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The Relationship between Exercise and Compassion Fatigue in Nurses

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by

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Abstract

Nurses in today's healthcare arena face numerous challenges and demands from the organization, personally, professionally, and their patients. These pressures can culminate into the development of compassion fatigue. Compassion fatigue (CF) has been defined as a combination of physical, emotional, and spiritual depletion associated with caring for patients. Compassion fatigue is linked to increased turnover, decreased teammate engagement, and poor clinical performance. The purpose of this thesis was to assess the prevalence of CF among nurses, and to determine if a relationship exists between CF and amount exercised each week. The organizing framework was based on Kolcaba's Theory of Comfort. The participants of the study were registered nurses or licensed practical nurses working at the bedside. Kendall's tau-b was used to determine the correlation between compassion fatigue and exercise. The data did not provide support that there is a significant relationship between compassion fatigue and exercise. However, information gained from this study provides insight on the prevalence of compassion fatigue and the need for further investigation into coping strategies.

*Keywords***:** compassion fatigue, exercise, Kolcaba's Theory of Comfort, health-seeking behaviors

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Anyone who stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young — Henry Ford

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CHAPTER I

Introduction

Nursing has been described as the "protection, promotion, and optimization of health and abilities, prevention of illness and injury, facilitation of healing, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, groups, communities, and populations," (American Nurses Association, 2017, para. 1). This description of nursing demonstrates the complexity of the nursing profession and the enormity of a nurse's responsibilities. Nurses employed in the acute care setting are challenged by difficult circumstances including death and dying, ethical dilemmas, physician demands, and organizational demands, coupled with patient and family needs.

The pressures of meeting all of these demands can lead to compassion fatigue (CF), which may affect the ability to perform daily work. CF has been identified as an occupational stressor experienced by nurses, affecting overall mental health, well-being, and effectiveness as a nurse. The concept of CF was first identified in emergency room personnel and presents as a unique form of burnout affecting those in caregiving roles (Lombardo & Eyre, 2011). According to Bride, Radey, and Figley (2007), "for some clinicians the experience of compassion fatigue may become so severe as to interfere with their clinical effectiveness and their personal mental health" (p. 162). Compassion fatigue has been defined as a combination of physical, emotional, and spiritual depletion associated with caring for patients in significant emotional pain and physical distress (Lombardo & Eyre, 2011).

Significance

CF creates significant effects on the nursing workforce including turnover, overall job performance, and decreased teammate engagement. According to Braunschneider (2013), compassion fatigue may lead nurses to make mistakes and cause poor performance and ultimately harm their patients. Jones and Gates (2007) reported turnover costs ranging from $22,000 to over $64,000 (U.S.) per nurse turnover. There was also a relationship between compassion fatigue and patient satisfaction (Garman, Corrigan, & Morris, 2002). Organizations currently place a high degree of importance on patient experience scores, as these are publicly reported and may impact the patient's likelihood of selecting a health care organization for treatment. Press-Ganey works with over 20,000 health care organizations to provide survey services related to patient experience and additional tools to create sustainable improvement (Press-Ganey, 2016). Dempsey, Wojciechowski, McConville, and Drain (2014) found that compassion fatigue and burnout create barriers to patient-centered care and create barriers in addressing suffering. The overall impact of CF has far-reaching effects on the organization, the nurse, and the patient.

Purpose

The purpose of this thesis was to assess the prevalence of CF among nurses, and to determine if a relationship exists between CF and amount exercised each week. Information gained from this study may enlighten nurses on the existence of these phenomena and impact on the ability to provide patient care. Understanding the relationship between CF and exercise can enlighten the nurse, the nurse leader, the

nursing profession, and the healthcare organization as a whole on methods to reduce the prevalence of CF.

Theoretical/Conceptual Framework

Katharine Kolcaba's Theory of Comfort was used as the framework to determine what relationship exists between CF and hours exercised each week. Kolcaba's Theory of Comfort is a mid-range theory, consisting of three types of comfort: relief, ease, and transcendence. Relief is the state where a specific need is met. Ease is the state of contentment. Transcendence is the state in which one rises above their problems and pain. Kolcaba also developed four contexts of comfort: physical, psychospiritual, sociocultural, and environmental (Alligood, 2014). Physical contexts of comfort consist of bodily sensations and homeostatic mechanisms. Psychospiritual contexts consists of awareness of self, esteem, concept, sexuality, and life's meaning; one's relationship to a higher order or being. Environmental consists of one's surroundings, conditions, and influences. Sociocultural contexts pertain to interpersonal, family, and societal relationships as well as family traditions, rituals, and religious practices. The major conceptual framework for the Theory of Comfort includes health care needs, comfort interventions, intervening variables, comfort, health-seeking behaviors, institutional integrity, best practices, and best policies (Alligood, 2014). The major assumptions of the theory are: the nurse's role to enhance the patient's comfort, the recipients of comfort include the patient, families, institutions and/or the nurse, the enhancement of the environment to enhance comfort, and optimal health. There are three assertions of the theory: comforting interventions result in increased comfort, increased comfort results in increased engagement in health-seeking behaviors, and increased health-seeking

behaviors results in increased quality of care (Alligood, 2014). All patients experience needs of comfort in stressful health care situations, once identified the nurse then implements interventions to meet those needs. Often nurses fail to recognize their own needs in stressful situations. Kolcaba defined comfort "as a positive concept and accounts for its many aspects beyond physical comfort" (Kolcaba, 2010). She further explained how the theory allows the user to identify comfort needs and create and measure their effectiveness.

While Kolcaba's Theory of Comfort has not been utilized as framework for compassion fatigue in other studies, it was an appropriate theoretical framework for analyzing any relationship between amount of exercise and compassion fatigue. According to Kolcaba, Tilton, and Drouin (2006), "the Comfort Theory proposes that when the comfort of nurses is enhanced, nurses are more satisfied, more committed to the institution, and able to work more effectively" (p. 539). The authors shared the journey of a New England hospital's pursuit to choose a nursing theorist to guide strategies, practice, and leadership. The Comfort Theory was chosen to not only enhance the patient's comfort but the nurse's comfort as well. Exercise may provide the nurse with a level of self-comfort and impact the nurse's risk for developing compassion fatigue. See Figure 1.

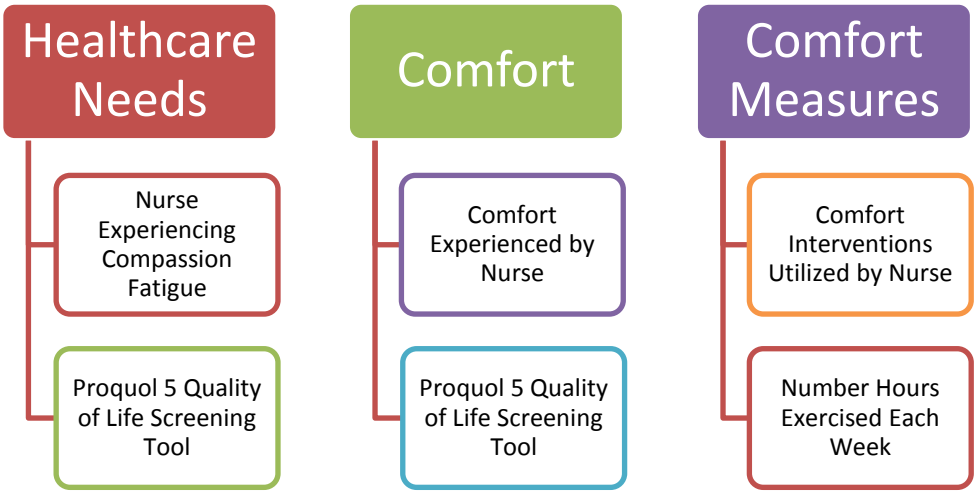

Figure 1. Conceptual-Theoretical-Empirical Diagram

Research Question

What is the relationship between exercise and compassion fatigue in nurses?

Summary

In the current healthcare arena, nurses are continually called upon to meet the needs of the patient, family and the healthcare organization. These increased demands place a high degree of stress and responsibility on the shoulders of nurses. According to Lombardo and Eyre (2011), "empathic and caring nurses, however, can become victims of the continuing stress of meeting the often overwhelming needs of patients and their families, resulting in compassion fatigue" (para. 1). The purpose of this thesis was to assess the prevalence of CF among nurses, and to determine if a relationship exists between CF and amount exercised each week. The information gained from this study can provide healthcare organizations with important information related appropriate interventions to decrease CF and may assist them in the development of support programs to decrease or alleviate the development of CF in nurses.

CHAPTER II

Literature Review

Compassion Fatigue (CF) is a growing problem among nurses, not only physically but emotionally (Jones & Gates, 2007). CF impacts the nurse, the patient, the organization and the nursing profession as a whole due to effects related turnover, patient satisfaction, patient safety, and costs to the organization. A comprehensive review of current literature was conducted utilizing Cumulative Index for Nursing and Allied Health Literature (CINAHL), ProQuest, EBSCO, and Google Scholar to research the prevalence of CF among nurses, and relationships between CF and exercise. The keywords "compassion fatigue," "coping," "prevalence," "risk," "predictors," "exercise," "Kolcaba's Theory of Comfort," and "health-seeking behaviors" were used to search for relevant literature. Twenty-three articles, ranging from 2004 to 2016 were reviewed. A gap in literature related to the relationship between CF and exercise was identified.

Concept of Compassion Fatigue

Numerous studies have attempted to define and investigate the concept of compassion fatigue. Coetzee and Klopper (2010) conducted a concept analysis to define compassion fatigue in nursing practice. Several themes associated with compassion fatigue were identified, including: risk factors, causes, process, and manifestations. Through the analysis, a connotative definition emerged, "compassion fatigue is the final result of a progressive and cumulative process that is caused by prolonged, continuous, and intense contact with patients, the use of self, and exposure to stress" (p.237). Additionally, compassion fatigue is a state where the nurse has given repeatedly from the self but loses the power to recover and restore the self. A limitation identified in the study

includes using only dictionary definitions. Future research recommendations included evaluation of appropriate interventions to stop the progression of compassion fatigue and whether it can be reversed. In conclusion, Coetzee and Klopper (2010) found the need for employee assistance programs focusing on alleviating emotional work burdens and the urgent need to identify compassion fatigue early. Failure to identify compassion fatigue early may lead to irreversible damage to the nurse.

Boyle (2011) described compassion fatigue, differences between compassion fatigue and burnout, the risk factors, and assessment thereof. Boyle (2011) further stressed the need to support nurses in high stress work environments and develop interventions to combat compassion fatigue. Boyle (2011) discussed differing definitions of compassion fatigue describing compassion fatigue as the loss of nurturing and related it as a more user-friendly term as opposed to secondary traumatic stress disorder (STSD). With STSD, the nurse experiences the trauma of their patients indirectly. Burnout development occurs due to poor working conditions, managerial conflicts, and less than expected salaries. CF's etiology differs in that it is related to patient care and the burdens associated with caring for very sick patients and witnessing traumatic events. Burnout usually occurs over time, whereas CF can have a more acute onset. Further studies are needed to better define the differences between compassion fatigue and burnout. Better understanding can assist organizations with the development of workplace interventions and support. CF symptoms may debilitate the nurse in her ability to adequately care for patients, increase turnover, impact outcomes, and decrease patient satisfaction. Recognition of symptoms, such as desensitization, sarcasm, detachment, and diminished

clinical performance should be a priority for nurse leaders and healthcare organizations (Boyle, 2011).

Sorenson, Bolick, Wright, and Hamilton (2016) analyzed compassion fatigue (CF) in healthcare providers (HCPs), with additional focus on provider role and practice area. The search utilized the keyword, "compassion fatigue." CINAHL and PubMed were searched between the years of 2005 and 2015. CF was prevalent in numerous healthcare settings, with some roles not being well represented, such as Advanced Practice Registered Nurses (APRNs) and physical therapists. Extensive studies have been conducted evaluating prevalence, risk factors, coping mechanisms, support, resources, prevention, and the impact on nursing practice. The literature review also revealed abundant research studies in the areas of oncology, emergency, pediatric, hospice, and critical care nursing. One limitation the author's literature review exhibited was differentiating between the concepts of CF, compassion satisfaction, secondary traumatic stress disorder, and burnout. Sorenson et al. (2016) recommended a concept analysis to further define compassion fatigue and stressed the importance of identifying, intervening, and preventing this phenomenon. CF crosses numerous specialties but lacks a universal definition. This definition is needed in order to "diagnose" CF and implement appropriate strategies to diminish its occurrence.

Prevalence of Compassion Fatigue

The prevalence of compassion fatigue (CF) has, by far, been the most studied aspect of compassion fatigue. Sacco, Ciurzynski, Harvey, and Ingersoll (2015) conducted a cross-sectional study with a purpose of establishing the prevalence of compassion satisfaction (CS) and CF. The identified group in the study included adult, pediatric, and

neonatal critical care nurses. The setting was a 739-bed, Magnet academic medical center located in New York. This study also examined demographic, unit, and organizational issues that could contribute to development of compassion satisfaction and compassion fatigue in nurses. Sacco et al. (2015) utilized the ProQOL-5 survey questionnaire along with a demographic survey tool. The survey questionnaire was distributed to the participants to measure compassion satisfaction and compassion fatigue. A total of 221 nurses completed the survey. The study identified several significant findings related to age and the prevalence of compassion fatigue. Nurses older than 50 years of age experienced a higher degree of compassion satisfaction and a lower prevalence of compassion fatigue. The highest reported levels of compassion fatigue were reported by nurses with 11 to 20 years of experience. There was no significance identified between levels of education and the development of compassion fatigue nor significant differences in levels of compassion fatigue in critical care nurses versus all other units included in the study. Several strengths and weaknesses were identified. The design of the study, cross-sectional, may have impacted the results of the data. Several of the units surveyed had recently experienced either managerial changes or significant changes to the design, or redesign of their units. There is a need for further research into understanding the principles of professional quality of life, compassion fatigue, and the implications to nursing. Creating positive work environments can create positive interactions with patients.

Similarly, Potter et al. (2010) examined the prevalence of burnout and compassion fatigue among oncology healthcare providers working within a large oncology medical center. This descriptive, cross-sectional survey sample consisted of 153

registered nurses, medical assistants, and radiation therapy technicians collectively. ProQOL-R-IV questionnaires were distributed to 448 staff's mailboxes for completion, with 153 responses. The findings indicated equal percentages of high-risk scores for compassion fatigue in the inpatient and outpatient settings, at 37% and 35%. Limitations identified were the low number of radiation therapy technicians and medical assistants, with a total of 21 as compared to 132 nurses, who participated in the study. The authors suggested potential bias, citing the fact that those who participated in the study may be more or less burdened by compassion fatigue. In conclusion, compassion fatigue was identified in both the inpatient and outpatient oncology settings. The average score of the participants was 15.2 for compassion fatigue risk, as compared to the average of 13 for the general population. These results are important in the evaluation of workplace satisfaction, environment, and the development of programs to minimize the prevalence of compassion fatigue amongst oncology healthcare workers.

An exploratory, cross-sectional, point-in-time analysis was conducted to describe the patterns of compassion satisfaction, burnout, and compassion fatigue among emergency nurses who work in an acute care hospital and compare those patterns with nurses working in other specialties such as oncology, nephrology, and intensive care (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010). In this study, all full-time Registered Nurses with at least one year of experience were included in the study. Demographics were collected along with completion of the ProQOL R-IV questionnaire. A total of 138 surveys were distributed; 114 were returned with response rate of 83%. Each of the specialty areas had a greater than 70% response rate. Results from the study failed to reveal statistically significant patterns related to area of specialty worked as it relates to

the prevalence of compassion fatigue. Of the four areas included in the study, oncology had the lowest rates for moderate to high compassion fatigue with 75%, while the emergency department's average score was 86%. The highest percentage for moderate to high compassion fatigue, were nurses from nephrology at 88%. Hooper et al. (2010) recommended further research, with a larger sample size, as well as the need for investigation into the treatment and prevention of these phenomenon. Healthcare organizations and nurse managers should promote education, support, provide opportunities to vent, and reward and recognize staff when they witness great care delivered.

Smart et al. (2014) designed a cross-sectional study to investigate compassion satisfaction (CS) and compassion fatigue (CF) among healthcare workers in the United States and investigate any differences in professional quality of life of this population. Smart et al. (2014) hypothesized that nurses working with more critical patients would have higher levels of compassion fatigue. The researchers also assessed for differences between assigned unit staff versus "float" staff to determine if these were predictors to the development of compassion fatigue. The participants were recruited from a community hospital; 253 questionnaires were distributed with 139 returned (response rate of 54.9%). The participants were invited to complete a demographic and ProQOL-5 questionnaire. Departments included in the survey were the emergency department, float pool, general medical-surgical, and critical care departments. A primary finding of the study was that increasing compassion satisfaction may decrease the prevalence of compassion fatigue in healthcare workers. The model indicated that 23% of the variability in burnout is due to hours of sleep per night. Sleep per night also correlated

with the risk of developing secondary traumatic stress, $F(1,133) = 4.211$, $p < 0.05$, with an $R2$ of 0.031. The culture of the organization might impact how participants responded to the questions (Smart et al., 2014). Limitations to the study included the majority ethnicity was Caucasian, small sample size, and use of a single hospital site for the survey. With the findings indicating that sleep was a factor in higher incidence of burnout and secondary traumatic stress, further research into the impact of compassion fatigue on patient outcomes and strategies related to adequate rest and sleep for the healthcare worker is warranted.

Adam, Biraboneye, and Bukusi (2015) examined compassion fatigue among medical workers in Nairobi, Kenya. The aim of the study was to measure the prevalence and the contributing factors, utilizing a cross-sectional descriptive method. Of the 2,402 potential participants, 345 agreed to participate, of which 99.6% were nurses. The Compassion Fatigue Self-Test (CFST) was used to measure the prevalence of compassion fatigue. Adam et al. (2015) identified "self" as having the biggest impact on the development of compassion fatigue, scoring at 44.6%. and the worker's environment had the lowest impact. For nurses, the prevalence of compassion fatigue was 33.1% and 12.9% for medical practitioners. A strength of the study included the sample size. The healthcare workers had a very high acuity patient base with exposure to numerous traumas, which could have affected the data. Recommendations were for future large scale studies and the creation of rescue programs for those affected by compassion fatigue. Additional studies comparing the results of the ProQOL survey and the Compassion Fatigue Self-Test in the same test group to examine results comparatively may be beneficial. This study was conducted on nurses from Kenya, revealing that the

phenomena of compassion fatigue is an international problem. A larger multi-national study may provide further insight into the development of compassion fatigue.

Development and Predictors of Compassion Fatigue

Melvin (2012) conducted an exploratory descriptive pilot study utilizing a purposive sampling method. The aim of the study was to identify prevalence, risk factors, effects, and coping strategies in hospice and palliative care nurses. The participants worked in a home health agency located in the northeast. To be included in the study the participants needed to have at least 10 years' experience. Of the 20 nurses employed by the agency, six were chosen. Each of them were given a semi-structured survey via a one-on-one interview. According to Melvin (2012) several themes were identified: "risk for CF in exposure to repeated deaths over extended periods of time, physical and emotional costs of providing hospice and palliative care and setting boundaries/healthy coping strategies" (p. 608). Strengths of the study included the study design which allowed the researcher to analyze the narratives of each of the participants. The sample size was a limitation as well as the purposive sample which could affect the answers provided. The researcher recommended future studies on strategies employers can utilize to decrease the risk of CF and protect their nurses. The type of patients cared for and the length of time nurses are exposed to trauma impacts the risk for developing CF.

Kelly, Runge, and Spencer (2015) designed a cross-sectional, quantitative, survey research study to comprehensively assess compassion fatigue (CF) and compassion satisfaction (CS) in nurses across specialties in the southwest United States. The aim of this study was to explore professional quality of life, prevalence, and predictors of CF and CS. The data was comprised of direct care, full-time, part-time/per diem nurses in the

inpatient setting. Of those, 491 completed the survey (response rate of 35%). The participants were asked to complete a demographic questionnaire, the ProQOL (Professional Quality of Life) survey and investigator-driven questions. Specifically, the nurses were asked if they receive meaningful recognition. The study revealed that nurses who were satisfied had less CF and more CS as opposed to teammates who reported less satisfaction. Recognition was a significant predictor of those who reported higher CS scores and lower reports of CF. A strength of the survey was the sample size and diversity of the respondents to the survey. Additional research into reward and recognition programs may be warranted as healthcare organizations work to implement programs to retain nurses.

Hunsaker, Chen, Maughan, and Heaston (2015) performed a nonexperimental, descriptive, and predictive study using a self-administered survey utilizing a purposive sampling method. Select emergency room nurses throughout the United States, were mailed surveys with a demographic questionnaire and Professional Quality of Life Scale version 5 (ProQOL 5). The purpose of this study was to analyze the prevalence of compassion satisfaction, compassion fatigue, and burnout in emergency department nurses throughout the United States and to examine demographic components (Hunsaker et al., 2015). The total sample of those completing the survey was 278. Hunsaker et al. (2015) identified the lack of managerial support as a key predictor in the development of compassion fatigue and increased or decreased compassion satisfaction. Limitations included sample size, mailed surveys, targeting of only members of the Emergency Nurses Association, and point in time survey. The authors recommended exploration into coping strategies that could be utilized by the nurse to prevent compassion fatigue. This

study further demonstrated the need for education at the leadership level. Leadership needs to be aware of the phenomena of compassion fatigue and what strategies are needed to combat the problem.

Hegney et al. (2014) examined compassion fatigue and compassion satisfaction with the potential contributing factors of anxiety, depression, and stress. Hegney et al. (2014) utilized a self-report exploratory cross sectional survey method. Of the 374 nurses invited, 132 completed the survey (35% response rate). The participants were given the Professional Quality of Life Scale version 5 (ProQOL 5) to measure compassion fatigue (CF), burnout (BO), compassion satisfaction (CS) and secondary traumatic stress (STS). Participants were also asked to complete the Depression Anxiety Stress Scales (DASS), which is a survey used to measure mood symptoms over the past week. Results of the study demonstrated a correlation between BO and STS and higher anxiety and depression. Twenty percent of the participants had elevated compassion fatigue scores with 7.6% with a very distressed profile. Limitations of this study included sample size and setting.

Health-Seeking Behavior/Self-Care

In a systematic analysis, Poortaghi et al. (2015) identified a concept analysis of health-seeking behaviors, including implications for use of health-seeking behaviors, as well as its significance to the discipline of nursing from 2000 to 2012. According to Poortaghi et al. (2015), health-seeking behaviors are multi-faceted, and are not limited to one particular type of behavior. Health-seeking behaviors are impacted by social, cultural, economic, and access to services. The analysis by Poortaghi et al. (2015) demonstrated that health-seeking behaviors led to health promotion and disease risk

reduction. Other findings of the study included impacts on future probability of diseases, health status, early diagnosis, treatment, and control of complications. Weaknesses were related to access to full text articles by the author. The literature review included a broad array of subject matter. In conclusion, Poortaghi et al. (2015) emphasized the importance of developing an understanding of the concepts associated with health-seeking behaviors, as they relate to the nursing profession.

According to Sansó et al. (2015), palliative care nurses face many challenges in caring for patients at the end of life. Sansó et al. (2015) explored the relationship between self-care activities and the impact on reported compassion fatigue (CF), burnout (BO) and compassion satisfaction (CS) using a cross-sectional online survey of Spanish palliative care professionals. The 387 respondents included physicians, nurses, social workers, nursing assistants, and psychologists, of which, 33.2% were nurses. Several methods were utilized to collect data including the ProQOL questionnaire and Kearney's Integrative Model of Self-Care. Overall, Sansó et al. (2015) found that self-care activities were a predictor of the ability to cope with death and coupled with awareness, a positive predictor of compassion satisfaction and negative predictor of CF and BO. Palliative healthcare professionals need to focus on their own self-care to provide a balance within their own lives and coping with death (Sansó et al., 2015). A strength of the study was the inclusion of multiple disciplines. Limitations were the low sample size and lack of specificity in regards to some of the questions asked on the survey. Often nurses fail to practice the very principles of their nursing training, that of caring for others and overlook their own self-care activities.

Coping

Weidlich and Ugarriza (2015) examined coping and compassion fatigue in military and civilian registered nurses, licensed practical nurses, and medic, using a prospective cohort pilot study with a convenience sample design. Prior to the training, the study participants were given three survey questionnaires which included: Connor-Davidson Resilience Scale (CD-RISC), the Ways of Coping Questionnaire (WCQ), and the Professional Quality of Life Scale (ProQOL). Results demonstrated a decrease in burnout and consequently a decrease in compassion fatigue in those who attended the training. There were no significant findings related to resiliency and coping after completion of the CPSP training program. Several limitations were identified with the study, which included sample size, failure of all of the initial participants to complete the second set of questionnaires, location of the survey, and a hiring freeze at the military base. Weidlich and Ugarriza (2015) expressed concerns that the hiring freeze may have led to increased stress among the participants. In conclusion, this training program decreased burnout and a decrease in burnout may in turn, decrease compassion fatigue. Institutions that implement programs to combat compassion fatigue need to evaluate and measure the effectiveness of their programs and mold them to meet the needs of their employees.

Aycock and Boyle (2009) aimed to identify resources available to oncology nurses to counter compassion fatigue. The survey was mailed to 231 Oncology Nursing Society (ONS) chapters, of those, 103 responded to the survey. Of those who responded, none identified mandatory End of Life Nursing Education (ELNEC), 60% had employee assistance programs, 45% had educational programs, 3% had retreats, 22% had a

psychologist available, and 5% had support groups. The findings identified a significant gap of available resources to combat compassion fatigue in oncology nurses, with evidence for the implementation of support and coping programs in an effort to reduce compassion fatigue. Aycock and Boyle (2009) further identified considerations for nurses to delegate tasks that were non-essential in an effort to decrease workloads and thereby diminish consequential compassion fatigue. Aycock and Boyle (2009) demonstrated an absence of resources to support oncology nurses. Several themes were discovered in this study: a need for formalized education programs, specialized retreats, and on-site counseling for nurses. Strengths included the number of respondents and the targeting process utilized to reach oncology nurses. One limitation to the study included a 27% response rate of the ONS chapters who were mailed a survey. According to the author, future studies should include nurse responses on their perception of available resources.

Nurses caring for trauma patients may develop Secondary Traumatic Stress (STS), a component of compassion fatigue. Hinderer et al. (2014) examined the relationship of burnout (BO), compassion fatigue (CF), compassion satisfaction (CS), and secondary traumatic stress (STS) to personal/environmental characteristics, coping strategies and exposure to trauma. The study surveyed 128 (49% response rate) trauma nurses working in a variety of trauma departments at a large urban trauma center. A cross-sectional descriptive method was used in distributing a demographic tool, the Penn Inventory (tool designed to measure Post Traumatic Stress Disorder) and the ProQOL questionnaire. Results revealed a negative correlation between hobbies and coworker relationships. The nurses with less hobbies and lack of coworker relationships scored with a higher CF risk as did working longer hours and use of medications as a coping

strategy. Exercise did not demonstrate a significant significance in the reduction of CF, however exercise was a predictor of more CS. One of the more significant findings in this study was that high BO and CF scores predicted the development of STS. As noted, caring for trauma patients on a daily basis can be stressful and lead to the development of BO, CS, CF and STS. Furthermore, utilization of various coping strategies can assist the caregiver in lowering their risk.

Yoder (2010) used a cross-sectional quantitative and qualitative design to describe the prevalence of compassion fatigue among a broad spectrum of nurses and to investigate the situations that lead to compassion fatigue and methods of coping. The study took place in Magnet-designated hospital in the Midwest, 178 nurses were invited to participate, 106 returned the survey; of those, 71 completed the qualitative portion of the questionnaire. The responses to the qualitative (narrative) portion were examined utilizing content analysis including explicit and implicit themes. Coping strategies to deal with compassion fatigue, based on themes, were categorized into work-related and personal strategies. Of these two strategies, 58% utilized work-related strategies as a coping mechanism. The participants reported tuning things out, decreasing hours worked, leaning on their peers, and detaching from the situation as their way of managing compassion fatigue. Comparatively, 42% of those surveyed utilized personal strategies. These strategies included prayer and work/life balance. Some of the limitations identified with the study were localized survey group, and the researcher was known within the organization by the participants. The fact that the surveyor was known may have impacted the answers given by the nurses and participation rates. The findings of the

study by Yoder (2010) demonstrated a variety of coping strategies utilized to deal with situations where the nurse felt compassion fatigue.

Wilson, Gettel, Walsh, and Esquenazi (2016) conducted a mixed-method approach to describe how a sample of nurses could incorporate massage as a caring intervention and determine whether measureable changes in compassion satisfaction or compassion fatigue could be identified among nurses providing massage. Participants were recruited from a large southwestern United States acute care hospital. Jean Watson's Caring Theory and Duffy's Quality Caring Model were used as frameworks for this pilot study. Data was collected through the ProQOL survey questionnaire, the Nyberg Caring Assessment Scale (CAS) and a participant information form. Of the 1,330 nurses invited, only 30 agreed to participate and only 29 completed the pilot study. The nurses were given classes from a licensed massage therapist prior to beginning the study. A pre-test revealed that 69% of the nurses had never provided a massage to a patient. The nurse comments were overall positive indicating that offering massage to their patients made them feel more relaxed personally and feel more compassionate towards their patients. Limitations included a low sample, the self-reporting process, and lack of validated tools to measure the massage encounters. Recommendations for future studies suggested a replication with a larger sample size and exploration into the physiologic responses of both the nurse and the patient. As this study was conducted

Literature Related to Theoretical Framework

Kolcaba, Dowd, Steiner, and Mitzel (2004) explored the efficacy of hand massage and its effects on comfort in hospice patients. Kolcaba's Theory of Comfort was used as the framework for this study. The theory directs nurses to assess patient comfort needs,

design holistic interventions, and measure the effectiveness of interventions. An experimental randomized study design was utilized to determine if hospice patients who receive hand massage demonstrate higher comfort and lower symptom distress over a three week period compared to patients who do not receive hand massage. There were 31 participants recruited from three hospital sponsored, nonprofit hospice agencies. The Hospice Comfort Questionnaire (HCQ) was utilized to measure comfort in both randomized groups, those receiving massage, and those who were not. Each group completed the questions weekly over a three week period. Results from the study demonstrated an improvement in comfort in the patients who received hand massage and no significant differences between the groups and symptom distress. Limitations of the study included the recruiting process, some patients died during the study, and others decided not to participate after learning they would not be receiving any interventions. Overall, there are benefits to administering hand massage to hospice patients. Although study results did not demonstrate an impact on symptom management, further research is recommended to test whether massage decreases the amount of pharmaceuticals administered at end of life.

Hansen, Higgins, Warner and Mayo (2015) developed a pilot study to examine family relationships at the end of life and any relationships between perceived comfort, relatedness states, and life closure. Hansen et al. (2015) used a descriptive, cross-sectional design, in which a convenience sample, 30 participants were recruited. The setting was a large not-for-profit hospice facility. Several methods were used for measurement including Hospice Comfort Questionnaire (HCQ), Relatedness States Visual Analog Scales and Life Closure Scale. The HCQ was created by Katherine

Kolcaba to measure comfort. The findings of the study indicated a significance of higher comfort scores in hospice patients if they participated in activities such as exercise or reported interactive relationships. "Participants residing in an inpatient setting had higher levels of involvement ($t[18] = -2.07$, $p = 0.05$) and comfort in relationships ($t[28] = -2.06$, $p = 0.05$) than those in the home setting" (Hansen et al., 2015, p. 305). Limitations of the study included smaller sample size and participant's length of stay greater than 100 days, when the average is 67 days. Longer length of stay may have impacted the relationships established with caregivers and their comfort level in being more interactive in the inpatient setting. In conclusion, Hansen et al. (2015) recommended a larger sample as well as investigation into why patients reported higher relationship interactions. Development of a tool similar to the HCQ, that specifically measures a nurse's comfort, could provide a more in depth analysis to assist in the development of strategic initiatives to improve nurse comfort.

A quasi-experimental study design was utilized by Apóstolo and Kolcaba (2009) to explore the effects of guided imagery on comfort, depression, anxiety, and stress of psychiatric inpatients with depressive disorders. Kolcaba's Theory of Comfort was used as a theoretical framework for this study. The sample included 60 short-term psychiatric patients on an inpatient unit. The patients comfort was measured by the Psychiatric Inpatients Comfort Scale (PICS), 5-point Likert scale with 42 questions. The Depression, Anxiety and Stress Scales (DASS-21) was used to measure stress, anxiety, and depression. Both tools were tested for validity and reliability utilizing Cronbach's Alpha. Utilization of guided imagery in the treatment group resulted in significantly lower levels of depression, anxiety, and stress. The treatment group also demonstrated higher comfort

scores, with a negative correlation, meaning those with higher comfort had lower depression, anxiety, and stress. Recommendations for future research include whether the use of guided imagery resulted in a decrease in the use of psychiatric medications. In conclusion, guided imagery can have a positive impact on decreasing symptoms in psychiatric patients and increasing levels of comfort.

According to Mollart, Skinner, Newing, and Foureur (2013), midwives who exercised regularly had a significant impact on whether they felt energetic. The participants of the study who said they never exercise felt less energetic. Similarly, a study by Holton, Barry, and Chaney (2016), concluded that adaptive strategies such as communicating with a friend and exercise predicted whether someone would self-identify as effectively managing stress. Further, the researchers recommended adaptive workplace strategies, such as exercise, to decrease stress. These studies further demonstrate the need to investigate the impact of support programs and effective coping strategies in to combatting compassion fatigue, which may include exercise.

Strengths and Limitations of the Literature

The physical and emotional health and well-being of nurses is of equal importance as the physical and emotional health and well-being of our patients. Identifying and understanding the phenomenon of compassion fatigue may help guide staff training and interventions to diminish the incidence of compassion fatigue. It is imperative for nurse leaders and organizations to develop appropriate programs to protect healthcare employees from the phenomenon of compassion fatigue.

Previous research (Aycock & Boyle, 2009; Boyle, 2011; Bride et al., 2007; Jones & Gates, 2007; Lombardo & Eyre, 2011; Melvin, 2012) has provided evidence that

continuous exposure to death, dying, traumatic events, heavy workloads; meeting patient/family needs, physician demands, and increased patient acuity is associated with the development of compassion fatigue. There are numerous studies related to the prevalence of compassion fatigue in a variety of settings; as well as predictors, coping strategies, self-care and conceptualizing and defining compassion fatigue (Adam et al., 2015; Boyle, 2011; Coetzee & Klopper, 2010; Hegney et al., 2014; Hinderer et al., 2014; Holton et al., 2016; Hooper et al., 2010; Hunsaker et al., 2015; Kelly et al., 2015; Melvin, 2012; Mollart et al., 2013; Potter et al., 2010; Sacco et al., 2015; Sorenson et al., 2016; Smart et al., 2014; Weidlich & Ugarriza, 2015; Wilson et al., 2016; Yoder, 2010).

There were no articles utilizing Kolcaba's Theory of Comfort to determine the relationship between compassion fatigue (CF) and exercise, or which related to the comfort of the nurse. Articles related to Kolcaba's Theory of Comfort and care of the patient are included in this literature review. According to Kolcaba, "compassion fatigue is an interesting (and new) concept to me, and perhaps self-comfort would help to extend or enhance the amount of compassion a nurse has at any given time. I think though, it is more dependent on the type of patients the nurse has on a daily basis" (K. Kolcaba, personal communication, November 20, 2016). However, in studies by Potter et al. (2010) and Sacco et al. (2015), findings did not reveal significance in the prevalence of compassion fatigue and the type of patients cared for.

Research has not fully examined the relationship of exercise and compassion fatigue. Several themes were identified in this literature review such as a need for support programs, early identification, along with organization, leadership, and nurse education on the recognition of compassion fatigue, appropriate coping strategies (such as

exercise), and the recognition of symptoms. Compassion fatigue impacts the nurse, the organization, the patient experience, patient outcomes, and the ability to provide compassionate care to their patients. Kolcaba's Theory of Comfort guided this thesis. Kolcaba's theory presents the assumptions "that (a) human beings have holistic responses to complex stimuli, (b) comfort is a desirable holistic outcome that is germaine to the discipline of nursing, and (c) human beings strive to meet, or to have met, their basic comfort needs" (Kolcaba, 1994, p. 1178). Exercise may provide the nurse with a level of holistic self-comfort and impact the nurse's risk for developing compassion fatigue.

CHAPTER III

Methodology

The purpose of this thesis was to assess the prevalence of CF among nurses, and to determine if a relationship exists between CF and amount exercised each week. Specifically, this thesis attempted to determine what relationship exists between CF and hours exercised each week. Information gained from this thesis may enlighten nursing leaders on the existence of these phenomena and the impact on the nurse leader's staff, the nurse, and to the organization as a whole, by providing information for methods of combatting CF.

Study Design

The research study design on the relationships between CF and exercise was a quantitative descriptive correlational study. The researcher collected data via a snowball (network) sampling method. Snowball (network) sampling utilizes social networks, such as Facebook, to reach the targeted population (Grove, Burns, & Gray, 2013). Participants were given a quality of life measurement tool (ProOL 5) (Appendix A) and asked how often they typically exercise each week. (Appendix B)

Setting and Sample

A convenience snowball sampling method was utilized to obtain 30 participants. The initial survey link was shared using Facebook®. The population for this study consisted of bedside Registered Nurses and Licensed Practical Nurses.

Design for Data Collection

A descriptive, correlational quantitative study design was employed, using a survey that has been adapted with permission from Quality ProQOL-5 (Stamm, 2009) to measure compassion fatigue in participants. (Figure 2)

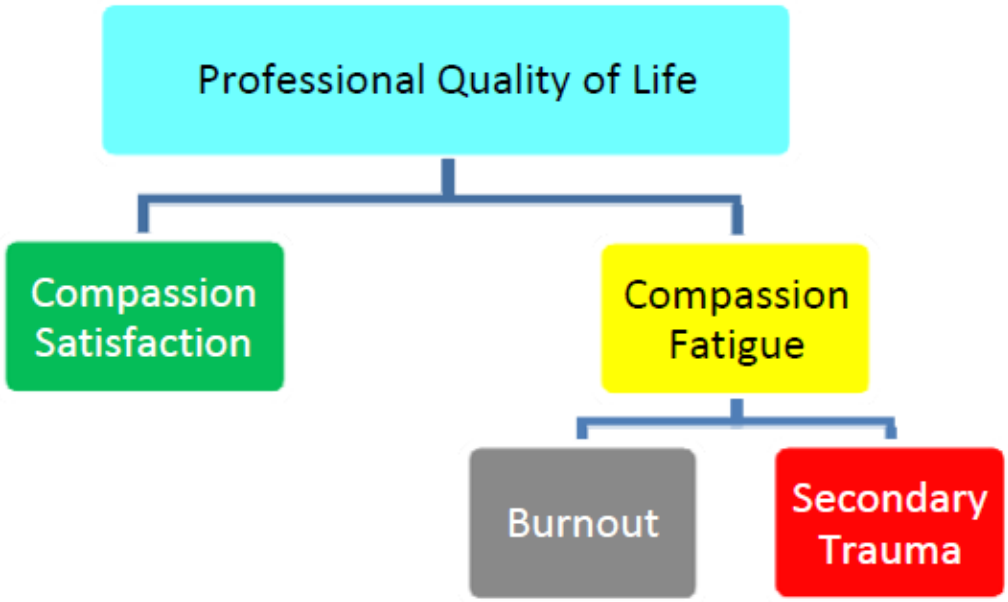

Figure 2. Professional Quality of Life Diagram (Stamm, 2009)

Measurement Methods

As part of this study a questionnaire preceded the measurement tool. The questionnaire asked the participant how much they exercised weekly and included a definition of exercise and the amount of time needed to count as exercise. The ProQOL-5 is the current version and most commonly used measure of the negative and positive effects of helping others who experience suffering and trauma. The ProQOL-5 is a 30-question instrument, which includes a 5-point Likert scale (1=*never*, 5= *very often*). The tool asks the participants to answer each question based on their feelings and experiences

over the past 30 days related to their current work situation. Two main subscales of the ProQOL-5 include compassion satisfaction and compassion fatigue. The subscale of compassion fatigue is further broken down into burnout and secondary trauma. Due to the inability to modify the survey tool, all subscales were asked as part of the survey. However, only the compassion fatigue subscale score, which includes the questions related to burnout and secondary trauma, was analyzed. The instrument has been tested with reliability α for compassion fatigue =.80. Permission to use this measurement tool was obtained from the ProQOL-5 website. (Appendix C)

Data Collection Procedure

The purpose of the study and survey questionnaire was posted online with a link to Survey Monkey via Facebook. Initially invitations were shared via Facebook to nurses known by the researcher. Those nurses were asked to voluntarily complete the survey and to share the survey with other nurses via Facebook. No demographics were collected as a part of this study. An informed consent (Appendix D) was included as part of the survey.

Once the invitation was sent via Facebook, the survey was available for 14 days, or until 30 participants had been obtained. Participation in this study was voluntary, and there was no risk of manipulation or coercion. The surveys were returned, once completed, on the researcher's Survey Monkey account page.

The survey results were analyzed by the researcher using the Statistical Package for Social Sciences (SPSS) statistical software to measure any relationship between compassion fatigue and exercise. A specific question was asked as to how often the survey participants exercise weekly, if at all. After data was screened to ensure

assumptions have been met, statistical analysis was completed using Kendall's tau-b correlation.

Protection of Human Subjects

Institutional Review Board (IRB) approval from the University was obtained prior to implementation of this study. Participants were informed that participation in the survey was completely voluntary, anonymous, and posed minimal risk. Participants were also informed they could decline to participate at any time by closing the survey. No demographic data was collected. The investigator's contact information was made available to all of the participants if any questions or concerns arose.

Data Analysis

Each returned survey questionnaire was assigned a number and responses were then entered for each individual item into the IBM ® Statistical Package for Social Sciences ® (SPSS) program for computing results. A descriptive analysis was utilized to assess the population sample. Correlation data analysis was utilized to determine if there was a relationship between compassion fatigue and exercise. Raw scores from the survey were converted to t-scores for analysis as recommended by the creator of the ProQOL-5 survey tool. ProQOL instructions were utilized to compute score, convert to Z scores, and then convert to t scores.

CHAPTER IV

Results

The purpose of this thesis was to assess the prevalence of CF among nurses, and to determine if a relationship exists between CF and amount exercised each week. This research attempt to determine if a relationship exists between CF and number of times exercised each week.

Sample Characteristics

Surveys were distributed via a snowball sampling on Facebook utilizing a Survey Monkey survey to obtain the data. A total of 34 surveys were returned. Due to the process for distribution of the surveys, the investigator was unable to determine a return rate for the study. The pie chart illustrates (see *Figure 3)* how often the participants of this study exercised: None-21.6%, one time per week-21.6%, two times per week-24.3%, three times per week-29.7%, and daily-2.7%.

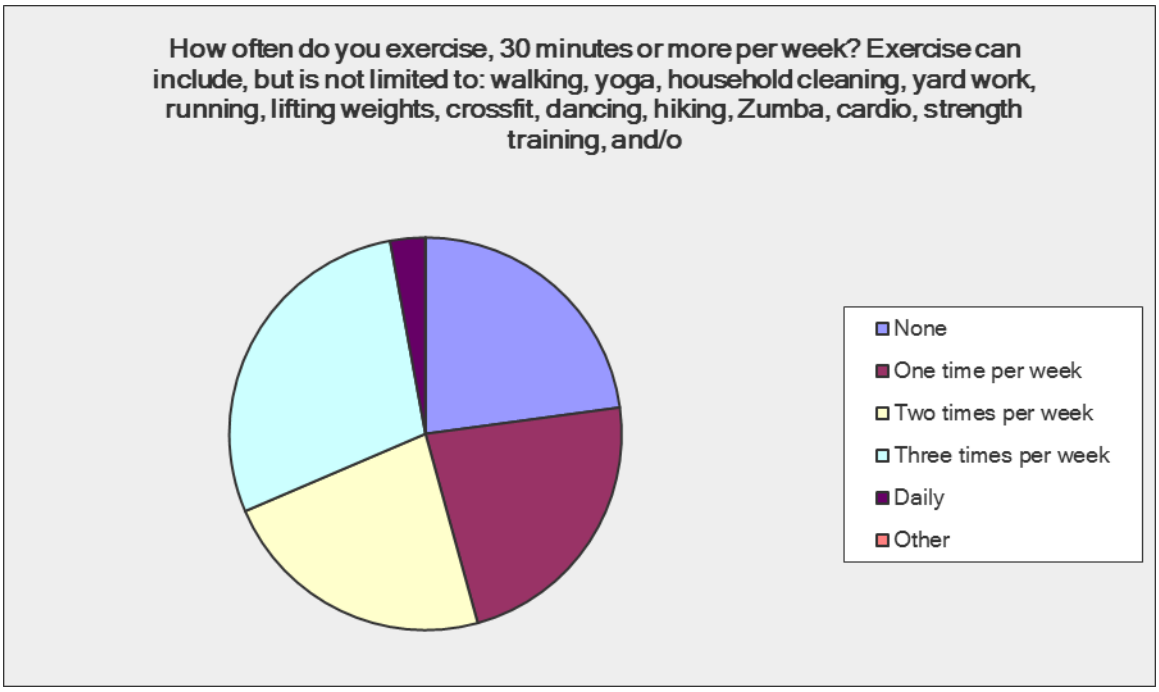

Figure 3. Pie Chart of How Often Participants Exercised. This figure illustrates how often participants exercised weekly.

Major Findings

Correlations of Exercise to Burnout and Secondary Traumatic Stress

The sample consisted of 34 nurses working in the acute care setting at the bedside. The response rate was unknown due to the sampling method. A Kendall's tau-b correlation was used to determine the relationship between compassion fatigue and level of exercise amongst 34 participants. The data did not meet assumptions for parametric testing. Kendall's tau-b was used to determine the correlation between compassion fatigue and exercise. There was a small, negative correlation between the burnout component of compassion fatigue and the number of times the participant exercised, however this was not statistically significant ($\tau b = -.195$, $p = .151$) (Table 1). There was a very small correlation between the secondary trauma component of compassion fatigue

and the number of times the participant exercised, however this was not significant (τb = -.025, p = .853) (Table 1).

Table 1

Correlations of Exercise to Burnout and Secondary Traumatic Stress

Measure	Exercise	*p* value
Burnout	-.195	.151
Secondary Traumatic Stress	-.025	.853

Compassion Fatigue Prevalence

As noted, the sample consisted of 34 nurses working at the bedside. Characteristics of the study sample are noted in Table 2 (see below). The use of *t* scores produced a standardization of each subscale in which the ProQOL-5 scale mean equaled 50, which indicates moderate CF. Scores greater than 57 indicate high CF, whereas scores less than 43 indicate low CF. Findings revealed that 73.6% of the sample was at moderate to high risk for burnout and secondary traumatic stress combined, with approximately 32.5% in the high-risk category for burnout, and 26.5% for secondary traumatic stress. Of the sample, 12% of the nurses scored at high risk on both of the subscales of burnout and secondary traumatic stress.

Table 2

Characteristics of Burnout and Secondary Traumatic Stress as a Percentage of the Sample

Characteristic	Low	Moderate	High	Combined Mod/High
Burnout	26.4	41.1	32.5	73.6
Secondary Traumatic Stress	26.4	47.1	26.5	73.6

Summary

This quantitative, correlational descriptive study investigated the question as to the prevalence of compassion fatigue (CF) and the relationship between exercise and CF among bedside nurses in a hospital setting. A total of 34 surveys were returned via Survey Monkey. The study results did not find any statistically significant correlation between the numbers of times the participants of the survey exercised and the level of compassion fatigue. The study did reveal a high percentage of nurses who reported moderate to high compassion fatigue scores.

CHAPTER V

Discussion

Implication of Findings

The purpose of this thesis was to determine if there was a relationship between exercise and compassion fatigue (CF). The data analysis of the study did not reveal statistical significance between the two variables: CF and amount of exercise each week. While the results did not find statistical significance, there was a small, negative correlation between the burnout component of compassion fatigue and the number of times nurses exercised, indicating that nurses who exercised more demonstrated a lower incidence of burnout.

There was a very small correlation between the secondary trauma component of compassion fatigue and the number of times nurses exercised, indicating that nurses who exercised more demonstrated a lower incidence of secondary traumatic stress. Hinderer et al. (2014) examined the relationship of burnout (BO), compassion fatigue (CF), compassion satisfaction (CS) and secondary traumatic stress to personal/environmental characteristics, coping strategies, and exposure to trauma. Similarly, their study did not find statistical significance related to exercise and the reduction of compassion fatigue. In other studies (Aycock & Boyle, 2009; Boyle, 2011; Coetzee & Klopper, 2010; Hinderer et al., 2014; Holton et al., 2016; Melvin, 2012; Sansó et al., 2015; Weidlich & Ugarriza, 2015; Yoder, 2010) found that utilization of coping strategies such as exercise, work/life balance activities, training, and support programs were effective in decreasing CF. It is important that nurses across all specialties become cognizant of the risk of developing compassion fatigue and participate in activities to prevent its development.

An additional aim of this study was to determine the prevalence of compassion fatigue within the sample. Compassion fatigue prevalence has been widely studied. Potter et al. (2010) revealed comparative results with findings from this thesis. With an average of 36% scoring at high risk for secondary traumatic stress and burnout. In a study of emergency room nurses, approximately 86% had moderate to high levels of compassion fatigue, compared to 73.6% in this study (Hooper et al., 2010). These studies and others support the need for a targeted approach, which should include awareness, education, and support.

Application to Theoretical/Conceptual Framework

Holistic comfort is defined as the immediate experience of being strengthened through having the needs for relief, ease, and transcendence met in four contexts of experience: physical, psychospiritual, social, and environmental (Kolcaba, 2010).

Comfort is a mid-range theory, consisting of three types of comfort: relief, ease, and transcendence. Relief is the state where a specific need being met. Ease is the state of contentment. Transcendence is the state in which one rises above problems and pain. The question of this master's thesis was to determine whether there was a relationship between exercise and compassion fatigue. The results did not demonstrate a statistical correlation between exercise and compassion fatigue. There were however, very small correlations between exercise, burnout, and secondary traumatic stress. While the Theory of Comfort has not been tested in the context of evaluating how often nurses exercise and the development of compassion fatigue, its concepts of health care needs, comfort interventions, and comfort were applicable. As mentioned previously, Kolcaba shared that "compassion fatigue is an interesting (and new) concept to me, and perhaps self-

comfort would help to extend or enhance the amount of compassion a nurse has at any given time…" (K. Kolcaba, personal communication, November 20, 2016).

Limitations

The purpose of this thesis was to assess the prevalence of CF among nurses, and to determine if a relationship exists between CF and amount exercised each week. Possible limitations to this study included the small sample, lack of demographics, and differentiation of the types of exercises utilized. Inclusion of demographics would be beneficial in determining any relationship between age, gender, family support, and the prevalence of compassion fatigue. The data was collected via a snowball convenience sampling method on Facebook.

Implications for Nursing

The implications of compassion fatigue and the identification of appropriate coping strategies are evident and supported through research. Nurses experience trauma in caring for patients, a lack of organized support programs to combat compassion fatigue, and overwhelming pressures to meet the expectations of their patients and leadership. The combination of factors leads to increased compassion fatigue throughout the nursing profession. According to Boyle (2011), "if compassion fatigue is not addressed in its earliest phases, it can permanently alter the ability of a caregiver to provide compassionate care" (para. 5). Lombardo and Eyre (2011) stated that compassion fatigue affects job satisfaction, the nurse's overall health, and their work environment, all of which impact productivity and lead to an increase in turnover. Without appropriate interventions, nurses who experience compassion fatigue may eventually give up and choose to leave the profession; leading to high turnover rates.

These high turnover rates impact those nurses who remain in the profession. Kane, Shamliyan, Mueller, Duval, and Wilt (2007) reported a projected 20% nursing shortage by 2020, due in part to job dissatisfaction. When shortages occur, those nurses who are "left behind" experience an increase in workloads thereby creating a vicious cycle. There is an obligation to effectively and swiftly identify compassion fatigue in nurses. Development of programs and strategies, to offer support, teach coping strategies (such as exercise), and decrease the incidence of compassion fatigue is vital to the sustainability of nurses and the profession.

Recommendations

There is overwhelming evidence of the widespread occurrence of compassion fatigue across all specialties (Adam et al., 2015; Hooper et al., 2010; Hunsaker et al., 2015; Kelly et al., 2015; Melvin, 2012; Potter et al., 2010; Sacco et al., 2015; Yoder, 2010). Nurses in today's healthcare environment are challenged by personal expectations, leadership expectations, professional expectations, and patient/family expectations on a daily basis. Education and awareness should be the first step to identifying whether the problem of compassion fatigue exists in any given organization. Once established that the problem exists, next steps should include education of both leadership and the nursing staff. A limited amount of studies have been conducted on programs specifically designed to prevent and treat compassion fatigue. Further research is needed into the identification of coping strategies to decrease the occurrence of compassion fatigue in nurses. The knowledge gained from this research thesis provides support for further testing utilizing Kolcaba's Theory of Comfort as a framework; targeting the nurse's comfort as it relates to their work environment (relaxation centers, support programs and

leadership support), social (interactions and outside interests), physical (exercise and self-care), and psychospiritual (meditation, imagery).

Conclusion

Exploring and determining the prevalence of compassion fatigue among nurses, and whether a relationship existed between exercise and compassion fatigue was the aim of this study. The results did not reveal conclusive evidence that a significant relationship exists between exercise and compassion fatigue. However, while the results did not find statistical significance, there was a small, negative correlation between the burnout component of compassion fatigue and the number of times the participant exercised, indicating that nurses who exercised more demonstrated a lower incidence of burnout. Furthermore, there was a very small correlation between the secondary trauma component of compassion fatigue and the number of times the participant exercised, indicating that nurses who exercised more demonstrated a lower incidence of secondary traumatic stress. The phenomenon of compassion fatigue was first identified in the early 1990's, and current empirical evidence exists on how rampant compassion fatigue is in the field of nursing at present. Nurses in both the inpatient and outpatient settings are susceptible to the development of compassion fatigue, regardless of the specialty or nationality. There is overwhelming support of the necessity to identify, prevent, and treat compassion fatigue. Currently, there are not any mandated programs to treat and prevent compassion fatigue across the nursing profession, which is surprising given the evidence of the problem and the implications for nursing practice. It is essential to the nursing profession that further research is conducted and strategies which are successful in the prevention and treatment of compassion fatigue are implemented.

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Appendix A

Professional Quality of Life Survey Tool

Professional Quality of Life Scale (ProQOL)

Compassion Satisfaction and Compassion Fatigue
(ProQOL) Version 5 (2009)

When you *help* people you have direct contact with their lives. As you may have found, your compassion for those you *help* can affect you in positive and negative ways. Below are some questions
about your experiences, both positive and negative, as a *helper*. Consider each of the following questions about you and your current work situation.

Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___1. I am happy.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___2. I am preoccupied with more than one person I *help*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___3. I get satisfaction from being able to *help* people.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___4. I feel connected to others.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___5. I jump or am startled by unexpected sounds.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___6. I feel invigorated after working with those I *help*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___7. I find it difficult to separate my personal life from my life as a *helper*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I *help*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___9. I think that I might have been affected by the traumatic stress of those I *help*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___10. I feel trapped by my job as a *helper*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___11. Because of my *helping*, I have felt "on edge" about various things.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___12. I like my work as a *helper*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___13. I feel depressed because of the traumatic experiences of the people I *help.*
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___14. I feel as though I am experiencing the trauma of someone I have *helped.*
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___15. I have beliefs that sustain me.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___16. I am pleased with how I am able to keep up with *helping* techniques and protocols.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___17. I am the person I always wanted to be.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___18. My work makes me feel satisfied.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___19. I feel worn out because of my work as a *helper.*
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

___20. I have happy thoughts and feelings about those I *help* and how I could help them.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___21. I feel overwhelmed because my case [work] load seems endless.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___22. I believe I can make a difference through my work.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___23. I avoid certain activities or situations because they remind me of frightening experiences
of the people I *help*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___24. I am proud of what I can do to *help*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___25. As a result of my *helping* I have intrusive, frightening thoughts.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___26. I feel "bogged down" by the system.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___27. I have thoughts that I am a "success" as a *helper*.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___28. I can't recall important parts of my work with trauma victims.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___29. I am a very caring person.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often
___30. I am happy that I chose to do this work.
1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

Appendix B

Exercise Question

How often do you exercise, 30 minutes or more per week? Exercise can include, but is not limited to: walking, yoga, household cleaning, yard work, running, lifting weights, crossfit, dancing, hiking, Zumba, cardio, strength training and/or cycling. Walking while at work, as part of job duties/requirements, does not count as exercise. However, walking in the gym or other area for 30 minutes during a lunch break at work, would count as exercise.

None

One time per week

Two times per week

Three times per week

Daily

Other

Appendix C

Copy of Permission to Use ProQOL Survey

The ProQOL measure may be freely copied and used as long as (a) author is credited, (b) no changes are made other than those authorized below, and (c) it is not sold. You may substitute the appropriate target group for / helper / if that is not the best term. For example, if you are working with teachers, replace / helper /with teacher. Word changes may be made to any word in italicized square brackets to make the measure read more smoothly for a particular target group. Additionally, you are granted permission to convert the ProQOL into other formats such as a computerized or taped version for the visually impaired.

Appendix D

Informed Consent

(Posted on Survey Monkey)

Title of Research: The Relationship between Exercise and Compassion Fatigue in Nurses

Name of Principal Investigator/Primary Researcher:

Cindy Yeargin

Purpose and Background:

Cindy Yeargin, RN, BSN, graduate student in Gardner-Webb University Master of Science in Nursing program, is conducting a research study (thesis) on the Relationship Between Compassion Fatigue and Exercise in Nurses. This research is under the supervision of Dr. Abby Garlock, Professor at Gardner-Webb University-Thesis Advisor for Cindy Yeargin, RN, BSN.

Procedures:

1. You will complete an anonymous survey, Professional Quality of Life Scale-5 (ProQOL-5), via a Survey Monkey questionnaire.
2. ProQOL-5 measures compassion satisfaction and compassion fatigue.
3. You will also be asked how much you exercise each week.
4. You will give consent that you agree to participate in this anonymous survey by clicking "yes" or "no."

Risks:

There are no known foreseeable risks or discomforts involved in participating in this study.

Confidentiality:

The records from this study will remain confidential. No individual identities will be used in any reports or publications resulting from the study. After the study is completed all data will be held for 3 years by the Hunt School of Nursing and then destroyed.

Direct Benefits:

There will be no direct benefit from participating in this research study. Anticipated benefit of this research is a better understanding of the prevalence of compassion fatigue in nurses and its relationship to exercise.

Alternatives:

You are free to choose not to participate in this research study or to discontinue the survey at any time.

Cost:

There will be no costs associated with participation in this survey.

Compensation:

There is no compensation associated with participation in this survey.

Questions:

If you have any further questions about the study, you can contact Cindy Yeargin directly at cyeargin@gardner-webb.edu or Dr. Abby Garlock at agarlock@gardner-webb.edu

PARTICIPATION IN RESEARCH STUDY IS VOLUNTARY. You are free to decline to participate in this research study, or you may withdraw your participation at any point without penalty.