients had increased levels of complexity as well as increased levels CF in nurses with increased

demands on their time during their daily practice. In terms of social network, active listening by managers to staff members promotes CS. Traits of management such as management support, shared decision making, and nursing recognition promote CS and reduce levels of CF (Hunsaker et al., 2015; Kolthoff & Hickman, 2017). On a unit level, nurses who have perceived peer support have lower levels of CF (Ariapooran, 2014; Mohsin et al., 2017). Nurses need support groups based with their peers to build interpersonal relationships in the peer group to which assist nurses with decreased CF levels and promoting professional satisfaction (Neville & Cole, 2013; Mohsin, et al., 2017).

Limitations of 10 of the 19 studies in this systematic review include small sample size, limited generalizability, and the use of self-reported surveys (Ariapooran, 2014; Dikmen et al., 2016; Hegney et al., 2014; Hunsaker et al., 2015; Kelly et al., 2015; Kelly & Lefton, 2017; Kolthoff & Hickman, 2017; Mohsin et al., 2017; Neville & Cole, 2013; Roney & Acri, 2018). The limitation related to surveys is because it cannot be determined whether a nurse filled out multiple surveys or if someone other than a nurse filled out the survey form. Limited generalizability was also listed as a limitation in all 19 of the studies reviewed; this is largely due to studies being conducted in one specific country, area of a county, or a single hospital location. Other limitations identified by two studies included the observation that the survey was conducted at a single point in time with results affected by unknown variables such as staffing issues, patient acuity, and staff mood on the day of the survey (Hunsaker et al., 2015; Kolthoff & Hickman, 2017).

Cross-Sectional Studies

There were nine cross-sectional studies included in DNP project. It was identified in the majority of these studies, that the demographic factors include age of nurse, duration practicing nursing, level of education, length of hours worked, marital status, active in religion, identifying race as white, and working overtime (Berger et al,, 2015; Dikmen et al., 2016; Hegney et al., 2014; Jakimowicz et al., 2017; Kim, Han, Kwak, & Kim, 2015; Sacco et al., 2015). Duration of practice was further distinguished by length of years worked to determine the impact on CF by age category (Berger et al., 2015; Jakimowicz et al., 2017). Level of education obtained by the nurse also indicates the level of CF. Nurses with advanced degrees tend to have lower CF and higher levels of CS while nurses with entry level degrees have higher CF and lower levels of CS (Jakimowicz et al., 2017). The age of the nurse also had an affect on the level of CF. Nurses aged 18 to 30 had increased levels of CF while nurses age 50 and over have higher CS levels (Berger et al., 2015; Sacco et al., 2015). Dikmen et al (2016) noted marital status as an indicator of CF as it was noted that married nurses have increased levels of CF.

Care situations identified by the cross-sectional research studies include nursing unit acuity, volume of work, nurses' uncertainty as to expectations, confidence in level of nursing skills, management change in the past year, or a major change of nursing practice in the past year (Barr, 2017; Berger et al., 2015; Jakimowicz et al., 2017; Sacco et al., 2015). Barr noted that a nurse who felt overburdened by the volume of work and felt work demands pulled them in multiple directions had increased levels of CF. The type of

acuity level of the nursing unit was also determined to have a direct effect on the level of CF nurses experienced (Berger et al., 2015; Jakimowicz et al., 2017; Sacco et al., 2015). Nurses working in medical surgical units have decreased levels of CS compared to nurses working in single acuity units (Berger et al., 2015; Jakimowicz et al., 2017; Sacco et al., 2015). Working in high acuity units such as intensive care displayed higher CS then nurses working in mixed acuity level units who have increased levels of CF (Jakimowicz et al., 2017; Sacco et al., 2015).

Social networking issues identified included coworker relationships, communication between staff, building trust between staff members, effective decision making, manager support, meaningful recognition and positive work attitudes (Barr, 2017; Hinderer et al., 2014; Jakimowicz et al., 2017; Kelly et al., 2015; Kim et al., 2015; Sacco et al., 2015). Peer to peer relationships that promote effective communication, reduce intimidating behaviors, and improved collaboration promote CS among nurses (Sacco et al., 2015). Having a strong social support network and strong co-worker relationships in the nursing unit promotes CS along with meaningful recognition towards nurses from peers and managers decreased levels of CF (Barr, 2017; Hinderer et al., 2014; Jakimowicz et al., 2017; Kelly et al., 2015; Kim et al., 2015; Sacco et al., 2015).

Limitations of this study type include limited generalizability and use of self reported data using both electronic and paper surveys from all studies reviewed (Berger et al., 2015; Barr, 2017; Hinderer et al., 2014; Kim et al, 2015; Jakimowicz et al., 2017; Sacco et al., 2015). The majority of studies site small sample size due to limited response rates (Barr, 2017; Hinderer et al., 2014; Jakimowicz et al., 2017; Sacco et al., 2015).

The professional quality of life scale tool is not designed as a diagnostic, as it was designed as an indicator for workplace well being and thefore, is not an effective tool to make causal inferences between the data obtained from participants as it does not take into account clinical competence, unit acuity factors or a difficult day on the nursing unit (Barr, 2017; Jakimowicz et al., Kim et al., 2015; 2017; Sacco et al., 2015).

Limitations

CF cannot be empirically validated or measured (Sinclair et al., 2017), which poses a limitation of this systematic review. As such, CF is a phenomenon that involves nurses who work in a high stress profession; thus, proving or disproving CF as a measured outcome can be difficult as the symptoms are based on subjective information. The ability to conduct studies such as randomized control studies is difficult due to the subjective nature of the information, as each nurse may experience different symptoms related to CF. The DNP project was also limited by types of research articles used to conduct the review. The research found to conduct the review consisted of non-experimental research studies and reviews. Using the GRADE process to rate evidence for this project, all studies reviewed fell into the category of low or very low. Since the concept of CF is a phenomenon, no high-quality types of evidence could be found when conducting review of articles in databases.

Findings Related to Project Questions

Demographic Factors Contributing to Compassion Fatigue

The completion of the review revealed several demographic factors related to CF. Factors identified in all three types of research types included being female, age of the

nurse, education level of the nurse, and years of experience (Beck, 2011;Hunsaker et al., 015; Jakimowicz et al., 2017; Kelly & Lefton, 2017; Kim et al., 2015; Kolthoff & Hickman, 2017; Mohsin et al., 2017; Nolte et al., 2017; Roney & Acri, 2018; Sacco et al., 2015). The review process confirmed that age and gender place a nurse at greater risk of developing CF. Nursing is a largely female-dominated profession which correlates to being female as a factor that contributes to CF, as female nurses account for 92% registered nurses in the United States (National Council of State Boards of Nursing, 2018). The average age of nurses currently in the workforce is 48.8 years old which could mean that the average age of a nurse is older, and CF is decreased in older nurses (National Council of State Board of Nursing, 2018). The cross-sectional studies did add additional information to this study with the factors of length of hours worked as nurses working eight hours had less CF then working a twelve-hour shift, marital status and if the nurse is religious (Dikmen et al., 2016;Kim et al., 2015). The cross-sectional studies also added time a frame to years of experience by stating that nurses with zero to five years of experience with an inverse relationship with CF (Berger et al., 2015;Jakimowicz et al., 2017). The additional years worked as a nurse is noted with decreasing levels of CF and increased levels of CS (Berger et al., 2015;Hunsaker et al., 2015;Jakimowicz et al., 2017;Kelly & Lefton, 2017;Kim et al., 2015;Sacco et al., 2015). While the demographic factors are consistent throughout all types of research, nurses are predominantly female the field of nursing which contributes to gender being identified as a factor.

Care situations that contribute to CF

Care situations were consistent for all three types of study categories acuity level of the unit the nurse worked in (Beck, 2011;Berger et al., 2015;Jakimowicz et al., 2017;Neville & Cole, 2013;Sacco et al., 2015). Mixed acuity units such as medical surgical units have been noted with increased levels of CF in nurses (Beck, 2011;Berger et al., 2015;Sacco et al., 2015). It was also noted that high acuity specialized units such as critical had lower levels of CF and higher levels of CS (Jakimowicz et al., 2017;Neville & Cole, 2013;Sacco et al., 2015). It was noted in the non-experimental and cross-sectional studies that demands on nurses in daily practice also contribute to increased CF levels (Barr, 2017;Neville & Cole, 2013). Nurses felt that increasing complexity of patient care and feeling overburdened with the volume of work to be completed during a shift caused them to have increased stress levels placing them at a higher risk for CF (Barr, 2017;Neville & Cole, 2013). The review studies also noted that factors such as staffing shortages, difficult workloads and lack of knowledge in their job role as factors contributing to CF (Sinclair et al., 2017). The review studies also noted that role of care giver who felt they had to deal with unreasonable expectations or who become personally involved with family members and patients had higher levels of CF (Sinclair et al., 2017). Care situations in nursing have changed, nurses are not just at the bedside caring for nurses. Nurses now expected to complete more administrative tasks which is limiting time available to care for the patient.

Influence of Social Support Network on Compassion Fatigue

The influence of a social network on the nursing unit can influence both CF and CS of the nursing staff members. Stronger peer relationships promote CS along with the

units perceived nurse support system (Ariapooran, 2014;Barr, 2017;Beck, 2011;Mohsin et al., 2017;Neville & Cole, 2013). Nursing units that have peer to peer support and respect between peers improves CS while weaker relationships and lack of support between peers contributed to increased CF (Beck, 2011;Hinderer et al., 2014;Mohsin et al., 2017;Sinclair et al., 2017). Units with a positive work attitude, teamwork, positive working relationships, effective communication between staff members and positive interpersonal relationships have higher levels of CS and lower CF levels amongst nursing staff (Kim et al., 2015;Neville & Cole, 2013;Sacco et al., 2015;Sinclair et al., 2017). Nursing units with intimidating behaviors, mistrust between staff members and lack of support from managers and administrators have higher CF levels (Sacco et al., 2015;Sinclair et al., 2017). Nursing units with increase CS levels had traits of active listening by managers, manager support, adequate resources and nurse recognition programs (Beck, 2011;Kolthoff & Hickman, 2017). Acute care nursing units at the highest risk of CF levels are units with a recent change of nursing practice or change in unit management (Jakimowicz et al., 2017;Sacco et al., 2015). Nursing administration and unit managers need to find ways to promote CS with building nursing teams that are supportive and based on effective communication between members of the nursing unit staff.

Implications of Study

Implications of this study can improve healthcare at all levels of the spectrum. Healthcare systems focusing on the prevention of CF in nursing staff can reduce the number of nurses who may leave their jobs while fostering positive work environments.

Healthcare institutions should focus on building a positive nursing management team that promotes team building, peer support programs and effective manager communication. By improving the lives of nurses in the healthcare setting and reducing the level of CF nurses will find a work life balance that supports positive mental health. The potential implication for positive social change is decreasing the intent to leave nursing as a profession keeping experienced nurses to provide a positive patient nurse interaction.

Recommendations

To address the gap in nursing practice and promote CS nursing leadership such as chief nursing officers, nursing directors and unit mangers need to focus on ways to provide support networks for nursing staff members and improve communication amongst all levels of nursing. Ways to improve peer support network with a focus on new nurses entering the job market is to assign any new hire staff members with a peer leader in the nursing unit. By developing a peer to peer network, the new staff member will feel safe asking questions. New hire staff members have a fear of asking questions and being perceived as unintelligent. By selecting a peer member to provide guidance new nurses will develop a relationship with peer members and feel supported. Managers need to establish effective communication with nurses. Scheduling one on one review sessions with new hire nurses on a weekly basis upon starting after orientation which should continue sessions on a bi-weekly then monthly basis for the first year of employment. This measure will provide support to the new hire on a long-term basis and not just a few months during the orientation process while building leadership traits current staff members.

Provide team building opportunities for unit nursing staff. Establish volunteer projects such as working with organizations such as habitat for humanity, working a booth at a community health fair, participation in a community clean-up day. Find ways to get nurses to give back to the community all the while establishing a sense of community within the nursing staff, while promoting staff to get to know each other better.

Summary

To find balance, nurses need to find ways to manage CF symptoms while finding ways to promote CS. There is a delicate balance between CF and CS factors that nurses, nurse managers, and administration must consider when trying to keep nursing units filled with nurses who find satisfaction in the job they perform. Stakes are high to find balance and influence nurses by providing a work environment where nurses feel valued for the job they perform (Sacco et al., 2015). Nurses who are experiencing increased CF find little satisfaction in their work. These nurses who experience CF are at greater risk of leaving the facility or leaving the nursing profession and at a higher risk of providing lower quality of care which can be linked to low patient satisfaction scored (Kelly & Lefton, 2017).

Section 5: Dissemination Plan

Evidence gained through this project will be distributed by presentation to a local hospital's leadership council. The presentation will include evidence found along with suggestions to decrease CF in nursing staff while promoting CS. As the facility is part of a large Midwestern academic medical center, strategies to address CF can be incorporated into the college of nursing to teach the next generation of nurses what CF is while understanding ways to decrease CF and promote CS.

Results from this systematic review will also be used to create a poster to educate nurses and present at nursing education events at the local level and at the state level during an annual state nursing society education event. Results may also be presented at conferences that provide continuing education credits to nurses. This would allow review results to be disseminated at not just a local level. An additional dissemination method would be to speak at one of the many nursing schools in the area. Any of these methods will promote dissemination and further knowledge of CF and what factors may predispose nurse to be affected by this phenomenon.

Analysis of Self

Conducting this review was a learning process. I had spent little time conducting nursing research in my role as a staff nurse, though while working as a clinical informatics nurse I did minor research with a focus on learning about the nursing environment that would be the focus of change. Learning how to conduct research that can further add to nursing as a science was challenging. I repeated many processes multiple times to ensure the project was accurate and reproducible. Additionally, this

project has changed my focus in nursing and caused me to reevaluate what is my best path. I have given up a job that kept me at a desk and have returned to the direct care setting working in a cardiac nursing unit. I see the need for nursing research to improve the quality of patient care while fostering an environment of communication for all those who work there. Insight gained from this journey is that nurses need to foster a sense of teamwork and belonging in all members of the team. Finding ways to support each other is key to giving everyone a sense of purpose and belonging. I have also learned that it is better to face a challenge than avoid it.

Summary

CF affects everyone, whether they are experiencing it or working with someone who is being affected by it. Nurse leaders can cause a positive influence by making time to listen to the nurses providing care to patients. The biggest resource in healthcare is the nursing staff. Finding ways to support nursing and prevent the desire to leave the profession saves resources. Providing nurses with a supportive environment where their input is valued, and effective communication is used also supports an environment of quality patient care.

References

Ariapooran, S. (2014). Compassion fatigue and burnout in Iranian nurses: The role of perceived social support. *Iranian Journal of Nursing & Midwifery Research, 19*(3), 279–284. Retrieved from https://doi.org/10.4103/ijnmr.ijnmr_188_17

Barr, P. (2017). Compassion fatigue and compassion satisfaction in neonatal intensive care unit nurses: Relationships with work stress and perceived social support. *Traumatology, 23*(2), 214–222. https://doi.org/10.1037/trm0000115

Beck, C. T. (2011). Secondary traumatic stress in nurses: A systematic review. *Archives of Psychiatric Nursing, 25*, 1–10. https://doi.org/10.1016/j.apnu.2010.05.005

Berger, J., Polivka, B., Smoot, E. A., & Owens, H. (2015). Compassion fatigue in pediatric nurses. *Journal of Pediatric Nursing, 30*(6), e11–e17. https://doi.org/10.1016/j.pedn.2015.02.005

Cimiotti, J. P., Aiken, L. H., Sloane, D. M., & Wu, E. S. (2012). Nurse staffing, burnout, and health care-associated infection. *American Journal of Infection Control, 40*(6), 486–490. https://doi.org/10.1016/j.ajic.2012.02.029

Desley G., H., Mark, C., David, H., Rebecca, O.-M., Samar, A., Karen, F., & Vicki, D. (2014). Compassion satisfaction, compassion fatigue, anxiety, depression and stress in registered nurses in Australia: Study 1 results. *Journal of Nursing Management, 22*(4), 506–518. https://doi.org/10.1111/jonm.12160

Dikmen, Y., Aydin, Y., Basaran, H., Filiz, N. Y., Denat, Y., & Arslan, G. G. (2016). Prevalence of compassion fatigue in emergency and intensive care nurses in Turkey. *Oxidation Communications, 39*(4–I), 3190–3198. Retrieved from

ProQuest database.

Drury, V., Craigie, M., Francis, K., Aoun, S., & Hegney, D. G. (2014). Compassion satisfaction, compassion fatigue, anxiety, depression and stress in registered nurses in Australia: Phase 2 results. *Journal of Nursing Management, 22*(4), 519–531. Retrieved from https://doi.org/10.1111/jonm.12168

Galiana, L., Arena, F., Oliver, A., Sansó, N., & Benito, E. (2017). Compassion satisfaction, compassion fatigue, and burnout in Spain and Brazil: ProQOL validation and cross-cultural diagnosis. *Journal of Pain & Symptom Management, 53*(3), 598–604. https://doi.org/10.1016/j.jpainsymman.2016.09.014

Guyatt, G. H., Oxman, A. D., Schünemann, H. J., Tugwell, P., & Knottnerus, A. (2011). GRADE guidelines: A new series of articles in the Journal of Clinical Epidemiology. *Journal of Clinical Epidemiology*, *64*(4), 380–382. https://doi.org/10.1016/j.jclinepi.2010.09.011

Guyatt, G. H., Oxman, A. D., Vist, G. E., Kunz, R., Falck-Ytter, Y., Alonso-Coello, P., & Schünemann, H. J. (2008). GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. *BMJ (Clinical Research Ed.), 336*(7650), 924–926. https://doi.org/10.1136/bmj.39489.470347.ad

Hinderer, K. A., VonRueden, K. T., Friedmann, E., McQuillan, K. A., Gilmore, R., Kramer, B., & Murray, M. (2014). Burnout, compassion fatigue, compassion satisfaction, and secondary traumatic stress in trauma nurses. *Journal of Trauma Nursing*, *21*(4), 160–169. https://doi.org/10.1097/jtn.0000000000000055

Hunsaker, S., Chen, H.-C., Maughan, D., & Heaston, S. (2015). Factors that influence the

development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *Journal of Nursing Scholarship, 47*(2), 186–194. https://doi.org/10.1111/jnu.12122

Jakimowicz, S., Perry, L., & Lewis, J. (n.d.). Compassion satisfaction and fatigue: A cross-sectional survey of Australian intensive care nurses. *Australian Critical Care, 31*(6), 396–405. https://doi.org/10.1016/j.aucc.2017.10.003

Kelly, L. A. (2017). Effect of meaningful recognition on critical care nurses' compassion fatigue. *American Journal of Critical Care, 26*(6), 438–444. https://doi.org/10.4037/ajcc2017471

Kelly, L. A., Baker, M. E., & Horton, K. L. (2017). Code compassion: A caring fatigue reduction intervention. *Nursing Management, 48*(5), 18–22. https://doi.org/10.1097/01.numa.0000515800.02592.d4

Kelly, L., Runge, J., & Spencer, C. (2015). Predictors of compassion fatigue and compassion satisfaction in acute care nurses. *Journal of Nursing Scholarship, 47*(6), 522–528. https://doi.org/10.1111/jnu.12162

Kim, K., Han, Y., Kwak, Y., & Kim, J. (2015). Professional quality of life and clinical competencies among Korean nurses. *Asian Nursing Research, 9*(3), 200–206. https://doi.org/10.1016/j.anr.2015.03.002

Kolthoff, K. L., & Hickman, S. E. (2017). Compassion fatigue among nurses working with older adults. *Geriatric Nursing, 38*(2), 106–109. https://doi.org/10.1016/j.gerinurse.2016.08.003

Ledoux, K. (2015). Understanding compassion fatigue: understanding compassion.

Journal of Advanced Nursing, 71(9), 2041–2050. https://doi.org/10.1111/jan.12686

Mason, V. M., Leslie, G., Clark, K., Lyons, P., Walke, E., Butler, C., & Griffin, M. (2014). Compassion fatigue, moral distress, and work engagement in surgical intensive care unit trauma nurses. *Dimensions of Critical Care Nursing, 33*(4), 215–225. https://doi.org/10.1097/dcc.0000000000000056

McHugh, M. D., Kutney-Lee, A., Cimiotti, J. P., Sloane, D. M., & Aiken, L. H. (2011). Nurses' widespread job dissatisfaction, burnout, and frustration with health benefits signal problems for patient care. *Health Affairs, 30*(2), 202–210. https://doi.org/10.1377/hlthaff.2010.0100

Michalec, B., Diefenbeck, C., & Mahoney, M. (2013). The calm before the storm? Burnout and compassion fatigue among undergraduate nursing students. *Nurse Education Today, 33*(4), 314–320. https://doi.org/10.1016/j.nedt.2013.01.026

Mohsin, Z., Shahed, S., & Sohail, T. (2017). Correlates of professional quality of life in nurses. *Annals of King Edward Medical University, 23*(4), 1–5. https://doi.org/10.21649/journal.akemu/2017/23.4.474.478

Morrison, K. B., & Korol, S. A. (2014). Nurses' perceived and actual caregiving roles: identifying factors that can contribute to job satisfaction. *Journal of Clinical Nursing, 23*(23–24), 3468–3477. https://doi.org/10.1111/jocn.12597

National Council of State Board of Nursing. (2018, September 2). *NCSBN.* Retrieved from National Council of State Board of Nursing: https://www.ncsbn.org/index.htm

Neville, K., & Cole, D. A. (2013). The relationships among health promotion behaviors, compassion fatigue, burnout, and compassion satisfaction in nurses practicing in a community medical center. *Journal of Nursing Administration, 43*(6), 348–354. https://doi.org/10.1097/nna.0b013e3182942c23

Nolte, A. G. W., Downing, C., Temane, A., & Hastings-Tolsma, M. (n.d.). Compassion fatigue in nurses: A metasynthesis. *Journal of Clinical Nursing, 26*(23–24), 4364–4378. https://doi.org/10.1111/jocn.13766

Roney, L. N., & Acri, M. C. (2018). The cost of caring: An exploration of compassion fatigue, compassion satisfaction, and job satisfaction in pediatric nurses. *Journal of Pediatric Nursing, 40*, 74–80. https://doi.org/10.1016/j.pedn.2018.01.016

Sabo, B. M. (2006). Compassion fatigue and nursing work: Can we accurately capture the consequences of caring work? *International Journal of Nursing Practice, 12*(3), 136–142. https://doi.org/10.1111/j.1440-172x.2006.00562.x

Sacco, T. L., Ciurzynski, S. M., Harvey, M. E., & Ingersoll, G. L. (2015). Compassion satisfaction and compassion fatigue among critical care nurses. *Critical Care Nurse, 35*(4), 32–42. https://doi.org/10.4037/ccn2015392

Salmond, E., Ames, M., Kamienski, M., Watkins, A. V., & Holly, C. (2017). Experiences of compassion fatigue in direct care nurses: a qualitative systematic review protocol. *JBI Database of Systematic Reviews & Implementation Reports, 15*(7), 1805–1811. https://doi.org/10.11124/jbisrir-2016-003143

Sheppard, K. (2015). Compassion fatigue among registered nurses: Connecting theory and research. *Applied Nursing Research, 28*, 57–59.

https://doi.org/10.1016/j.apnr.2014.10.007

Sinclair, S., Raffin-Bouchal, S., Venturato, L., Mijovic-Kondejewski, J., & Smith-MacDonald, L. (2017). Compassion fatigue: A meta-narrative review of the healthcare literature. *International Journal of Nursing Studies*, *69*, 9–24. https://doi.org/10.1016/j.ijnurstu.2017.01.003

Wentzel, D., & Brysiewicz, P. (2014). The consequence of caring too much: compassion fatigue and the trauma nurse. *Journal of Emergency Nursing*, *40*, 95–97. https://doi.org/10.1016/j.jen.2013.10.009

Wu, S., Singh-Carlson, S., Odell, A., Reynolds, G., & Su, Y. (n.d.). Compassion fatigue, burnout, and compassion satisfaction among oncology nurses in the United States and Canada. *Oncology Nursing Forum*, *43*(4), E161–E169. https://doi.org/10.1188/16.onf.e161-e169

Appendix A: Articles Included

Author(s) of Article	Title of Article
Ariapooran 2014	Compassion fatigue and burnout in Iranian nurses: the role of perceived social support
Barr et al. 2017	Compassion fatigue and compassion satisfaction in neonatal intensive care unit nurses: relationships with work stress and perceived social support
Beck 2017	Secondary traumatic stress in nurses: a systematic review
Berger et al. 2015	Compassion fatigue in pediatric nurses
Circenis, and Millere 2011	Compassion fatigue burn out and contributory factors among nurses in Latvia
Dikmen et al. 2016	Prevalence of compassion fatigue in emergency and intensive care nurses in turkey
Hegney et al. 2014	Compassion satisfaction, compassion fatigue, anxiety depression and stress in registered nurses in Australia study 1
Hinderer et al. 2014	Burnout, compassion fatigue, compassion satisfaction, and secondary traumatic stress in trauma nurses
Hunsaker et al. 2015	Factors that influence the development of compassion fatigue, burnout and compassion satisfaction in emergency department nurses
Jakimowicz et al. 2017	Compassion satisfaction and fatigue: a cross sectional survey of Australian intensive care nurses
Kelly and Lefton, 2017	Effects of meaningful recognition on critical care nurses' compassion fatigue
Kim et al. 2015	Professional quality of life and clinical competencies among Korean nurses
Kolthoff and Hickman 2017	Compassion fatigue among nurses working with older adults
Mohsin et al. 2017	Correlates of professional quality of life in nurses
Neville and Cole 2013	The relationship among health promotion behaviors, compassion fatigue, burnout and compassion satisfaction in nurses practicing in a community medical center
Nolte et al. 2017	Compassion fatigue in nurses: a metasynthesis
Roney and Acri 2018	The cost of caring: An exploration of compassion fatigue, compassion satisfaction, and job satisfaction in pediatric nurses
Sacco et al. 2015	Compassion satisfaction and compassion fatigue among critical care nurses
Sinclair et al. 2017	Compassion fatigue: a meta-narrative review of the healthcare literature

Appendix B: Excluded Articles

Articles excluded from this review include the following, with the reason for exclusion:

Authors	Year	Title	Reason for Exclusion
Berg et al., 2016	2016	Exposing compassion fatigue and burnout syndrome in a trauma team: a qualitative study	Includes all healthcare roles
Galiana et al., 2016	2016	Compassion satisfaction, compassion fatigue, and burnout in Spain and Brazil: ProQol validation and cross-cultural diagnosis	Includes all healthcare roles
Elbarazi et al., 2017	2017	Prevalence of and factors associated with burnout among health care professionals in Arab countries: a systematic review	Includes all healthcare roles
van Moi et al., 2015	2015	The prevalence of compassion fatigue and burnout among healthcare professionals in intensive care units: a systematic review	Includes all healthcare roles
Slatten et al., 2011	2011-2	Compassion fatigue and burnout what managers should know	Includes all healthcare roles
Duarte & Pinot-Gouveia 2017	2017	Empathy and feelings of guilt experienced by nurses; a cross sectional study of their role in burnout and compassion fatigue symptoms	Includes ambulatory
Kim et al., 2016	2016	Influence of type D personality on job stress and job satisfaction in clinical nurse: the mediating effects of compassion fatigue, burnout and compassion satisfaction	Includes ambulatory
Kim et al., 2015	2015	Korean nurses' ethical dilemmas, professional values and professional quality of life	Includes ambulatory
Duarte et al., 2016	2016	Relationship between nurse's empathy, self-compassion and dimensions of professional quality of life: a cross sectional study	Includes ambulatory
Hegney et al., 2015	2015	The contribution of individual psychological resilience in degerming the professional quality of life of Australian nurses	Includes ambulatory
Craige et al., 2016	2016	The influence of trait-negative affect and compassion satisfaction on compassion fatigue in Australian nurses	Includes ambulatory
Mashego et al., 2018	2018	Burnout compassion fatigue and compassion satisfaction among nurses in the context of maternal and perinatal deaths	Includes ambulatory
Stayer& Such-Lockhart 2016	2016	Living with dying in the pediatric intensive care unit: a nursing perspective	Includes hospice
Bao & Taliaferro 2015	2015	Compassion fatigue and psychological capital in nurses working in acute care settings	Includes Oncology
Potter et al., 2015	2015	Compassion fatigue resiliency training: The experience of facilitators	Includes Oncology
Hooper et al., 2010	2010	Compassion satisfaction, burnout, and compassion fatigue, among emergency nurses compared with nurses in other selected inpatient specialties	Includes Oncology

(table continues)

Authors	Year	Title	Reason for Exclusion
Sabrey et al., 2017	2017	Concept development of compassion fatigue in clinical nurses: application of Schwartz-Barcott and Kim's hybrid model	Includes Oncology
Hevezi 2015	2015	Evaluation of a medication intervention to reduce the effects of stressors associated with compassion fatigue among nurses	Includes Oncology
Yang & Kyung, 2016	2016	Factors influencing turnover intention in clinical nurses: compassion fatigue, coping, social support and job satisfaction	Includes Oncology
Gunusen et al., 2017	2017	Secondary traumatic stress and burnout among Muslim nurses caring for chronically ill children in a Turkish hospital	Includes Oncology
Mooney et al., 2017	2017	A preliminary analysis of compassion satisfaction and compassion fatigue with consideration for nursing unit specialization and demographic factors	Includes Oncology
Sorenson et al., 2017	2017	An evolutionary concept analysis of compassion fatigue	No ProQol
Lachman, 2016	2016	Compassion fatigue as a threat to ethical practice: Identification, personal and workplace prevention/management strategies	No ProQol
Mason et al., 2014	2014	Compassion fatigue, moral distress, and work engagement in surgical intensive care unit trauma nurses a pilot study	No ProQol
Austin et al., 2009	2009	Compassion fatigue: the experience of nurses	No ProQol
van der Cingel et al., 2014	2014	Compassion: the missing link in quality of care	No ProQol
Schmidt & Jaglund 2017	2017	Debrief in emergency departments to improve compassion fatigue and promote resiliency	No ProQol
Henderson & Jones 2017	2017	Developing and maintaining compassionate care in nursing	No ProQol
Schwab et al., 2016	2016	Hidden grief and lasting emotions in emergency department nurse	No ProQol
Harris & Quinn-Griffon, 2015	2015	Nursing on	No ProQol
Meyer et al., 2013	2013	Pediatric novice nurses: examining compassion fatigue as mediator between stress exposure and compassion satisfaction, burnout and job satisfaction	No ProQol
Missouridou 2017	2017	Secondary post-traumatic stress and nurses' emotional responses to patient's trauma	No ProQol
Beck et al., 2017	2017	Secondary Traumatic stress in NICU nurses	No ProQol
Hockaday 2017	2017	Trauma leadership strategies to prevent and reduce burnout in Urban academic trauma centers	No ProQol
Legoux 2015	2015	Understanding compassion fatigue: understanding compassion	No ProQol
Hegney et al., 2015	2015	Work and personal well-being of nurses in Queensland: does rurality make a difference?	No ProQol
Wentzel & Brysiewicz 2014	2014-2	The consequence of caring too much: Compassion fatigue and the trauma nurse	No ProQol

(table continues)

Authors	Year	Title	Reason for Exclusion
Sabo 2011	2011-2	Reflecting on the concept of compassion fatigue	No ProQol
Romano et al., 2013	2013-2	Combating compassion fatigue an exemplar of an approach to nursing renewal	No ProQol
Yoder, Elizabeth, A.	2010-2	Compassion fatigue in nurses	No ProQol
Laombardo & Eyre 2011	2011-2	Compassion Fatigue: A Nurse's Primer	No ProQol
Flarity et al. 2014	2013-2	The effectiveness of an educational program on preventing and treating compassion fatigue in emergency nurses	No ProQol
Mason et al., 2014	2014	Compassion fatigue, moral distress, and work engagement in surgical intensive care unit trauma nurses a pilot study	No ProQol
Andriani & Rustiyanlngsih 2017	2017	Factors related to nurse's compassion satisfaction, burnout and secondary traumatic stress in pediatric care unit RSUP Dr. Sardjito Yogyakarta	No ProQol
Duffy et al., 2015	2015	Secondary traumatic stress among emergency nurses: a cross sectional study	No ProQol
Komachi et al., 2012	2012	Secondary traumatic stress and associated factors among Japanese nurses working in hospitals	No ProQol
Chen et al. 2017	2017	The influence of personality traits and socio-demographic characteristics on pediatric nurses' compassion satisfaction and fatigue	No ProQol
Abbaszadch et al., 2017	2017	The relationship between compassion fatigue and burnout among nurses	No ProQol
Boyle 2011	2011	Countering compassion fatigue: A requisite nursing agenda	No ProQol
Komachi et al. 2012	2012	Secondary traumatic stress and associated factors among Japanese nurses working in hospitals	No ProQol

Note. ProQol = professional quality of life scale

Appendix C: Determinants Identified in Systematic Review

Author(s) of Article	Study Type	Level of Evidence	Sample Size/Response Rate	Determinants Identified
Kim et al., 2015	Cross sectional	Level 3	N = 335	advanced clinical knowledge (less nursing experience) leads to CF
Jakimowicz et al., 2017	Cross sectional	Level 3	N = 98	Years of practice, tenure, educational level, place of work. Post grad nurses had lower levels of compassion fatigue. Higher CF in mixed acuity units, units undergoing management changes.
Barr 2017	Cross Sectional Correlation	Level 3	N = 140	Strong social support decreased occurrence of CF. When a nurse doesn't know what is expected of them CF was increased.
Dikmen et al., 2016	Cross sectional descriptive	Level 3	N = 111	years of experience, type of nursing unit, single nurses, educational level, long hours
Sacco et al., 2015	Cross sectional design	Level 3	N = 221	Age unit acuity management change and major system or practice change. Younger age, working mixed acuity units contributed to higher levels of CF. Females have higher levels of CF. Nurses with ADN have higher levels of CF.
Hunsaker et al. 2015	Cross sectional survey nonexperimental descriptive Predictive design	Level 3	N = 284	Age, Associate or BSN degree higher CF, manager support
Hinderer et al., 2014	Cross-sectional descriptive	Level 3	N = 128	CF related to long shifts weak coworker relationships, a lack of hobbies. Caring for challenging patients, futile care, work environment stressors and personal experience trigger CF
Berger et al., 2015	Cross-sectional survey	Level 3	N = 239	Age, years of experience, years in current position, type of Nursing unit working in.

(table continues)

Author(s) of Article	Study Type	Level of Evidence	Sample Size/Response Rate	Determinants Identified
Hegney et al., 2014	Cross-sectional survey	Level 3	N = 132	Higher CF nurse with lower educational level, longer work hours, less experienced, younger age of nurse.
Roney & Acri, 2018	Non-exploratory correlational descriptive	Level 3	N = 318	Significant relationship between female gender. Lower levels with nurses who had a career prior to entering nursing field.
Neville & Cole 2013	Non-exploratory correlational descriptive design	Level 3	N = 214	Lack of peer to peer support, lack of spiritual growth, low professional job satisfaction
Ariapooran 2014	Non-exploratory correlational descriptive survey	Level 3	N = 164	Lack of social support contributes to CF.
Mohsin et al., 2017	Non-exploratory correlational descriptive survey	Level 4	N = 160	Age and experience level, perceived social support, working hours
Kolthoff & Hickman 2017	Non-exploratory descriptive study	Level 3	N = 42	lack of experience, higher acuity patients
Circenis & Millere 2011	Quantitative	Level 3	N = 129	Inadequate salary, psychological pressure working with patients and lack of professional achievements
Kelly & Lefton, 2017	Non-experimental descriptive online survey	Level 3	N = 1136	Work environment, age of nurse,
Sinclair et al., 2017	Review meta narrative	Level 1	90 articles	Nurses with less experience and younger age experience higher levels of CF.
Nolte et al., 2017	Review meta synthesis	Level 1	9 articles	Staffing shortage and heavy workloads, limited professional development, lack of support from managers, administrators and nurse colleagues.
Beck, 2011	Review systematic review	Level 1	7 articles	Lack of peer to peer support, younger age and less education