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An Investigation into the Prevalence of and Relationships Among Compassion Fatigue, Burnout, Compassion Satisfaction, and Self-Transcendence in Oncology Nurses

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AN INVESTIGATION INTO THE PREVALENCE OF AND RELATIONSHIPS AMONG

COMPASSION FATIGUE, BURNOUT, COMPASSION SATISFACTION, AND SELF-

TRANSCENDENCE IN ONCOLOGY NURSES

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DEDICATION

This dissertation is dedicated to all my fellow oncology nurses and cancer patients. I have the utmost respect for all of you and feel truly honored to be able to witness the journey that patients with cancer and their nurses must travel. I am here today writing in your honor, for all those who have survived and for all those we have lost.

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I would like to hereby acknowledge and thank everyone who helped make this dissertation dream a reality. First, to my family and especially my husband, thank you for your patience and never ending emotional and financial support. Without you, I never could have made it. To my children, when I began this journey you were also only a dream in my heart and it is hard to believe that now by the end of it, there are three of you. You inspire me every day to want to do more with my life to make life better for you. To my mother, thank you for all those early years of tirelessly typing my papers as I dictated them to you, never judging, as I never learned how to formally type. To my Princeton B2 family, thank you for all the late night coffee, laughs, and support while I routinely worked on my revisions until four in the morning. Secondly, to my Chairperson Dr. Kathleen Sternas, there are not enough words in the English dictionary to thank you for all you have done for me through the years. You always made time for me no matter what else was going on in your life and you believed in me and gave me the confidence to continue through this program. To my Committee Members Dr. Jean Rubino and Dr. Jamesetta Halley-Boyce, thank you so much for all the time and effort you put into helping me succeed. You are both so special and were such excellent mentors throughout the dissertation process**.** To my statistician Rob Mathias, thank you so much for all your help and patient support. A special thank you to Dr. Pamela Reed, for permission to use your Self-transcendence Scale; for without it, this research would not have been possible.

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ABSTRACT

AN INVESTIGATION INTO THE PRESENCE OF COMPASSION FATIGUE,
BURNOUT, COMPASSION SATISFACTION, AND SELF-TRANSCENDENCE
IN ONCOLOGY NURSES

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PROBLEM: Oncology nursing is an emotionally demanding profession where nurses witness repeated patient suffering and death placing them at risk for adverse emotional effects such as compassion fatigue (CF) and burnout (BO). Despite this risk, many oncology nurses describe an intense satisfaction with their work, known as compassion satisfaction (CS). Self-transcendence (ST) has been found to have protective abilities. This study purpose was to assess the prevalence of CF, BO, and CS among oncology nurses in the United States, and the relationships among ST and CF, BO, CS, and demographic factors.

METHODS: This descriptive correlational study consisted of a random sample of 405 nurse members of an oncology professional organization who provide direct patient care. Figley's Compassion Fatigue and Reed's Self-Transcendence theoretical frameworks guided the study. Instruments administered online via the Survey Monkey platform included: Professional Quality of Life Compassion Satisfaction, Compassion Fatigue, and Burnout Subscales-Revision V; Self-transcendence Scale; and a demographic survey. Data were analyzed using descriptive statistics, correlational analyses, and analysis of variance (ANOVA). Level of significance was $p < .05$.

RESULTS: Study hypotheses were supported. There was a statistically significant negative correlation between ST and CF; a significant positive correlation between CF and BO; a significant negative correlation between ST and BO; and a significant positive correlation between ST and CS. Low levels of CF and BO with high levels of ST and CS suggest ST and CS are protective factors for CF and BO. Statistically significant relationships were found among CF, BO, CS, ST, and age, nursing experience, life stress, health rating, and religion/spirituality.

CONCLUSIONS: ST and CS may have protective abilities for oncology nurses at risk for CF and BO. Implications for nursing include the need for education, assessment, prevention, and health promotion interventions addressing CF and BO among oncology nurses. This study raises awareness of CF and BO in oncology nursing. Further research of ST and CS on CF and BO needs to be done. Future research should focus on development and evaluation of interventions which prevent and manage CF and BO and promote CS and ST in oncology nurses.

Chapter I

INTRODUCTION

Problem

Cancer is currently the second leading cause of death in the United States, with over 571,950 cancer-related deaths predicted to have occurred in 2011 (American Cancer Society, 2011). Oncology nurses deliver the majority of specialized care to cancer patients (National Cancer Institute, 2009). Oncology nurses work in a specialty that can be very emotionally demanding (Bush, 2009), and they represent a specialty that has long been linked in the literature to high rates of stress, burnout, and turnover (Bram & Katz, 1989; Dorz, Novara, Sica, & Sanavio, 2003; Grunfeld, et al., 2000; Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008; Lombard & Eyre, 2011; Medland, Howard-Ruben, & Whitaker, 2004; Sherman, Edwards, Simonton, & Mehta, 2006). Reasons for these untoward effects include repeated witness to suffering and death (Ferrell & Coyle, 2008; Hildebrandt, 2012; Lindberg, 2012; Quinal, Harford, & Rutledge, 2009), and the need to deal with a host of organizational and other stressors. Stressors faced by oncology nurses include patient and family dynamics (Medland, Howard-Ruben, Whitaker, 2004), a constant need to learn new skills and technology (Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008), conflict with and lack of support from staff (Bram & Katz, 1989; Rodrigues & Chaves, 2008), and inadequate preparation for the needs of dying patients (Dunn, Otten, & Stephens, 2005; Hildebrandt, 2012). Other factors which can impact stress

levels include adequacy of spiritual training and level of awareness of one's own spirituality (Highfield, Johnston Taylor, & O'Rowe Amenta, 2000).

Oncology nurses work with cancer patients across a continuum of care that ranges from initial diagnosis, aggressive treatment, cure, remission, and end of life care. These nurses bear witness to patients' trauma and suffering (be it physical or emotional) at all phases of the disease, and are ultimately responsible for providing holistic care for their patients and supporting their families throughout the process (Kemper & Wornham, 2001; Marcial, Brazina, Diaz, Jaramillo, Marentes, Mazmanian, 2013; Ward, 2002). Holistic nursing care embraces all aspects of patients including their physical, psychological, social, cultural, and spiritual needs, as well as the needs of the patients' families and support systems (Ward, 2002). This care often occurs repeatedly over an extended length of time and bonds are formed with patients (Quinal, Harford, & Rutledge, 2009). Despite providing the best care to these patients, nurse caregivers find that cancer can often continue to progress and the nurse- patient relationship can end with the patient's death. Some deaths may be expected and supported by hospice services, while many others may not be expected and are the result of traumatic emergency events related to their disease. This can be extremely stressful for oncology nurses, as they tend to empathize with patients' losses, resulting in a personal sense of futility or failure in their care (Potter et al., 2010; Rodrigues & Chaves, 2008). It is only in the last two decades that some of the emotional effects, such as compassion fatigue, on the caretakers of dying,

traumatized, and/or suffering individuals have begun to be recognized in the literature (Joinson, 1992; Figley, 1995; Boyle, 2011).

The concept of compassion fatigue has been used to describe the emotional aftermath of providing ongoing care for suffering patients (Figley, 1995; Joinson, 1992). Joinson (1992) first used the term *compassion fatigue* when she wrote about the phenomenon of nurses being so burned out by the emotional demands of caring for others that it left them too tired to care for themselves. Expanding on this, Figley (1995) defined compassion fatigue as "the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a significant other; the stress resulting from helping or wanting to help a traumatized or suffering individual" (p.7). Pfifferling and Gilley (2000) have also defined compassion fatigue as a deep physical, emotional, and spiritual exhaustion accompanied by acute emotional pain. Research suggests that the inability of caregivers to care for the emotional needs of their patients while safely distancing themselves is ultimately what results in risk for compassion fatigue (Abendroth & Flannery, 2006; Bush 2009).

There are many reasons why the potential risk for compassion fatigue (CF) in oncology nurses has great significance to society. It is reported in the literature that caregivers suffering from compassion fatigue may not be able to provide the same level of empathy and quality of care as unaffected caregivers; thus, this can result in reduced patient satisfaction, increased medical errors, and turnover (Pfifferling & Gilley, 2000; Potter et al., 2010). Despite this impact on care, it is only within the past

six years that research has begun to explore compassion fatigue among oncology

caregivers (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010; McMullen, 2007;

Quinal, Harford, & Rutledge, 2009; Perry, 2008; Perry, Toffner, Merrick, & Dalton,

2011; Potter et al., 2010; Potter, Deshields, Berger, Clarke, Olsen, & Chen, 2013;

Yoder, 2010).

The concept of burnout (BO) has also been cited in the oncology nursing

literature as having the potential to result in similar adverse outcomes such as reduced

patient satisfaction, decreased productivity, and increased turnover (Leiter, Harvie, &

Frizzell, 1998; Potter et al., 2010). However, unlike compassion fatigue, this concept

has been well researched (Bram & Katz, 1989; Hunnibell, Reed, Quinn-Griffin, &

Fitzpatrick, 2008; Potter et al., 2010; Quattrin, Zanini, Nascig, Annunziata, Calligaris,

& Brusaferro, 2006; Sherman, Edwards, Simonton, & Mehta, 2006). Burnout is

defined as a syndrome of emotional exhaustion and cynicism that occurs frequently

among individuals who do "people work" of some kind (Maslach & Jackson, 1986,

p.1). These negative feelings usually have a gradual onset and can reflect the feeling

that one's efforts make no difference (Figley, 2002b). Burnout is most often

associated with organizational stressors such as a very high workload, insufficient

training, or a non-supportive work environment (Figley, 2002b).When evaluating the

two concepts of compassion fatigue and burnout, Aycock and Boyle (2009) state that

while the cumulative distress historically experienced by oncology nurses has been

referred to as burnout, this dated term does not truly depict the result of the

longitudinal workplace ramifications of sadness and despair on oncology nursing

staff. Rather, they posit that the work-related emotional stress emanating from close interpersonal contact with cancer patients and their families that may result in physical, social, and spiritual distress for oncology nurses is actually better classified by the term compassion fatigue**.** Figley (1995) believes that compassion fatigue develops as a result of the caregiver's exposure to patients' traumatic experiences combined with their empathy for their patients.

To summarize, burnout is the result of organizational stressors faced by oncology nurses such as a very high workload, insufficient training, or a non-supportive work environment, while compassion fatigue is the result of emotional stressors such as bearing witness to patients' trauma, suffering, and death. The two concepts are distinct (Abendroth, 2011; Alkema, Linton, & Davies, 2008; Boyle**,** 2011; Bush, 2009; Sabo, 2011), and it is important to discern the two as they differ in etiology, onset, impact, and treatment. Burnout is typically seen as a gradual wearing down of workers who over time feel overwhelmed by their work and incapable of effecting positive change. It is distinct from compassion fatigue which has a sudden and acute onset and develops as a result of the caregiver's exposure to patients' traumatic experiences combined with their empathy for their patients (Figley, 2002b). Burnout is usually a result of cumulative effects of job stress that is often predictable and can be relieved by taking a vacation or changing jobs (Boyle, 2011; Schwan, 1998). This is in direct contrast to compassion fatigue in which workaholic patterns are often seen in caregivers who may actually choose to work more to relieve a patient's suffering at the expense of their own self-care (Pfifferling & Gilley, 2000;

Tunajek, 2006). Compassion fatigue also has more far reaching impact than burnout and is more difficult to treat with professional counseling and the use of intensive therapies such as the "Accelerated Recovery Program" (Figley, 1995; Gentry & Baranowsky, 1999).

With all of the potential stressors involved in engaging in this type of nursing work, it is important to note that many nurses also reported positive outcomes from working with this type of patient population (Cohen, Haberman, Steeves, & Deatrick, 1994; Perry, 2006, 2008; Rohan & Bausch, 2009). While there are a number of risk factors involved in working with suffering individuals and survivors of trauma, there is also the possibility of a powerful sense of satisfaction with this work (Alkema, Linton, & Davies, 2008; Figley, 2002b; Rohan & Bausch, 2009). Figley has coined the term "compassion satisfaction" to describe this process, which involves the development over time of a much stronger sense of strength, self-knowledge, confidence, meaning, spiritual connection, and respect for human resiliency (Alkema, Linton, & Davies, 2008; Figley, 1995). Theoretically, this sense of achievement/satisfaction may act as a protective factor against compassion fatigue.

It has been suggested that self-transcendence is also a potential protective factor that may be useful in helping oncology nurses maintain long-term ability to deal with the day-to-day stresses to which they are exposed (Hunnibell, Reed, Quinn-Griffin, and Fitzpatrick, 2008). Self-transcendence has been shown to be protective against burnout in a study of oncology and hospice nurses (Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008). However, the relationship of self-transcendence to

compassion fatigue has yet to be investigated. Self-transcendence may be useful in helping to promote compassion satisfaction; however, this relationship has not been studied. Self-transcendence is conceptually defined as a characteristic of developmental maturity whereby there is an expansion of self-boundaries and orientation toward broadened life perspectives and purpose (Reed, 1991b). Self-transcendence is developed by introspective activities and concerns about the welfare of others and by integrating perceptions of one's past and future to enhance the present (Reed, 1991b). Self-transcendence has been linked to improved coping and mental health in various patient populations (Coward, 1990, 1991, 1995, 1996, 2003; Reed 1991a), and in one study on nurses (Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008). A wide variety of personal and contextual variables and their interactions may influence the process of self-transcendence as it contributes to well-being. Examples of such variables are age, gender, cognitive ability, life experiences, spiritual perspectives, social environment, and historical events. These personal and contextual variables may strengthen or weaken relationships between vulnerability and self-transcendence and between self-transcendence and well-being (Reed, 2003).

No studies were found which explored the relationship between self-transcendence and compassion fatigue or the relationship between self-transcendence and compassion satisfaction in either oncology nurses or any other populations. The relationship between self-transcendence and burnout in oncology nurses has been studied by Hunnibell, Reed, Quinn-Griffin, and Fitzpatrick (2008) who found an inverse relationship, namely high self-transcendence was associated with lower

burnout in oncology nurses, suggesting self-transcendence is a protective factor within this population. More research is needed to further explore self-transcendence in oncology nurses to assess whether or not it is related to compassion satisfaction and if it serves as a protective factor against compassion fatigue.

Problem Statement

Oncology nursing is an intense and stressful occupation. Evidence exists that oncology nurses are at risk for adverse emotional effects such as compassion fatigue and burnout. Both compassion fatigue and burnout are distinct concepts that have the ability to cause increased odds of adverse outcomes in oncology nurses such as an overall decline in the general physical and emotional health of the caregiver (Abendroth & Flannery, 2006; Pfifferling & Gilley, 2000). Additional research is needed not only to distinguish between compassion fatigue and burnout and their prevalence in oncology nurses, but also to assess their relationship with compassion satisfaction and self-transcendence to see if they can act as protective factors against these adverse outcomes.

Purpose of the Study

The purpose of this study is to examine the emotional effects of oncology nursing. More specifically, this study will examine the prevalence of compassion fatigue, burnout and compassion satisfaction among a random sample of oncology nurses working as direct patient care providers in the United States, as well as assess the relationships between self-transcendence and compassion fatigue, burnout, and compassion satisfaction.

Definition of Variables

Compassion Fatigue

Compassion fatigue is conceptually defined as the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a person. It is described as an extreme state of tension and preoccupation with the suffering of those being helped to the degree that it is traumatizing for the helper (Figley, 2002b). Compassion fatigue has a sudden and acute onset and develops as a result of the caregivers' exposure to patients' traumatic experiences, combined with their empathy for their patients (Figley, 2002b). Compassion fatigue will be operationally defined for this study as a score of 57 or higher on the compassion fatigue subscale (ranges 15-60) of the Professional Quality of Life Compassion Satisfaction and Fatigue Subscales-Revision V (ProQOL-RV) developed by Stamm (2009).

Burnout

Burnout is conceptually defined as a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do people work of some kind (Maslach & Jackson, 1986, p.1). These negative feelings usually have a gradual onset and can reflect the feeling that one's efforts make no difference (Figley, 2002b). Burnout is most often associated with organizational stressors such as a very high workload, insufficient training, or a non-supportive work environment (Figley, 2002b). Burnout will be operationally defined for this study as a score of 57 or higher

on the burnout subscale (ranges 15-60) of the Professional Quality of Life Scale-Revision V (ProQOL-RV) developed by Stamm (2009).

Compassion Satisfaction

Compassion satisfaction is conceptually defined for people in helping professions as the pleasure one derives from being able to help people and do their work well (Figley, 2002b). Compassion satisfaction involves the process of the development over time of a much stronger sense of strength, self-knowledge, confidence, meaning, spiritual connection, and respect for human resiliency when caring for traumatized and suffering individuals. Compassion satisfaction will be operationally defined for this study as a score of 57 or higher on the compassion satisfaction subscale (ranges 15-60) of the Professional Quality of Life Compassion Satisfaction and Fatigue Subscales-Revision V (ProQOL-RV) developed by Stamm (2009).

Self-transcendence

Self-transcendence is conceptually defined as a characteristic of developmental maturity whereby there is an expansion of self-boundaries and orientation toward broadened life perspectives and purpose. Self-transcendence is developed by introspective activities and concerns about the welfare of others and by integrating perceptions of one's past and future to enhance the present (Reed, 1991b). Self-transcendence is operationally defined for this study as a total/summative score on the STS Self-transcendence Scale (Reed, 1987) that ranges from 15-60 reflecting

the respondent's overall level of self-transcendence with the higher the number, the higher the level of self-transcendence.

Inclusion Criteria

Inclusion criteria were that all study participants must be oncology nurses, currently working in a direct patient care role in the United States. Restrictions were not placed on length of time working in the profession, so as to allow for a comparison of results between newer and more experienced oncology nurses. Subjects needed to be members of the Oncology Nursing Society (ONS) who had an e-mail address on file. Oncology Nursing Society members were chosen because ONS is the largest professional oncology nursing association in the world, with over 37,000 members (Oncology Nursing Society, 2010). Of these, 34,000 ONS members are from the United States. Oncology nurses were chosen as opposed to any other nursing specialty sample as research has shown that these nurses are exposed to intense suffering (Ferrell & Coyle, 2008; Hildebrandt, 2012; Lindberg, 2012) and stress (Bram & Katz, 1989; Medland, Howard-Ruben, Whitaker, 2004). Nurses needed to be direct patient caregivers and were chosen because they make up the majority of the staff that provide hands-on care to patients. They have the most time to develop long term relationships or bonds with their patients. Restrictions were not placed on care settings so as to allow for a comparison between the various inpatient and outpatient settings. In the proposed study there was no exclusion of women, minorities, persons of different ethnicities or races, or socioeconomic status.

Exclusion Criteria

Exclusion criteria for this study were oncology nurses who: are not members of the Oncology Nursing Society; are not currently living or practicing in the United States; did not have e-mail addresses; and did not provide direct patient care.

Theoretical Background

This study was guided by two theoretical frameworks, Figley's compassion fatigue framework (Figley, 1995) and Reed's (1991b) self-transcendence nursing theoretical framework. Figley's framework centers on the concepts of empathy and exposure, and asserts that caregivers (especially therapists) who are exposed to trauma and suffering on a repeated basis and respond with empathy are at risk for compassion fatigue (Figley, 1995). Since empathy is a core aspect of providing oncology nursing care (Feldstein & Gemma, 1995; Kash, Holland, Breitbart, Berenson, Dougherty, Ouellette-Kobasa, & Lesko, 2000), it is reasonable to assume that oncology nurses would also be at risk. Figley's framework is based on the assumption that empathy and emotional energy are the driving force in effectively working with suffering persons. In general, establishing and maintaining an effectively therapeutic alliance, and delivering effective services including an empathic response (Figley, 1995; Figley, 2002a). Figley also recognizes that being compassionate and empathic involves personal and emotional costs to the caregivers, as well as the energy required to provide these services.

In addition to Figley's (1995) compassion fatigue framework, Reed's (1991b) self-transcendence theory was used to guide this study. Self-transcendence theory

rests on the belief that self-transcendence is developed by introspective activities and concerns about the welfare of others and by integrating perceptions of one's past and future to enhance the present (Reed, 1991b). Self-transcendence is considered to be a characteristic of developmental maturity whereby there is an expansion of self-boundaries and orientation toward broadened life perspectives and purpose. Within self-transcendence there is an expansion of personal boundaries outwardly, toward others and the environment; inwardly, toward greater awareness of beliefs, values, and dreams; and temporarily toward integration of past and future in the present (Reed, 1991b). Other central concepts of the theory include wellbeing or a sense of feeling wholeness and health, and vulnerability or an awareness of personal morality (Reed, 1991b). Self-transcendence has been linked in the literature to improved coping and mental health in studies with various patient populations (Coward, 1990, 1991, 1995, 1996, 2003; Reed, 1991a) and in one study of nurses (Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008). Self-transcendence is promoted by interventions which expand the individual's boundaries, such as meditation, self-reflection, visualization, religious expression, counseling, and journaling (Reed, 2008). The influence of self-transcendence on compassion fatigue has yet to be studied.

Demographic Variables

The demographic variables chosen in this study were based on a review of the literature and guiding theoretical frameworks. Figley's theoretical framework suggests compassion stress, prolonged exposure to suffering, traumatic recollections, and life disruptions are all factors that may increase a nurse's risk for

compassion fatigue (Figley, 2002b). These concepts were assessed in the present study through demographic questions such as years of oncology nursing, work setting, degree of life stress, and overall health rating. According to Reed's (2008) theoretical framework, variables that may influence the process of self-transcendence as it contributes to well-being include age, gender, cognitive ability, life experiences, spiritual perspectives, social environment, and historical events. These variables are addressed through demographic questions such as age, gender, highest level of nursing education, oncology nursing (OCN) certification, employment status, work setting, years in oncology nursing, type of patient population cared for, degree of life stress, overall health status, degree to which religion/spirituality plays a part in participants' lives.

A wide variety of demographic factors have been shown in the literature to affect compassion fatigue, burnout, compassion satisfaction, and self-transcendence. Demographic variables that were investigated in this study based on the literature include: participant's age (Abendroth & Flannery, 2006; Bram & Katz, 1989; Frank & Adkinson, 2007; Hunnibell et al., 2008; Potter et al., 2010; Quattrin et al., 2006); gender (Abendroth & Flannery, 2006; Hunnibell et al., 2008); years in oncology nursing (Bram & Katz, 1989; Hunnibell et al., 2008; Potter et al., 2010; Quattrin et al., 2006); nursing educational level (Abendroth & Flannery, 2006; Bram & Katz, 1989; Potter et al., 2010); oncology certification status; degree of life stress outside of work (Abendroth & Flannery, 2006; Radley & Figley, 2007); personal health status (Abendroth & Flannery, 2006; Radley & Figley, 2007); and degree to which

religion/spirituality plays a role in one's life (Alkema, Linton, & Davies, 2008, Frank & Karioth, 2006; Reed, 1991a). Demographic data were collected on the participants' employment status, work setting (Abendroth & Flannery, 2006; McMullen. 2007; Potter et al., 2010), type of patient population to whom the nurse provides care (Maytum, Heiman, & Garwick, 2004). In addition, one final question on whether or not the participants have ever heard of the term compassion fatigue in the past will be asked. The rationale for the inclusion of the final question is based on a prior study conducted by McMullen (2007) who found that only 47% of the oncology nurses studied had ever heard of the term compassion fatigue. Due to relative newness of the term, this question seeks to assess whether or not this is an unfamiliar concept to oncology nurses.

Research Questions

1. What is the level of self-transcendence, compassion fatigue, burnout, and compassion satisfaction in oncology nurses?

2. What is the relationship between level of self-transcendence and compassion fatigue in oncology nurses?

3. What is the relationship between compassion fatigue and burnout in oncology nurses?

4. What is the relationship between level of self-transcendence and burnout in oncology nurses?

5. What is the relationship between level of self-transcendence and compassion satisfaction levels in oncology nurses?

6. What are the relationships among compassion fatigue, burnout, compassion satisfaction, self-transcendence, and demographic variables?

Hypotheses

1. There is a negative relationship between self-transcendence and compassion fatigue in oncology nurses.

2. There is a positive relationship between compassion fatigue and burnout in oncology nurses.

3. There is a negative relationship between self-transcendence and burnout in oncology nurses.

4. There is a positive relationship between self-transcendence and compassion satisfaction in oncology nurses.

5. Levels of compassion fatigue, burnout, compassion satisfaction, and self-transcendence will be related to demographic factors (age, gender, years of oncology nursing experience, employment status, work setting, type of patient population cared for by nurses, oncology certification, educational level, degree of life stress, overall health status, and religion/spirituality level).

Independent and dependent variables in the present study vary based on the hypotheses being tested. In hypotheses 1, 3, and 4, self-transcendence is the independent variable. In hypothesis 2, compassion fatigue is the independent variable. In hypothesis 5, the demographic variables are independent variables and compassion fatigue, burnout, compassion satisfaction, and self-transcendence are the dependent variables.

Significance

This proposed study is important and will contribute to nursing and healthcare in many ways. Currently, little emphasis is placed on maintaining the psychological well-being of nurses working in the emotionally challenging field of oncology, and very few supportive resources are available to oncology nurses. This is in direct contrast to the higher amount of resources available to nurses working in other emotionally demanding fields such as hospice. Also, there is no mention of compassion fatigue, burnout, or other psychological side effects in the Oncology Nursing Society's Core Curriculum Manual (Itano & Taoka, 2005). Aycock and Boyle (2009) found no consistency in resources available for oncology nurses to use to counter compassion fatigue and burnout. When assessing three major categories of resources namely: on site professional resources, educational programs, and specialized retreats, the availability of resources ranged anywhere from 0%-60% throughout the major cancer institutes and hospitals studied.

With our nation currently in the midst of a nationwide nursing shortage projected to reach over 500,000 vacancies by 2025 (Buerhaus, Potter, Staiger, French & Auerbach, 2008), and with the demand for oncology nurses predicted to increase with the aging of the baby boomer generation, more research is needed to provide information relevant to retaining oncology nurse caregivers and optimizing their functioning. Healthcare institutions would benefit from addressing compassion fatigue in oncology nurses, as research shows employees suffering from it can have poor job performance, increased medication errors, and other mistakes, increased

employee healthcare costs, as well as a loss of morale which can lead to employee turnover (Abendroth & Flannery, 2006; Hildebrandt, 2012; Lombard & Eyre, 2011: Pfifferling & Gilley, 2000). The inability of 72% of oncology nursing executives to retain experienced oncology nurses (Lamkin, Rosiak, Buerhaus, Mallory, & Williams, 2001), in addition to the reported cost of nurse turnover as $22,000 to over $64,000 per individual (Advisory Board Company, 1999; Jones, 2005; O'Brien-Pallas et al., 2006; Stone et al., 2003; Waldman et al., 2004) demonstrate the consequences of compassion fatigue in undermining institutional revenues accrued from nurse turnover.

In addition to the financial costs of compassion fatigue, there are associated human costs, as well. Individually, nurses suffering from compassion fatigue can have their personal relationships affected causing home lives to deteriorate and relationships to deteriorate due to personality problems (Figley & Riser, 2013). Eventually compassion fatigue can lead to overall decline in the general physical and emotional health of the caregiver (Abendroth & Flannery, 2006; Pfifferling & Gilley, 2000). Potential consequences of compassion fatigue identified in the literature include abusing drugs, alcohol, or food; anger and resentment; blaming others; chronic lateness; depression; diminished sense of personal accomplishment; physical or emotional exhaustion; frequent headaches; gastrointestinal complaints; excessive weight gain or loss; high self-expectations; hopelessness; hypertension; inability to balance empathy and objectivity; increased irritability; less ability to feel joy; low self-esteem; sleep disturbances; and workaholic patterns (Boyle, 2011; Coetzee &

Klopper, 2010; Figley, 1995; Pfifferling & Gilley, 2000; Quinal, Harford, & Rutlege, 2009; Tunajek, 2006).

Despite all of the potential financial and human costs associated with compassion fatigue for oncology nurses being at high risk, gaps in the literature regarding compassion fatigue in oncology nurses remain. Historically, to suggest that oncology nurses have emotional needs and risks in response to the demands of caring for cancer patients has not been popular even among the nurses themselves (Feldstein and Gemma, 1995). This current study will add to the knowledge base of the emotional effects of providing nursing care to oncology patients.

Chapter II

REVIEW OF LITERATURE

This chapter includes a review of theoretical and research literature related to the variables of compassion fatigue, burnout, compassion satisfaction, and self-transcendence. For the purposes of this literature review, books and scholarly peer reviewed journals from CINHAL, ProQuest Nursing & Allied Health Source, and Academic Search Premier databases from 1981 to the present were reviewed. A focus was placed on oncology studies.

Theoretical Framework

This study was guided by two theoretical frameworks, Figley's compassion fatigue framework (Figley, 1995), and Reed's (1991b) nursing self-transcendence theoretical framework. Figley's compassion fatigue framework (Figley, 1995) was chosen to help guide the present study as it conceptualizes the repeated witness of patient suffering and death and the potential adverse emotional effects of witnessing suffering. Oncology nursing, often includes repeated witness of patient suffering and death (Ferrell & Coyle, 2008; Hildebrandt, 2012; Lindberg, 2012; Quinal, Harford, & Rutledge, 2009) therefore, this framework is useful to the study of oncology nurses. Reed's (1991b) self-transcendence theoretical framework was chosen since it conceptualizes how ways of introspection, and expanding boundaries can help nurses develop maturity and an ability to better cope with unavoidable adversity and suffering.

Compassion Fatigue Theoretical Framework

Figley's compassion fatigue framework (Figley, 1995) comes from the psychotraumatology literature and forms the only established theoretical framework on compassion fatigue to date. Figley's framework centers on the concepts of empathy and exposure. Figley asserts that caregivers (especially therapists) who are exposed to trauma and suffering on a repeated basis, and respond with empathy, are at risk for compassion fatigue. Figley (2002b) conceptually defines compassion fatigue as a state experienced by those helping people in distress; it is an extreme state of tension and preoccupation with the suffering of those being helped to the degree that it is traumatizing for the helper. Compassion fatigue has a sudden and acute onset and develops as a result of the caregivers' exposure to patients' traumatic experiences combined with their empathy for their patients (Figley, 2002b).

For the purposes of this research, Figley's definitions of compassion fatigue and his compassion fatigue theoretical framework were used. Eight variables comprise Figley's framework (1995) of compassion fatigue. Some variables (such as patient exposure, empathetic response, compassion stress, prolonged exposure, traumatic recollections, and life disruptions) are seen as risk factors for compassion fatigue while others (such as sense of achievement/satisfaction, and disengagement) may be considered protective. Although this is a framework originally designed for psychotherapists, oncology nurses also bear witness to patients' feelings of trauma and suffering as they provide holistic care and are theoretically at risk for compassion

fatigue (Aycock & Boyle, 2009; Bush, 2009; Sabo, 2005). A description of the variables which comprise Figley's (1995) framework follows.

1. *Empathic Ability* is the aptitude of the caregiver for noticing the pain of others. This framework suggests that without empathy there will be little if any compassion stress and no compassion fatigue. However, without empathy there will be little, if any, empathic response to the suffering patients. Thus, the ability to empathize is a keystone to both helping others and being vulnerable to the costs of caring.

2. *Empathic Concern* is the motivation to respond to people in need. The ability to be empathic is insufficient unless there is motivation to help others who require the services of a concerned caregiver. With sufficient concern, the empathic caregiver draws upon her or his talent, training, and knowledge to deliver the highest quality of services possible to those who seek their help.

3. *Exposure to the Patient* is experiencing the emotional energy of the suffering of patients through direct exposure to a suffering patients. One of the reasons why those in direct patient care may leave to practice roles in other avenues of their professions is due to the costs of direct exposure to patients. The personal and emotional costs of direct exposure to the suffering of others is high and it is impossible to know how direct exposure to certain situations will affect individual caregivers until they are actually exposed.

4. *Empathic Response* is the extent to which the caregiver makes an effort to reduce the suffering of the sufferer through empathic understanding. This insight into feelings, thoughts, and behaviors of the client is achieved by projecting one's self into the perspective of the patient. In doing so, the caregiver might experience the hurt, fear, anger, or other emotions experienced by the patient. Therein lies both the benefits and the costs of such a powerful therapeutic response.

Exposure to patients, empathetic ability, empathetic concern, and empathetic response are all essential features of the actual act of nursing and what it means to be a nurse. These concepts within Figley's framework provide a direct theoretical link between nursing and compassion fatigue risk. Some items within the Pro-QOL V scale measure compassion fatigue and reflect these four concepts.

Other concepts within Figley's theoretical framework such as compassion stress, prolonged exposure to suffering, traumatic recollections, and life disruptions are all factors that may increase a nurse's risk for compassion fatigue (Figley, 2002b). These concepts are discussed in greater detail below and were assessed in the present study through demographic questions including years of oncology nursing, work setting, degree of life stress, and overall health rating.

5. *Compassion Stress* is the residue of emotional energy from the empathic response to the patient and is the on-going demand for action to relieve the suffering of a patient. Like any stress, with sufficient intensity it can have a negative impact on the human immune system and the quality of

life generally. Together with other factors it can contribute to compassion

fatigue unless the caregiver acts to control compassion stress.

6. *Prolonged Exposure* is the on-going sense of responsibility for the

care of the suffering, over a protracted period of time. The greater the period

of time between breaks, which are specifically viewed as a respite from being

compassionate and empathic toward patients (a break from being a

professional caregiver) the greater the risk for compassion fatigue.

7. *Traumatic Recollections* are memories that trigger the symptoms of

post-traumatic stress disorder and associated reactions, such as depression and

generalized anxiety in the caregiver. These memories may be from the

caregiver's experiences with other, rather demanding or threatening patients

or patients who were especially sad or suffering. Often these memories are

from the personal life of the caregiver. They are memories of traumatic

events. They are events that, when recalled, cause an emotional reaction.

These memories can be provoked by certain types of patients and types of

patient experiences that have a connection to the traumatic events experienced

by the caregiver.

8. *Life Disruptions* are the unexpected changes in schedule, routine,

and managing life responsibilities that demand attention (e.g., illness, changes

in life style, social status, or professional or personal responsibilities).

Normally such disruptions would cause a certain but tolerable level of

distress. However, when combined with the other seven risk factors in this

framework they can increase the chances of the caregiver developing compassion fatigue.

While compassion stress, prolonged exposure to suffering, traumatic recollections, and life disruptions are all factors that may increase a nurse's risk for compassion fatigue in Figley's framework, a sense of achievement/satisfaction and disengagement are factors that may help protect nurses. The first protective factor, sense of achievement/satisfaction, is known to result in "compassion satisfaction' which is a term coined by Figley to describe the process of the development over time of a much stronger sense of strength, self-knowledge, confidence, meaning, spiritual connection, and respect for human resiliency when caring for traumatized and suffering individuals. Compassion satisfaction is the pleasure derived from caregivers (or nurses) being able to do their work well. This was measured directly in this study via the compassion satisfaction subscale in the ProQOL V instrument. Sense of Achievement/Satisfaction is one factor that lowers or prevents compassion stress and is the extent to which the caregiver is satisfied with his or her efforts to help the patient/sufferer. A caregiver with a sense of achievement regarding the delivery of services to the patient demands a conscious, rational effort to recognize where the caregivers' responsibilities end and the patient's responsibilities begin. Sense of achievement prevents compassion stress (Figley, 2002b).

The second protective factor against compassion stress and fatigue in Figley's framework is disengagement. This is a factor that can help protect caregivers (or nurses) when they are unable to obtain the sense of achievement or satisfaction with

their efforts to relieve their patients' suffering. It is described as the extent to which

the caregiver can distance himself or herself from the ongoing misery of the patient.

Self-transcendence (although not mentioned in Figley's framework) is one potential

way in which caregivers (or nurses) could disengage from the suffering of their

patients and participate in an act of self-care. This concept is the focus of Reed's self-

transcendence theoretical framework which also guided this research and is discussed

below.

Disengagement is the extent to which the caregiver can distance himself or

herself from the ongoing misery of the patient between interactions in which services

are being delivered. A caregiver's ability to disengage the patient also demands a

conscious, rational effort to recognize that she or he must "let go" of the thoughts,

feelings, sensations associated with the care of the patient in order to live his or her

own life. Disengagement is the recognition on the part of the caregiver of the

importance of self-care and the need to carry out a deliberate program of self-care. If

compassion stress is permitted to build, despite the caregiver's effort at

disengagement and a sense of satisfaction in the work, the caregiver is at greater risk

of compassion fatigue (Figley, 2002b).

In conclusion, upon reviewing these factors, it is evident that compassion

fatigue may be a phenomenon of which oncology nurses are at risk. Many nurses by

the nature of their jobs are exposed to various degrees of patient illness and suffering

throughout their careers. Having concern for these patients and empathetic ability is

essential to eliciting the empathetic response that is necessary to treat patients

effectively. While some nurses may be able to gain a powerful sense of satisfaction from helping suffering individuals and be able to "disengage" themselves from the suffering at the end of their work day through various means, other nurses may not, and may become at risk for negative consequences such as compassion fatigue. As per Figley's framework, prolonged exposure to suffering, other life demands, or one's own traumatic memories, are all factors that may increase a nurse's risk for compassion fatigue and more study is needed.

Self-transcendence Theory

Reed's self-transcendence nursing theoretical framework will also be used to guide this research. The original purpose of this theory was to enhance understanding of well-being in later adulthood; however the theory has evolved over time and is also applicable to any person whose life situation increases awareness of vulnerability and personal mortality (Reed, 2008). The process of developing this theory was based largely on the method of "deductive reformulation." Using this strategy, theoretic knowledge derived from Frankl (1962), Erikson (1963), Watson (1988) and Rogers (1980) was used. Clinical experience and empirical investigations were also important in the theory development process (Reed, 1991b).

The concept of self-transcendence has roots in psychology and nursing, with some of the first noted references in the literature being made by psychologists, Frankl (1962) and Erikson (1963). In 1962, Frankl, a Nazi concentration camp survivor, discussed self-transcendence in his book entitled "Man's Search for Meaning". In this book, Frankl explores the meaning of life and why some

concentration camp prisoners survived and others did not. Through his experiences, Frankl came to the conclusion that the capacity of self-transcendence was a basic characteristic of being human that may surface at any time in the life span. It was this ability for some prisoners to self-transcend which ultimately resulted in their survival (Frankl, 1962). Frankl argues that we cannot avoid suffering but we can choose how to cope with it, find meaning in it, and move forward with renewed purpose (Frankl, 1962).

Adding to the literature on self-transcendence, Erikson (1963) identified the need of mature adults to transcend personal needs and attend to the needs of others by arguing that generativity attained through helping others is a vital aspect of human development (Erikson, 1963). Another prominent psychologist, Maslow (1969), referenced self-transcendence when he described his hierarchy of needs. Self-transcendence was listed at the top of the pyramid and was described as the ultimate holism or connectedness. Maslow associated self-transcendence with self-actualization (Maslow, 1969). This assumption is congruent with Frankl's conceptualizations of self-transcendence as an innate human characteristic that when actualized, gives purpose and meaning to a person's existence (Reed, 2008).

Although the concept of self-transcendence originated in the field of psychology, there are also links to the origins of this theory within the realm of nursing science stemming from the works of Rogers (1980) and Watson (1988). Self-transcendence theory, within the nursing literature, derives from Rogerian assumptions about pandimensional awareness, which extends beyond physical and

temporal dimensions, and about "continuously fluctuating boundaries" that are

manifested in patterns of increasing complexity and organization (Rogers, 1980).

According to Rogers (1980), self-transcendence is an indicator of unitary patterning

and is a developmental capacity that becomes evident during the experiences of

aging, illness and loss that confront the person with personal mortality and

immortality. In addition to Rogers' work, Watson's research on the theory of human

caring also speaks to transcendence and states that "it is integral to understanding the

essence of the person and the caring-healer relationship of the nurse and patient"

(Watson, 1988). Watson (Watson, 1985, p.7) posits that nursing enables

transcendence through the use of the ten carative factors which form a framework for

understanding nursing as the science of caring. Watson uses the term "carative"

instead of "curative" to distinguish between nursing and medicine. "Whereas *curative*

factors aim at *curing* the patient of disease, *carative* factors aim at the *caring process*

that helps the person attain (or maintain) health or die a peaceful death" (Watson,

1985, p.7). Carative factors include: humanistic altruistic system of values; enabling

and sustaining faith and hope; development of sensitivity to self and others;

developing helping trusting human care relationships; expressing positive and

negative feelings; engaging in creative problem solving caring processes; promoting

transpersonal teaching and learning; attending to supportive, protective, and/or

corrective mental, physical, societal, and spiritual environments; providing human

needs assistance; and being open to existential-phenomenological-spiritual forces

(Watson, 1985, p. 7). Through these ten carative factors, Watson posited that the

nurse ultimately experiences transcendence which leads to the dichotomy between the one caring and the one being cared for, thus resulting in both groups becoming carers and experiencing healing through greater inner strength.

Self-transcendence is conceptually defined in Reed's theory as a characteristic of developmental maturity through which there is an expansion of self-boundaries and orientation toward broadened life perspectives and purpose (Reed, 1991b). Self-transcendence refers to the fluctuations in perceived boundaries that extend persons beyond their immediate and constricted views of self and the world. The fluctuations are pandimensional: outward toward awareness of others and the environment; inward toward greater insight into one's own beliefs, values, and dreams; temporal toward integration of past and future in a way that enhances the relative present; and transpersonal towards awareness of dimensions beyond the typically discernible world (Reed, 2008). Self-transcendence is developed by introspective activities and concerns about the welfare of others and by integrating perceptions of one's past and future to enhance the present (Reed, 1991b). Other central concepts of the theory include wellbeing (or a sense of feeling wholeness and health), and vulnerability (or an awareness of one's personal mortality) (Reed, 1991b).

According to Reed, the theory of self-transcendence may be used by nurses to allow attendance to spiritual and psychosocial expressions in patients confronted with end-of-life issues while maintaining their own personal health and energies. Self-transcendence theory proposes that individuals who face human vulnerability or mortality obtain an increased capacity for self-transcendence and its positive

influence on mental health and well-being. One confronts personal vulnerability through experiences of personal illness, loss, and aging or by accompanying others through these events (Reed, 2009). This theory supports and we hypothesize that self-transcendence will have an inverse relationship to burnout and compassion fatigue since self-transcendence can positively affect health and wellbeing even during experience of illness. Moderating-mediating factors of self-transcendence identified by Reed include personal and contextual variables such as age, gender, life experiences, and social environments. To promote self-transcendence, nurses may use interventions to expand their individual boundaries, such as meditation, self-reflection, visualization, religious expression, counseling, and journaling.

Review of Literature

Compassion Fatigue

The concept of compassion fatigue has deep roots in the nursing profession despite the fact that there has only been limited research done on compassion fatigue in nurses. The actual term *compassion fatigue* was first used in the literature in 1992 by Joinson, a nurse who used the term to describe the phenomenon of nurses being so burned out by the emotional demands of caring for others that it left them too tired to care for themselves (Joinson, 1992). Expanding on Joinson's observations of similar phenomenon in the field of traumatology, Figley (1995) went on to further define compassion fatigue as "the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a significant other; the stress resulting from helping or wanting to help a traumatized or suffering individual" (p.

7). Figley is a psychologist whose initial work on compassion fatigue grew from his counseling of nurses and other military personnel who served in Vietnam (Figley, 2002a). Figley first studied the consequences of helping the traumatized in 1971 when he conducted his first interview with a Vietnam War veteran nurse named "Doc" who served with the Marine Corp between 1969 and 1970. Doc revealed in his sessions with Figley that his memories of the war were dominated by guilt and regrets associated with not saving, not helping, or not doing enough for his patients. According to Figley, these burdensome memories were associated with psychological problems that would later be diagnosed as war-related Post-traumatic Stress Disorder (PTSD).

In 1980, when the Diagnostic and Statistical Manual of Mental Disorders [DSM III] (American Psychiatric Association, 1980) was published, it contained for the first time the diagnosis of PTSD. At that time the DSM had a limited view of what could cause PTSD, defining it as developing from an experience that anyone would find traumatic, leaving no room for individual perception or experience of an event. This definition was expanded when the DSM III was revised in 1987, and the DSM IV (American Psychological Association, 1994) provides even broader criteria. Included in the 1994 description of the diagnosis was the provision that one could be traumatized both from being in harm's way and/or by bearing the distress of others who are in harm's way. Potential victims of PTSD included family and close friends of the suffering as well as professionals involved in helping the suffering; including those suffering from chronic illnesses such as cancer (Figley, 2002a). The expanded

diagnostic criteria for PTSD highlights the potential risk for those working with patients suffering from cancer, which is recognized as a chronic illness by the Centers for Disease Control and Prevention (2010).

Within the past two decades, the concept of compassion fatigue has been used to describe the emotional aftermath experienced by caregivers providing ongoing care for suffering and traumatized patients (Boyle, 2011; Figley, 2002b). In addition to Figley's original definition of compassion fatigue, other definitions exist in the literature. One such example is the definition used for a study conducted by Boscarino, Figley, and Adams (2004), in which Figley's original definition of compassion fatigue (1995) had been revised to be defined as "the reduced capacity or interest in being empathic or bearing the suffering of clients; it is the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a person". Another example of a definition of compassion fatigue which exists in the literature is that of Pfifferling and Gilley (2000) who define compassion fatigue as "a form of burnout affecting those in helping professions which manifests itself as physical, emotional, and spiritual exhaustion". Figley, in his 2002b work, also identified compassion fatigue as a form of burnout. However, others have suggested differences between compassion fatigue and burnout (Abendroth, 2011; Alkema, Linton, & Davies, 2008; Boyle, 2011; Bush, 2009; Sabo, 2011). Despite minor differences, all definitions have in common that compassion fatigue causes negative effects on those in helping professions.

In addition to compassion fatigue, the terms secondary traumatic stress (Figley, 1983, 1985, 1989; Quinal, Harford, & Rutledge, 2009; Stamm, 1995) and vicarious traumatization (Sabo, 2008; Sinclair & Hamill, 2007) have also been used to describe the negative effects on caregivers who provide care to those who have been traumatized. Secondary traumatic stress is defined as "the presence of post-traumatic stress disorder symptoms in a caregiver (such as intrusive imagery, avoidance, hyperarousal, distressing emotions, cognitive changes, and functional impairment) which are more likely tied to the patient's experience rather than the caregiver (Figley, 1995). Vicarious traumatization is defined as the negative transformation in the therapist's (or other trauma worker's) inner experience resulting from empathic engagement with clients' trauma material which results in the permanent disruption of the individual's cognitive schema (Pearlman & Saakvitne, 1995, p.151). According to Figley (1995, p.15) the terms compassion fatigue and secondary traumatic stress can be used synonymously. Stamm (2009), however, states that compassion fatigue can actually be broken into two parts, with the first being burnout and the second being secondary traumatic stress (implying that secondary traumatic stress is not exactly synonymous with compassion fatigue and that compassion fatigue is actually more complex than secondary traumatic stress). Figley's statement, however, is more in line with the current state of the literature which often has compassion fatigue and secondary traumatic stress being used synonymously (Figley, 2002a; Sabo, 2008; Quinal, Harford, & Rutledge, 2009; Simon, Pryce, Roff, & Klemmack, 2005).

Although much of Figley's work has been done with therapists, he states that his work with other caregiver populations (such as nurses and emergency workers) has shown that they actually prefer to use the term compassion fatigue to describe this phenomenon due to a perceived negative, more clinical connotation with the terms secondary traumatic stress or vicarious traumatization (Figley, 1995, p.15). This would seem to be an accurate assessment in the oncology literature as currently the majority of the published literature uses the term compassion fatigue (Aycock & Boyle, 2009; Bush, 2009, McMullen, 2007; Perry, 2008; Perry et al., 2011; Potter et al., 2010; Sabo, 2005, 2008; Welsh, 1999; Yoder, 2010) while very few use the term secondary traumatic stress (Quinal et al., 2009; Simon et al., 2005). Other terms used in the literature to describe phenomena similar to compassion fatigue in oncology populations include cumulative or unresolved grief which is often seen as a precursor to compassion fatigue (Hildebrandt, 2012; Lindberg, 2012).

Compassion Fatigue in Nursing Populations

Compassion fatigue has been studied in nurses and nursing specialties including hospice nurses (Abendroth & Flanery, 2006), pediatric nurses (Maytum, Heiman, & Garwick, 2004), public health nurses caring for victims of natural disasters (Frank & Adkinson, 2007; Frank & Karioth, 2006), nurse-daughters caring for elderly parents (Ward-Griffin, St-Amant, & Brown, 2011), emergency nurses (Hooper et al., 2010), nurses in a Magnet hospital (Yoder, 2010) and oncology nurses (McMullen, 2007; Quinal, Harford, & Rutledge, 2009; Perry, 2008; Perry et al., 2011; Potter et al., 2010; Potter et al., 2013). Overall findings from these studies show that

compassion fatigue does exist in nurses, and that nurses are at risk for compassion fatigue in varying degrees in settings where they are exposed to suffering and traumatized people.

In a 2006 study conducted by Abendroth and Flannery, 216 hospice nurses from 22 hospices across the state of Florida were studied in order to investigate the prevalence of compassion fatigue within this population, and the relationships between hospice nurse characteristics and compassion fatigue risk. A quantitative, descriptive design using cross sectional data and descriptive and inferential statistics was used. Factors associated with the risk of compassion fatigue were investigated, namely stress, trauma, anxiety, life demands, and excessive empathy. Linear regression analysis was used to examine the relationship between compassion fatigue and demographic and work factors (Abendroth & Flannery, 2006). Participants in this study were surveyed using the Professional Quality of Life Compassion Satisfaction and Fatigue Subscales: Revision-III (Stamm, 1998), and a questionnaire developed by the researchers to measure demographic, work, and health characteristics. Findings from this study showed that 78% (n=168) of the sample was at moderate to high risk for compassion fatigue, with approximately 26% (n=56) in the high-risk category, as evidenced by a score of 18 or greater (Abendroth & Flannery, 2006). Trauma, anxiety, life demands, and excessive empathy (leading to blurred professional boundaries where nurses were unable to maintain separation between their work and home lives) were key determinants of compassion fatigue risk in the regression model, which accounted for 91 % (p< .001) of the variance in compassion fatigue

risk. This study's findings support Figley's compassion fatigue theoretical framework in that prolonged exposure to suffering, other life demands, or one's own traumatic memories are all factors that may increase a nurse's risk for compassion fatigue (Figley, 2002b).

In another study of compassion fatigue conducted by Maytum, Heiman, and Garwick (2004), pediatric nurses who care for children with chronic conditions were studied in order to identify the triggers and coping strategies that they used to manage compassion fatigue and prevent burnout. In this qualitative, descriptive study, 20 experienced nurses who cared for children with chronic conditions were interviewed about their experiences with compassion fatigue and burnout. The findings indicated that compassion fatigue was commonly yet episodically experienced by the nurses caring for children with chronic conditions and their families (Maytum, Heiman, & Garwick, 2004), therefore supporting that compassion fatigue is not permanent. Study participants also reported that insight and experience helped them develop short and long-term coping strategies to minimize and manage compassion fatigue episodes and prevent burnout (Maytum, Heiman, & Garwick, 2004).

In addition to those in hospice and pediatric specialties, public health nurses responding to those involved in natural disasters have also experienced compassion fatigue (Frank & Adkinson, 2007; Frank & Karioth, 2006). Frank and Karioth (2006) studied a sample of nurses who provided care for the victims of the hurricanes which devastated Florida in 2004. In this study, 117 public health nurses, aged 24 to 66, were surveyed to measure their risk for compassion fatigue using the Compassion

Fatigue Self-Test (Stamm & Varra, 1993) and a demographic questionnaire which assessed work experience, personal and family circumstances. This study took place 3 to 4 months post hurricane, and respondents were asked to complete the study questionnaires regarding their feelings during the time when they were deployed to provide care and again at 3 to 4 months post hurricane deployment. Results of this study revealed that 76% were at low risk for compassion fatigue during their deployment, while 24% were at moderate to high risk. A total of 66% (n=77) of the 117 nurses completed the 3 to 4 month follow-up Compassion Fatigue Self-Test. Out of those 77 nurses, 64% were found to be at low risk while 18% were found to be at moderate to high risk. According to the researchers, the findings that the majority of the nurses had low risk for compassion fatigue in both phases of the study may be because the majority of the nurses were deployed for only a short period of time (2 weeks), and this experience was their first time providing assistance to disaster victims. The variables which correlated with an increased risk for compassion fatigue during the hurricane assistance and post hurricane follow up included a sense of personal, family, and normal job disruption; preferences to work less time than they did; and the actual number of hours worked (Frank & Karioth, 2006). These variables could be classified as "life demands". Abendroth and Flannery (2006) found similar results in their study of 216 hospice nurses where life demands were also listed as a key determinant of compassion fatigue risk.

In a secondary analysis, Frank and Adkinson (2007) used the same sample database as Frank and Karioth (2006) to examine the level of risk for compassion

fatigue in a subgroup of 55 female nurses, aged 40 to 60 years old. Researchers

re-examined this data from a developmental perspective using developmental theory.

Erikson's (1963) and Sheehy's (1976) theories of human development were the

theoretical frameworks that guided this study. These frameworks suggest that middle

aged women may possess developmental qualities that allow them to be more capable

of handling the magnitude and quality of stress resulting from a hurricane disaster as

well as being at lower risk for compassion fatigue. Results of this study supported the

authors' hypothesis and the developmental theories. Findings were similar to the

results found in the sample of all 117 nurses studied by Frank and Karioth (2006), in

that the majority of the participants (76%) were at low risk for experiencing

compassion fatigue while assisting hurricane victims. These results are further

supported by a study by Maytum, Heiman, and Garwick (2004) who found that

insight and experience helped participants in their study to develop short and long-

term coping strategies to minimize and manage compassion fatigue episodes.

Although hurricanes and other natural disasters are considered to be traumatic,

the authors state that their findings may be due to several factors, namely, that most

of the nurses were deployed once for a short time period of approximately 2 weeks

and for the majority of nurses, it was their first time assisting victims of a hurricane or

natural disaster (Frank & Adkinson, 2007). As compassion fatigue is a buildup of

compassion stress over time, most nurses would probably have had to spend more

time assisting victims in order to experience compassion fatigue. Another possible

explanation for the lower than predicted risk of compassion fatigue, is that the

sample consisted of middle aged women, who may not have had small children or been primary caregivers to anyone else at home during that period, thereby reducing the cummulative buildup of stress from additional life stressors at home. Both Frank and Karioth (2006) and Frank and Adkinson (2007) found that 24% to 27% of respondents did show some presence of compassion fatigue, which can be seen as a risk factor in this population of nursing. Limitations of both the Frank and Karioth (2006) and the Frank and Adkinson (2007) studies include small sample sizes, portions of the study included recall which may have introduced a chance for bias, and truly traumatized compassion fatigued nurses may have chosen not to participate in the studies because they did not want to be reminded of the events that occurred during their deployment (Frank & Adkinson, 2007; Frank & Karioth, 2006). In summary, these studies identified that 24-27% of the nurses who participated were at risk for some level of compassion fatigue, demonstrating that there is risk for compassion fatigue in nurses who respond to large scale human and natural disasters and witness trauma.

Frank and Adkinson (2007) attributed low levels of compassion fatigue in their sample were due to the fact that participants were mostly middle aged female nurses, who may not have had "confounding" stressors such as small children or primary caregiving responsibilities at home during the period in which they were exposed. Ward-Griffin, St-Amant, & Brown (2011) in their study of compassion fatigue found double duty caregiving (ie, nurse-daughters who were caring for elderly parents) to be a factor contributing to compassion fatigue. "Double duty caregiving"

was defined in this study as the provision of care to elderly relatives by practicing nurses. Using qualitative data from two studies of Canadian double duty caregivers, 20 female registered nurses were identified and interviewed. The themes of context, characteristics, and consequences emerged from the findings, and results suggested that being both a nurse and a daughter lead to the blurring of boundaries between professional and personal care work, which ultimately predisposed the caregivers studied to compassion fatigue (Ward-Griffin, St-Amant, & Brown, 2011).

In conclusion, compassion fatigue risk for nurses in varying situations in which they are exposed to individuals' suffering is supported by research studies (Abendroth & Flannery, 2006; Frank & Adkinson, 2007; Frank & Karioth, 2006; Hooper et al., 2010; Maytum, Heiman, & Garwick, 2004; Ward-Griffin, St-Amant, & Brown, 2011; Yoder, 2010) and reviews of the literature (Abbendroth, 2011; Boyle, 2011; Coetzee & Klopper, 2010; Sabo, 2011; Showalter, 2010). Factors contributing to compassion fatigue risk in the literature included: age (Frank & Adkinson, 2007); length of exposure to trauma and suffering (Frank & Adkinson, 2007; Frank & Karioth, 2006); having "confounding" stressors such as small children or primary caregiving responsibilities at home during the period in which they were exposed (Frank & Adkinson, 2007); "double duty caregiving" for example nurse-daughters who were caring for elderly parents (Ward-Griffin, St-Amant, & Brown, 2011).

Compassion Fatigue in Oncology

It is only within the past decade, that researchers have focused on compassion fatigue in the oncology nursing population (Hooper et al., 2010; McMullen, 2007;

Quinal, Harford, & Rutledge, 2009; Perry, 2008; Perry et al., 2011; Potter et al., 2010;

Potter et al., 2013; Yoder, 2010). The first such study, a quantitative pilot study, was

conducted by McMullen (2007) who employed a descriptive, correlational design to

examine the ability of 38 oncology nurses to recognize compassion fatigue and

identify the organizational support systems available to oncology nurses. The study

sample consisted of 38 inpatient and outpatient oncology nurses practicing at

community-based hospitals. Study participants completed the Professional Quality of

Life Scale (ProQOL): Compassion Satisfaction, Burnout, and Compassion

Fatigue/Secondary Trauma Scale R-III (Stamm, 1998). The Pro-QOL is an instrument

composed of three subscales measuring compassion satisfaction, burnout, and

compassion fatigue.

Results of McMullen's (2007) study revealed that while less than half (47%,

n=18) of the nurses surveyed had heard of the term compassion fatigue in the past,

23% (n=4) of the outpatient and 19% (n=4) of the inpatient oncology nurses showed

possible presence of compassion fatigue in their responses by a score of 17 or above

on the Pro-QOL compassion fatigue subscale. Results of the burnout subscale in this

study revealed 47% (n=10) of the inpatient and 11% (n=2) of the outpatient nurses

were at high risk for burnout. The compassion satisfaction subscale indicated that

99% (n=37) of the oncology nurses surveyed derived pleasure from being able to do a

good job (McMullen, 2007). Organizational support systems identified as being

available to oncology nurses in this study included religious counselors, professional

medical counselors, and informal peer support. All nurses (100%, n=38) reported

"sometimes" or "always" using informal support by peers while only 8% (n=3) sought the help of professional counselors. Limitations of this study included: its small sample size; use of a convenience sample; and that the survey was conducted at a social function dinner for oncology nurses.

In a second quantitative research study focusing on compassion fatigue in the oncology population, Potter et al. (2010) studied a sample comprised of 153 oncology healthcare providers including registered nurses (RN's), medical assistants, and radiology technicians. Study participants were surveyed using the ProQOL Revision IV instrument (Stamm, 2009). Similar to the earlier version of this instrument used by McMullen (2007), the ProQOL Revision IV (Stamm, 2009) also measures compassion fatigue, compassion satisfaction, and burnout. This descriptive, cross-sectional survey was conducted in 5 inpatient oncology units, 4 outpatient chemotherapy infusion areas, and 3 physician practice areas within one Midwestern United States cancer center. The purpose of this study was to conduct a quality improvement evaluation exploring the prevalence of burnout and compassion fatigue among oncology healthcare providers working within a large oncology medical center. The majority of respondents (86%; n=132) were nurses. ProQOL R-IV subscales were compared with the study demographic variables, including the participants' workplace setting (inpatient versus outpatient), years of healthcare experience, years of oncology experience, age, and level of education in order to come up with the participants' level of risk. Overall results for the total sample were that 36% (n=55) of the sample was at high risk for compassion fatigue, and 38%

(n=59) was at high risk for burnout, while only 17% (n=26) had high risk compassion satisfaction scores. Findings were statistically significant for the relationship between compassion satisfaction and work setting (p = 0.008). Staff working on inpatient nursing units had the largest percentage of high risk compassion satisfaction scores while the percentages of high risk scores for compassion fatigue were relatively equal among inpatient and outpatient staff (37% and 35% respectively). Although 44% of inpatient staff scored at high risk for burnout compared to 33% for outpatient staff, the difference was not statistically significant. No statistically significant relationships were found based on other demographic variables such as years of general healthcare experience, years of oncology experience, age and education level. However, trends were found (Potter et al., 2010) which included; staff with 11–20 years of oncology experience had the highest percentage of high-risk scores for all three ProQOL R-IV subscales and that there was an increased risk for burnout and compassion fatigue among nurses with higher levels of education. Nurses with bachelor's degrees had the highest percentage of high risk scores for compassion fatigue; and nurses with advanced degrees had the highest percentage of high-risk scores for burnout. Nurses with associate's degrees had the highest percent of low compassion satisfaction scores. Results of this study further demonstrate that compassion fatigue and burnout are prevalent among oncology nurses. However, gaps in the literature still remain as to what demographic variables contribute to compassion fatigue and burnout. Further research is warranted and the researchers suggested that a future quantitative study consisting of a random sample of oncology nurses might be helpful in adding to this

knowledge. The researchers also state that an aim of this study was to assess the work environment to gain support for the development of a program to treat compassion fatigue in nurses (Potter et al., 2010).

Potter, Deshields, Berger, Clarke, Olsen, and Chen (2013) conducted a descriptive pilot study to evaluate a resiliency program designed to reduce compassion fatigue among oncology nurses. The study took place at a National Cancer Institute-designated comprehensive cancer center in the Midwestern United States and included a sample of 13 oncology nurses employed in their outpatient infusion center. As part of this study, the nurses attended a five week program involving five 90 minute sessions on compassion fatigue resiliency. A pre-and post-test design was used. The Professional Quality of Life (ProQOL) R-IV Scale, Maslach Burnout Inventory-Human Services Survey, the Impact of Event Scale-Revised (IES-R), and the Nursing Job Satisfaction Scale were used in this study. Findings included that long term benefits were realized from the program, more specifically, that compassion fatigue scores on the ProQOL R-IV declined immediately after the program. They remained low at three months, and then dropped again at 6 months with a statistically significant mean difference compared with baseline. Average IES-R total scores improved significantly for each of the three post intervention time points. Participants received strategies for managing stress at work and home and evaluated the program positively with respect to their ability to apply and benefit from resiliency techniques (Potter et al., 2013). This is the first reported study in the literature to show benefits gained from a compassion fatigue intervention

program within the oncology nursing population. Limitations of this study included its small sample size, its self-selected sample, and use of self-report whereby those who were most affected by compassion fatigue may not have chosen to participate. Time demands of the program with multiple sessions may have also been a barrier for those staff feeling most overwhelmed. According to the researchers, compassion fatigue is a prevalent condition among oncology healthcare providers, and a clear need exists for hospitals to implement effective programs to prepare staff to better recognize, prevent, and manage compassion fatigue.

Also adding knowledge on compassion fatigue in oncology nursing are two recent mixed nursing population studies (Hooper, Craig, Janvrin, Wetsel & Reimels, 2010; Yoder, 2010). In the study by Hooper and colleagues (2010), the prevalence of compassion satisfaction, burnout, and compassion fatigue was explored among emergency nurses (n=49) and three other selected inpatient specialties of oncology (n=12), nephrology (n=16), and intensive care (n=32). Nurses in this study participated in a cross-sectional survey. The study sample included 109 volunteer participants who completed a sociodemographic profile and the Professional Quality of Life R-IV: Compassion Satisfaction and Fatigue Subscales. Subscale scores were summed for compassion satisfaction, burnout, and compassion fatigue. Emergency nurses were compared with nurses in the other specialties. Results were that approximately 82% of emergency nurses had moderate to high levels of burnout, and nearly 86% had moderate to high levels of compassion fatigue. Differences between emergency nurses and those working in the three other specialty areas of oncology,

nephrology, and intensive care, did not reach the level of statistical significance on

the subscales for compassion satisfaction, burnout, or compassion fatigue. The scores

of emergency nurses were lower for compassion satisfaction, while intensive care

nurses demonstrated a higher risk for burnout, and the oncology nurses had higher

compassion fatigue. The researchers found that the hypothesis in this study, that

emergency nurses were at greater risk for compassion fatigue and burnout, was not

supported. Nurses, regardless of specialty, scored at risk. Future research should

include the use of a larger sample size. Further research which aims to promote a

better understanding of the concepts of compassion satisfaction, burnout, and

compassion fatigue, through recognizing the signs and symptoms, and identifying

best practice interventions is needed (Hooper et al., 2010).

     A quantitative study was conducted by Yoder (2010), to describe the

prevalence of compassion fatigue among a broad spectrum of nurses, and investigate

the situations that lead to compassion fatigue as well as nurses' methods of coping. A

sample of 102 nurses (emergency, n=23; home care, n=9; ICU, n=16; medical-

surgical, n=31; oncology, n=13; and progressive care unit, n=10) from one Magnet

hospital in the Midwest were studied. The study was a mixed methods design

consisting of three parts: a demographic section designed by the researcher; a

quantitative section which included the Professional Quality of Life Scale (ProQOL

R-IV Stamm, 2005); and a qualitative section which included two questions on

compassion fatigue which invited a narrative response (Maytum et al., 2004). The

Professional Quality of Life Scale measured compassion fatigue, compassion

satisfaction, and burnout and narrative questions elicited trigger situations and coping strategies. Compassion fatigue scores were significantly different between nurses who worked 8- or 12-hour shifts, with nurses working 8 hour shifts more at risk. Fifteen percent of the participants (n=15) had scores indicating risk for compassion fatigue. Compassion fatigue scores in the oncology nursing participants (n=13) had a mean of 11.4 (sd=6.2). There were statistically significant differences in compassion satisfaction, depending on the unit worked and time as a nurse (mean compassion satisfaction score for oncology nurses=40.5, sd=4.6). The most common category of trigger situations was "caring for the patient". Work-related coping strategies were identified with the most common being a change in personal engagement with the patient or situation. Personal coping strategies were identified, with the most common being maintaining a balanced life outside of work. Limitations of this research included lack of demographic data to compare the nurses who returned the questionnaire with the total hospital RN population. There may have been differences within these groups. This study was also limited to one community hospital and may not reflect the experience of nurses in other community regions. Based on this research, compassion fatigue was a phenomenon present in the small community hospital studied. Nurses were able to identify a variety of work-related and personal trigger situations and coping strategies. The researcher concludes that being aware of these triggers and coping strategies may help the nurses and their managers deal with the stressors which nurses face on a daily basis.

In addition to the quantitative studies, several qualitative studies examining compassion fatigue within the oncology nursing population were found. Perry (2008) conducted a phenomenological study designed to explore the lived experience of exemplary oncology nurses and what facilitates their avoidance of compassion fatigue. The sample for this study was purposive and consisted of seven oncology nurses who were identified by their colleagues as exemplary caregivers. Data collection occurred through semi-structured conversations that were transcribed and analyzed for recurring themes. The three primary themes that arose from the data were experiencing moments of connection with patients, making moments matter with patients, and having energizing moments with patients. Oncology nurses whose lived experiences encompassed these three themes were found to feel they were able to avoid compassion fatigue (Perry, 2008). One potential limitation of this study includes inaccurate responses by nurses, whereas no method was described to assess the participants' understanding of the meaning of the term compassion fatigue nor was it measured. Based on the results of McMullen's (2007) earlier study which showed that 47% of oncology nurse respondents sampled had never heard of the term compassion fatigue, it is possible that some respondents in this study may also have never heard of the term compassion fatigue and may not have fully understood it. Other limitations include a potential for altered/biased responses based on the fact that study participants were identified by their peers on the basis of being "exemplary"; they may have been hesitant to admit to feelings of compassion fatigue which can have a negative connotation to some persons.

Perry, Toffner, Merrick, and Dalton (2011), conducted a descriptive exploratory study to investigate the experience of compassion fatigue in Canadian clinical oncology registered nurses. Study participants included nineteen nurses recruited through advertisement in the Canadian Oncology Nursing Journal. The advertisement directed potential participants to a university-based online website developed for this study, whereby participants completed a questionnaire and wrote a narrative describing an experience they had with compassion fatigue. Five themes emerged: 1) defining compassion fatigue; 2) causes of compassion fatigue; 3) factors that worsen compassion fatigue; 4) factors that lessen compassion fatigue; and 5) outcomes of compassion fatigue. Results revealed that participants had limited knowledge about compassion fatigue, a perceived lack of external support, and that insufficient time to provide high quality care may precipitate compassion fatigue. Gaps between the quality of care which nurses wanted to provide and what they were able to do, compounded by coexisting physical and emotional stress, worsened compassion fatigue. Colleague support, work-life balance, connecting with others, acknowledgement of compassion fatigue, maturity, and experience all were reported to lessen compassion fatigue. As a result of compassion fatigue, respondents reported profound fatigue of mind and body, negative effects on personal relationships, and considering leaving the specialty (Perry et al., 2011).

While not a study of compassion fatigue and burnout, it is also important to discuss findings from a study of secondary traumatic stress in oncology staff conducted by Quinal, Harford, and Rutledge (2009) in this section. Their study is the

first study to document the prevalence of secondary traumatic stress among oncology staff. Whereas Figley (1995) states secondary traumatic stress and compassion fatigue are two terms which can be used interchangeably, findings from this study are included in this review. This correlational descriptive study sought to examine the prevalence of secondary traumatic stress among oncology staff at a 500-bed Magnet hospital, as well as assess for associations between demographic characteristics and specific stress-reduction activities. Forty-three staff members including nurses, nursing assistants, and unit secretaries from an inpatient oncology unit completed mailed surveys which included the 17 item Secondary Traumatic Stress Scale (Bride, 2004) which assessed the frequency of intrusion, avoidance, and arousal symptoms associated with secondary traumatic stress. Presence of secondary traumatic stress among oncology staff ranged from 16% to 37%. The most common symptoms reported were difficulty sleeping, intrusive thoughts about patients, and irritability while the least common symptoms were avoidance of people, places, and things and disturbing dreams about patients. Current use of massage was significantly predictive of not having secondary traumatic stress while staff having an ethnicity other than White or Hispanic was related to having secondary traumatic stress. No significant positive or negative associations were found between secondary traumatic stress for shift worked, position, or being a member of a professional organization. Results of this study were then correlated with risk for post-traumatic stress disorder (PTSD) and compared by the researchers to a previous study of secondary traumatic stress in emergency room nurses (Dominguez-Gomez & Rutledge, 2009). In this comparison,

oncology staff were found to have less secondary traumatic stress than emergency workers and half as much (16% versus 33%) risk for PTSD. Reasons for this may include the difference in the type of trauma and exposure (time with patients) witnessed by nurses in an emergency department versus oncology unit, as well as documented personality types of oncology nurses whereby most have been typed as considering helping others both a responsibility and a pleasure (Bean & Holcombe, 1993).

While no further research exploring secondary traumatic stress in oncology nurses could be found, one study of secondary traumatic stress in oncology social workers, conducted by Simon, Pryce, Roff, and Klemmack (2005), adds to the knowledge of secondary traumatic stress in oncology caregiver populations. This exploratory study sought to examine secondary traumatic stress (compassion fatigue) in a sample of 21 members of the Association of Oncology Social Workers. Results of this study revealed that oncology social workers also experienced compassion fatigue and burnout and that these variables were inversely related to compassion satisfaction, suggesting compassion satisfaction as a potential protective factor for compassion fatigue and care of oncology patients as a potential risk factor (Simon, Pryce, Roff, & Klemmack, 2005).

In conclusion, the results of studies done on compassion fatigue in various nursing populations indicate that nurses are at risk for compassion fatigue in situations in which they work with traumatized or suffering individuals particularly over time (Abendroth & Flannery, 2006; Frank & Adkinson, 2007; Frank & Karioth,

2006**;** Hooper et al., 2010; Maytum, Heiman, & Garwick, 2004; McMullen, 2007; Quinal, Harford, & Rutledge, 2009; Perry, 2008; Perry et al., 2011; Potter et al., 2010; Potter et al., 2013; Ward-Griffin, St-Amant, & Brown, 2011; Yoder, 2010). Within the past decade, several studies in the literature have demonstrated that oncology nurses are at risk for compassion fatigue (Hooper et al., 2010; McMullen, 2007; Quinal, Harford, & Rutledge, 2009; Perry, 2008; Perry et al., 2011; Potter et al., 2010; Potter et al., 2013; Yoder, 2010) and there is a need for increased education, awareness, and intervention within this population. Further, results from the Abendroth and Flannery (2006) study of hospice nurses are also useful to understand this risk, as hospice nurses are very similar to oncology nurses in that they both care for patients at end of life. Hospice nurses differ, however, from oncology nurses in that end of life is their main focus, while oncology nurses must work with a mixture of patients at end of life, including those continuing to actively seek cure. This can be extremely stressful for oncology nurses as they tend to empathize with patients' losses, resulting in a personal sense of futility or failure in their care (Potter et al., 2010). Studies show that hospice nurses may have more resources available to them to help deal with working with patients at end of life such as a formal program of staff support in the workplace (Bram & Katz, 1989) and specific training in death, bereavement, and spiritual care (Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008). Also unique to hospice nurses is that part of the hospice philosophy is the patient's acceptance of imminent death and a willingness to forego aggressive treatment for comfort care. Oncology nurses, on the other hand, often encounter

patients at end of life who have not yet come to that level of acceptance and may still be pursuing active, aggressive treatment despite progression of a terminal illness and futility of treatment. This has the potential to put oncology nurses in situations that may result in increased risk for compassion fatigue.

Current studies have suggested that the type of emotion-evoking work that oncology nurses do puts them at risk for conditions such as compassion fatigue (Hooper et al., 2010; McMullen, 2007; Perry, 2008; Perry et al, 2011; Potter et al., 2010; Potter et al., 2013; Quinal, Harford, & Rutledge, 2009; Yoder, 2010), and further research is warranted due to gaps, small sample sizes, and use of non-probability samples in previous studies. Gaps in the literature include identifying the incidence of compassion fatigue in oncology nurses and risk factors specific to this population, as well as short and long term consequences and sequella of compassion fatigue. Most of the current studies in the literature used small sample sizes and were conducted in one hospital or geographic region (such as the mid-west), which decreases the ability to generalize findings to all oncology nurses in the United States. There are gaps in the literature regarding regional variations. Results from further study of compassion fatigue in oncology nurses would add to the literature on adverse emotional effects and challenges of oncology nursing. While some research has been done (Perry, 2008; Potter et al., 2013), gaps in the nursing literature still exist regarding a consensus of what factors may help prevent or protect against compassion fatigue as well as establishing a standard evidenced-based plan for treatment. Further

research into these areas will be helpful for retention and optimizing the function of quality oncology nursing staff (Hildebrandt, 2012).

Burnout

Burnout is defined as a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do people work of some kind (Maslach & Jackson, 1982, p.1). Although the concepts of compassion fatigue and burnout are closely related and sometimes ambiguously defined, definitions of burnout more often point to environmental stressors whereas definitions of compassion fatigue address the relational nature of the condition (Potter et al., 2010). The actual term "burnout" originated in the 1940s as a word to describe the point at which a jet or rocket engine stops operating (Felton, 1998). The word burnout was later applied to humans in the 1970s by the psychiatrist Herbert Freudenberger (1974) who used the term to describe the status of overworked volunteers in free mental health clinics (Freudenberger, 1974). At the time, Freudenberger compared the loss of idealism in these volunteers to a building, once a vital structure that had burned out. Burnout first emerged as a social problem, not a scholarly construct (Maslach & Schaufeli, 1993). The first few articles about burnout appeared in the mid-1970s in the United States (Freudenberger, 1974, 1975; Maslach, 1978). The significance of these first articles was that they provided an initial description of the burnout phenomenon, gave it its name, and showed that it was not an aberrant response by a few deviant people but was actually more common (Maslach & Schaufeli, 1993).

Burnout was first defined by Freudenberger (1974) as "the extinction of motivation or incentive, especially where one's devotion to a cause or relationship fails to produce the desired results". Edelwich and Brodsky (1980) then went on to define burnout as a progressive loss of idealism, energy, and purpose experienced by people in the helping professions as a result of the conditions of their work. Maslach and Jackson (1982, p.1) were the next to describe burnout and defined it as a "syndrome of emotional exhaustion, depersonalization, and reduced sense of accomplishment that can occur among individuals who do "people work" of some kind".

According to Maslach and Jackson (1982), there are three main aspects of the syndrome of burnout. The first aspect, emotional exhaustion, can be described as once emotional resources are depleted; workers feel they are no longer able to give of themselves at a psychological level. Another aspect of the burnout syndrome is the development of depersonalization (i.e., negative, cynical attitudes and feelings about one's patients). This callous or even dehumanized perception of others can lead staff members to view their patients as somehow deserving of their troubles (Maslach & Jackson, 1982). Depersonalization can be used as a coping mechanism whereby people who are burnt out attempt to staunch the depletion of emotional energy by treating others as objects or numbers rather than as people. The third aspect of the burnout syndrome, reduced personal accomplishment, refers to the tendency to evaluate oneself negatively, particularly with regard to one's work with patients.

Workers may feel unhappy about themselves and dissatisfied with their

accomplishments on the job.

Although burnout has been linked to concepts such as compassion fatigue and

stress in the literature, it is important to note that they are not synonymous and clear

distinctions can be made (Alkema, Linton, & Davies, 2008). Burnout is typically seen

as a gradual wearing down of workers who over time feel overwhelmed by their work

and incapable of effecting positive change. Making the distinction between

compassion fatigue which has a sudden and acute onset and develops as a result of

the caregivers' exposure to patients' traumatic experiences combined with their

empathy for their patients (Figley, 2002b), burnout is usually a result of cumulative

effects of job stress that is often predictable and can be relieved by taking a vacation

or changing jobs (Schwan, 1998). This is in direct contrast to compassion fatigue

where workaholic patterns are often seen in caregivers who may actually choose to

work more to relieve a patient's suffering at the expense of their own self-care

(Tunajek, 2006, Pfifferling & Gilley, 2000).

Possible causes of burnout cited in the literature include a lack of resources, a

lack of technical ability, insufficient training, difficulty in coping with patient

problems, excessive workloads, and existing barriers in the organization (Barrett &

Yates, 2002; Chung & Corbett, 1998; Maslach, 1982; Maslach, Schaufeli, & Leiter,

2001). The consequences of burnout are potentially very serious for workers, their

clients, and the larger institutions in which they interact. Burnout has been seen to be

a factor in job turnover, absenteeism, and low morale (Barrett & Yates, 2002; Keidel,

2002; Maslach, 1982; Maslach, Schaufeli, & Leiter, 2001; Medland et al., 2004).

Furthermore, burnout seems to be correlated with various self-reported indexes of

personal dysfunction, including physical exhaustion, insomnia, increased use of

alcohol and drugs, and marital and family problems (Kahill, 1988). Research findings

suggest that burnout can lead to deterioration in the quality of care or service

provided by the staff (Maslach, 2003).

Burnout in Nursing

The rates of stress and burnout among nurses have been found to be higher

than the rates among other healthcare professionals (Lopez-Castillo, Gurpegui,

Ayuso-Mateos, Luna, & Catalan, 1999), with approximately 40% of hospital nurses

having burnout levels that are higher than the norm for other healthcare workers

(Aiken, Clarke, Sloane, Sochalski, & Silber, 2001). Many studies indicate that the

prevalence of burnout is higher among nurses who work in especially stressful

settings, such as oncology (Barrett & Yates, 2002; Bram & Katz, 1989; Dorz et al.,

2003; Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008; Malach-Pines, 2000;

Medland et al., 2004; Quattrin et al., 2006), mental health (Jenkins & Elliot, 2004),

and critical care (Poncet, Toullic, & Papazian, 2007).

The concept of burnout has been well researched in the oncology nursing

literature and oncology nurses have been found to have higher levels of burnout than

other types of nurses (Bram & Katz, 1989; Dorz et al., 2003; Hunnibell, Reed, Quinn-

Griffin, & Fitzpatrick, 2008; Malach-Pines, 2000; Medland et al., 2004). In one early

study conducted by Bram & Katz (1989), fifty seven nurses working with patients

who were terminally ill in hospice and oncology settings were studied in order to investigate whether nurses providing care for terminally ill patients experienced burnout to different degrees based on the healthcare settings in which they work. This study also explored the relationship between hospice and oncology work settings and six work-related variables hypothesized to relate to burnout. Results of this study showed a significant difference between hospice nurses' burnout scores and those of hospital oncology nurses, with oncology nurses reporting significantly higher levels of burnout (Bram & Katz, 1989). Correlates of burnout differed between the two groups with understaffing and intensity of direct patient contact being the biggest issues for oncology nurses, while role discrepancy was the biggest issue for hospice nurses. Support in the workplace was the exception and correlated significantly for both groups as being important for prevention of burnout (Bram & Katz, 1989). The other variables studied were the number of patient deaths and expression of feelings to family and friends which were not significantly correlated as contributors to burnout rates in either group. Study findings indicate that hospice nurses scored significantly lower on the measure of burnout than did hospital oncology nurses. Therefore, in the sample studied, hospice appeared to be a less stressful environment in which to care for terminally ill patients than the hospital-based oncology unit setting.

Dorz et al. (2003) conducted another study on burnout using a sample consisting of caregivers working in 20 Italian hospitals in AIDS and oncology units. The sample size for this study consisted of 528 doctors and nurses with the majority

of the respondents (75.3%) being nurses and female (76%). This study assessed

psychological stress and coping strategies of the staff using self-report methods. The

Maslach Burnout Inventory (MBI), Coping Orientations to Problems Experiences

(COPE), State-Trait Anxiety Inventory (STAI) and Depression Questionnaire (DQ)

were used. Results of this study showed that oncology workers were found to have

higher levels of emotional exhaustion (17.9 versus 14.5) and more symptoms of

depression and burnout than did the AIDS workers (Dorz et al., 2003).

Another Italian study adding to the literature on the level of burnout within the

oncology nursing population was conducted by Quattrin, Zanini, Nascig, Annunziata,

Calligaris, & Brusaferro, 2006). In this research, Quattrin et al. studied burnout in 100

oncology nurses working in public hospitals in a northeastern Italian region with the

aim of estimating their level of burnout. This research also sought to identify the risk

factors for burnout and the strategies used by the staff to prevent and deal with stress

(Quattrin et al., 2006). The tools used in this study consisted of the Maslach Burnout

Inventory (Maslach, Jackson, & Leiter, 1996) modified for Italian healthcare workers,

as well as questions pertaining to the respondents' perceptions about coping

mechanisms and strategies adopted by the organization to help the nurses cope with

the stress of their work. Sociodemographic and job characteristics of the population

were also assessed (Quattrin et al., 2006). Results showed that 35% of the nurses had

a high level of emotional exhaustion, 17% had a high level of depersonalization, and

11% had a high level of personal achievement. Quattrin and colleagues also found

significantly higher levels of emotional exhaustion in nurses older than 40, with a

working seniority of more than 15 years, who had chosen to work on an oncology ward, and those who wanted another work assignment (Quattrin et al., 2006).

In a more recent study, Hunnibell, Reed, Quinn-Griffin, and Fitzpatrick (2008) explored the incidence of burnout in 563 hospice (n=244) versus oncology (n=319) nurses in the United States. The purpose of this study was to examine differences in self-transcendence between hospice and oncology nurses and identify relationships between self-transcendence and the three aspects of burnout syndrome: emotional exhaustion, depersonalization, and personal accomplishment. Respondents completed mailed surveys and results of this study supported those of earlier findings of Bram and Katz (1989), in that the oncology nurses had a higher rate of overall burnout (48%) than the hospice nurses (40%). There were also significant differences in self-transcendence between hospice and oncology nurses, with hospice nurses showing higher levels, therefore suggesting self-transcendence as a potential protective factor against burnout.

In conclusion, several studies of burnout in oncology nurses using the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1996) have consistently indicated the presence of burnout at moderate to high levels (Bram & Katz, 1989; Dorez et al., 2003; Hunnibell et al., 2008; Quattrin et al, 2006) and oncology nurses consistently score at higher levels of burnout than do hospice nurses (Bram & Katz, 1989; Hunnibell et al., 2008). Although two early studies in the literature report that burnout rates are no different in oncology nursing than in general medical surgical settings (Van Servellen & Leake, 1993; Papadatou, Anagnostopoulos, & Monos,

1994), the majority of the literature on burnout in oncology nurses supports the position that oncology nursing is an emotionally demanding profession and burnout is of major concern (Bram & Katz; Bush, 2009; Cohen et al., 1994; Dorz et al., 2003; Hinds et al., 1994; Hunnibell et al., 2008).

Currently, there is only one study on prevention of burnout in this vulnerable population. Quattrin and colleagues (2006), found that organizational factors, such as the development of more of a participatory decision making process, providing meaningful feedback and recognition, and providing staff the opportunity to take part in focus groups, as well as encouraging individual coping strategies (such as caring for one's own health, taking the time to do something fun, focusing on positive work aspects, and asking for help when needed) all helped to prevent burnout. While Hunnibell and colleagues (2008) found self-transcendence to be potentially protective against burnout, more research is needed into how to prevent and protect against burnout in the vulnerable oncology nursing population.

Compassion Satisfaction

Despite all of the stressors involved in caring for suffering and traumatized individuals, Figley (2002b) posits that the other side of this coin is the overall benefits one can receive from helping suffering individuals and making a difference in their lives. While there are a number of risk factors involved in working with suffering individuals and survivors of trauma, there is also the possibility of a powerful sense of satisfaction with this work (Figley, 2002b). Figley has coined the term "compassion satisfaction" to describe this process, which involves the development

over time of a much stronger sense of strength, self-knowledge, confidence, meaning,

spiritual connection, and respect for human resiliency (Figley, 2002b) when caring

for traumatized and suffering individuals. Stamm (2005) defines compassion

satisfaction as the pleasure derived from being able to do your work well (p.4).

Compassion satisfaction is generally thought to be related to seeing patients change

for the better and recognizing the positive impact the caregivers have on those with

whom they work (Radley & Figley, 2007). Factors that can enhance compassion

satisfaction among caregivers include having a positive affect, being optimistic,

having and utilizing several social resources, maintaining good health, leading a

balanced life (Radley & Figley, 2007) and emotional and spiritual self-care (Alkema,

Linton, & Davies, 2008).

Based on Figley's theoretical framework, this sense of

achievement/satisfaction acts as a protective factor against compassion fatigue.

Figley's framework has been validated in the Simon, Pryce, Roff, & Klemmack

(2005) study of oncology social workers. In this study, compassion fatigue and

burnout were variables inversely related to compassion satisfaction, thereby

suggesting compassion satisfaction as a potential protective factor for compassion

fatigue (Simon, Pryce, Roff, & Klemmack, 2005). Figley's framework was once

again validated in another study of 37 hospice care professionals conducted by

Alkema, Linton, & Davies (2008). The purpose of this study was to explore the

relationship between self-care, compassion fatigue, burnout, and compassion

satisfaction among hospice care professionals. A significant relationship between

self-care strategies and lower levels of burnout and compassion fatigue, and higher levels of compassion satisfaction were found. Results showed statistically significant ($p \leq .05$) negative correlations between compassion satisfaction and burnout, and compassion satisfaction and compassion fatigue, thereby suggesting compassion satisfaction as a potential protective factor. This is important to note as increasing compassion satisfaction for caregivers may enhance the quality of their work and the care they provide their patients (Alkema, Linton, & Davies, 2008). Harrowing (2011) found that engaging in meaningful relationships, maintaining hopeful attitudes, and advocating for the profession were found to transform and affirm the nurses' approach toward their work and enhance their experiences of compassion satisfaction.

Compassion Satisfaction in Oncology Nursing

In a study by Potter and colleagues (2010), the ProQOL R-IV (Stamm, 2009) was used to explore the prevalence of compassion fatigue and burnout among 153 oncology healthcare providers in the Midwest (86% of whom were nurses). Compassion satisfaction when previously studied by Stamm (2009) obtained an average score of 37 among previous users on the ProQOL R-IV across varying disciplines. The average score on the compassion satisfaction subscale among participants in the Potter study was 38.3 (SD=7.2), thus demonstrating a higher than average rate of compassion satisfaction among the oncology staff studied**.** Findings in Potter's study were statistically significant for the relationship between compassion satisfaction and work setting (p=0.008), with staff working on inpatient nursing units having the highest compassion satisfaction scores. In a study of compassion fatigue,

burnout, and compassion satisfaction conducted among a mixed sample of emergency, homecare, ICU, medical-surgical, oncology, and PCU nurses using the Pro-QOL R-IV, high levels of compassion satisfaction were once again found among the oncology nurses studied with a mean score of 40.5 (Yoder, 2010). In another study of compassion fatigue conducted among a mixed sample of emergency, ICU, nephrology, and oncology nurses using the Pro-QOL R-IV, a mean score for compassion satisfaction was not reported, however, the researchers reported frequency data which showed that 91.7% (n=11) of the oncology nurses studied scored at medium to high levels of compassion satisfaction, as demonstrated by a score of 34 or above on the compassion satisfaction subscale (Hooper et al., 2010). A study by McMullen (2007) of compassion fatigue in oncology nurses, using an unspecified version of the Pro-QOL, also did not report a mean score for the compassion satisfaction subscale. However, published results state that compassion satisfaction scores in this study indicated that 99% of the nurses studied (n=37) reported that they "derived pleasure from being able to do a good job".

Although no further research could be found which specifically examines the concept of compassion satisfaction within the oncology nursing population, other studies (Perry, 2006; Quattrin et al., 2006; and Rohan & Bausch, 2009) add insight into its possible effects within this population. Quattrin and colleagues' (2006) who studied burnout in oncology nurses, found an 11% rate of high personal achievement among the participating oncology nurses with high levels of personal achievement correlated to high levels of satisfaction with one's job. This finding was supported by

Perry (2006) in a qualitative study of exemplary oncology nurses which asked the

questions "what inspires nurses to choose oncology as a specialty?" and subsequently,

"what gives them impetus to continue in this field?". In order to answer these

questions, oncology nurses were invited to recall moments in their careers when they

were satisfied that they had chosen the "right" career. Data were collected in narrative

form through an online research technique and then submissions were analyzed using

the qualitative methods of narrative analysis (Priest, Roberts, & Woods, 2003), poetic

interpretation (Van Manen, 1990) and photovoice (Woolrych, 2004). Results of this

study revealed that the nurses repeatedly expressed that their motivation and energy

to continue to care for oncology patients at exceptional levels came in part from the

realization that the patients they were caring for could be their mothers, their brothers,

their sisters, or their neighbors. Providing excellent care that was then appreciated by

their patients, whereby the nurses received positive feedback, fueled the positive

cycle of caring that energized the exemplary nurses (Perry, 2006).

Perry's (2006) study also revealed that oncology nurses who provide excellent

care, and make strong connections with their patients, are also usually very satisfied

with their careers. Specifically, the nurses who were identified by peers as providing

exemplary care, reported attaining professional fulfillment when they achieved

connection with those in their care by affirming value and sharing humor (Perry,

2006). Nurses reported feeling as though they were making a difference when they

were able to "see patients through" the care trajectory. Nurses reported accomplishing

this in part by helping people live longer, individualizing care, enabling hope, and helping individuals find meaning (Perry, 2006).

In another qualitative study, Rohan & Bausch (2009) conducted 21 in-depth interviews with oncology clinicians (social workers, physicians, and nurses) which addressed their overall experiences with their work, including professional roles, teamwork, challenges and rewards of working with cancer patients. The clinicians were also asked their thoughts about whether oncology work changed their world-view. Results of this study were that oncology clinicians reported abundant rewards from their work, such as being able to ease suffering, receiving gratitude from patients, having intimate emotional connections with patients, being inspired and awed by the human spirit, and gaining wisdom and perspective. The clinicians also indicated that the negative/traumatic responses they experienced were transient and managed by developed coping strategies. The positive aspects of their work largely overshadowed the challenges. Working on a team that fostered mutual respect was both professionally satisfying and helped to mitigate the potentially deleterious effects of working in the emotionally charged field of oncology (Rohan & Bausch, 2009).

In conclusion, findings from Perry (2006), Quattrin et al. (2006), and Rohan and Bausch (2009) clarify components of Figley's (2002b) concept of compassion satisfaction in oncology nursing, although the specific variable of "compassion satisfaction" was not measured by these researchers. Compassion satisfaction has been studied within one sample of oncology caregivers (consisting of 86% nurses) in

a study conducted by Potter et al. (2010). Results of this study were that the staff in general had higher rates of compassion satisfaction than other previously studied disciplines, and that staff working on inpatient units were the most likely to have high compassion satisfaction scores. Based on this literature review, compassion satisfaction appears to be an understudied protective factor for compassion fatigue within the oncology nursing population. More research is needed on the concept of compassion satisfaction in oncology nurses, as well as research on how to promote compassion satisfaction in this population.

Self-transcendence

In addition to compassion satisfaction as proposed by Figley (2002b), self-transcendence has been suggested to be another potential protective factor that may enable oncology nurses to maintain a long-term ability to deal with the day-to-day stresses to which they are exposed (Coward, 1998; Hunnibell et al., 2008.). Self-transcendence has been shown to protect against burnout in oncology nurses (Hunnibell et al., 2008). The relationship between self-transcendence and compassion fatigue, however, has yet to be explored. Self-transcendence may also help to promote protective factors against compassion fatigue such as compassion satisfaction; however, this has yet to be studied.

Reed's self-transcendence theory has been studied in a variety of patient populations such as elderly over the age of 80 (Reed, 1991a), acquired immune deficiency syndrome (AIDS) patients (Coward, 1995), stage IV breast cancer patients Coward, 1990; Coward, 1991) and healthy adults (Coward, 1996). Findings from

these studies support self-transcendence views and behaviors contribute to mental health. Reed's (1991a) initial self-transcendence model testing (1991a) investigated patterns of self-transcendence and mental health symptomatology in 55 independent-living "oldest old" adults aged 80 to 97 years (Reed, 1991a). The triangulation method was used in this study between the qualitative data and quantitative findings (Reed, 1991a). Four patterns of self-transcendence, congruent with the investigator's definition, were identified by the participants as being important to their own sense of well-being: 1) generativity (a need to nurture and guide younger people and contribute to the next generation); 2) introjectivity (personal reflection); 3) life-long learning; and 4) body-transcendence (the ability to cope with and transcend above physical ailments of the body). Elders who scored high on depression reflected weak patterns in these four areas, thus demonstrating the importance of the expansion of self-boundaries and supporting a relationship between self-transcendence and the mental health of older adults (Reed, 1991a).

In another study investigating patients confronted with personal mortality, Coward (1995) described the lived experience of self-transcendence in women with Acquired Immune Deficiency Syndrome (AIDS) infections. Study participants included ten women recruited by nurses at an AIDS family clinic and through a flyer advertisement at the AIDS Support Group House in Seattle. Participant descriptions indicated that women with AIDS, despite their terminal illness, continued to find meaning and purpose in their lives through experiences of receiving from others, giving to others, and maintaining hope (Coward, 1995).The findings support the

theory that self-transcendence views and behaviors are a source of mental health at end of life.

Adding to the research on self-transcendence, Coward (1996) conducted a study of 152 adults, aged 19 to 85, who were healthy. The purpose of this study was to examine the presence of self-transcendence perspectives in a healthy population, and to compare self-transcendence and related concepts with previous findings in elderly well persons and in persons with life-threatening illnesses. Results were similar to those found in other populations. Self-transcendence was found to be a significant and strong positive correlate of well-being indicators, including sense of coherence, self-esteem, hope, and variables assessing emotional well-being. While Coward's results did support the hypothesized relationship between self-transcendence and mental health variables, findings from the sample of healthy adults did not support a theoretical link between awareness of end of life issues and self-transcendence (Reed, 2008, p. 114). Results were in line with the views of Frankl (1962), who proposed that self-transcendence is an essential human characteristic that may surface at any time in the life span.

The findings of Reed (1991a) and Coward (1995, 1996) support the theorized relationship between self-transcendence and various indicators of well-being across groups of participants facing a variety of health experiences. More recently, Acton and Wright (2000) explored Reed's theory and its linkages to the family caregiving experience of adults with dementia. The purpose of this review was to examine the concept of self-transcendence, its linkages to the caregiving experience of family

caregivers of adults with dementia, and to suggest potential strategies to assist family caregivers to achieve self-transcendence. Results of this review were that through using self-transcendence as a framework for intervention, family caregivers were able to move away from isolation, loss, and hopelessness and move towards understanding, love, and healing (Acton & Wright, 2000). More research is needed into how to foster and promote self-transcendence among various caregivers in need of intervention.

Self-transcendence in Oncology Nurses

Only one study of self-transcendence in oncology nurses was found in the literature. In this descriptive comparative study by Hunnibell, Reed, Quinn-Griffin, and Fitzpatrick (2008), the differences in self-transcendence between hospice and oncology nurses was explored, as well as the relationship between self-transcendence and the three aspects of burnout syndrome, namely, emotional exhaustion, depersonalization, and personal accomplishment. Reed's theory of self-transcendence was used as the theoretical framework to guide this study. The sample included 244 hospice nurses and 319 oncology nurses in the United States who completed mailed surveys. Results of this study found that there were significant differences in self-transcendence and burnout between hospice and oncology nurses. Oncology nurses had a higher rate of burnout (48%) than the hospice nurses (40%), as well as lower levels of self-transcendence. Significant correlations ($p < .01$) existed between self-transcendence and the three aspects of burnout for both groups of nurses. Personal

accomplishment correlated positively with self-transcendence and emotional exhaustion and depersonalization correlated negatively with self-transcendence.

Although no further studies of self-transcendence in oncology nurses were found in the literature, there are several studies evaluating self-transcendence in oncology patients conducted by Coward (1990, 1991, 1998, 2003) that support the theorized relationship between self-transcendence and various indicators of well-being. Coward (1990), in one of her early works, conducted a phenomenological, exploratory study of oncology patients in order to describe the lived-experience of self-transcendence in women with Stage IV breast cancer. The sample for this study included five women, who had lived with metastatic disease from 2 to 7 years, and were asked to describe experiences from which they derived an increased sense of self-worth, purpose in life, and interconnectedness with others (Coward, 1990). The self-transcendent experiences described by the women involved efforts on the part of the participants to reach out beyond themselves to help other women, to permit others to help them, or to "just accept" unchangeable situations. The results indicated that participants found meaning in their lives in the face of life-threatening illness through transcending self.

In another study by Coward (1991), self-transcendence was investigated in 107 women with stage III and stage IV breast cancers. Self-transcendence was found to directly affect emotional well-being which had a strong positive effect on reduced illness distress. Later, Coward (1998) conducted another qualitative, phenomenological study aimed at describing the "lived experience" of self-

transcendence in women with stage IV breast cancer. The research question posed in

this study was "what are the essential features of self-transcendence in women with

advanced breast cancer?". The research question was derived from the works of

Frankl (1962) and Reed's (1991b) Self-transcendence Theory, as well as the

researcher's reflections on her own experiences as a facilitator in a breast cancer

support group where some participants found meaning in their lives as a result of their

disease (Coward, 1998). Data was analyzed using Colaizzi's (1978) Seven Step

Technique. The researchers found instances of self-transcendence did occur among

these women during times of great effort such as while helping others, while learning

how to accept help from others, and while changing their attitudes towards their

illness (Coward, 1998). Women who experienced self-transcendence in this study

reported that they felt more connected with other women suffering from breast

cancer, old friends, beauty in nature, and God. They also reported that assisting other

women with breast cancer gave them a renewed sense of value and life purpose

(Coward, 1998).

Based on the results from her 1998 study, Coward conducted another study to

pilot a second support group intervention (Coward, 2003). This intervention research

study was designed to assess whether an eight week closed support group for women

with newly diagnosed breast cancer, promoting self-transcendence perspectives and

activities, would result in a change in well-being over time when compared with non-

participants (Coward, 1998). The variables of this study included support group

intervention, self-transcendence, and emotional and physical well-being. The

theoretical framework for this study was Self-transcendence Theory (Reed, 1991b)

and the study environment was a survivor-established breast cancer resource center.

The results of this study were similar to others conducted by Coward in the breast

cancer population, which concluded that activities based on self-transcendence theory

are associated with expanded perspectives and an improved sense of well-being.

Results of this study showed positive results in support group participants at the end

of the given intervention but not one year later. These results support the

effectiveness of activities to promote self-transcendence on improved well-being, and

the need for on-going support to sustain these activities and their effects. Study

results show that not all participants were effective self-transcendors without ongoing

outside support.

     Although the majority of these studies focused on patients and not nurses, the

results may still be considered of great use to nursing practice. Knowing that the

promotion of self-transcendence can help oncology patients come to terms with their

illness and find purpose in life is important. Implications of this study on nursing

practice include that if self-transcendence is able to help oncology patients to feel a

renewed sense of value and life purpose in life, it may have some potential to be able

to do the same in the nurses caring for them. Self-transcendence may be useful to

promoting the well-being of nurses who are involved in these emotionally demanding

situations. More research is needed on self-transcendence and its impact on well-

being in oncology nurses.

Conclusions

Oncology nursing has been found to be stressful (Florio, Donnelly & Zevon,

1998; Razavi, Delvaux, Marchal, Bredart, Farvacques, & Paesmans, 1993; Stewart,

Meyerowitz, Jackson, Yarkin, & Harvey, 1982), with oncology nurses at risk for

adverse effects such as burnout (Bram & Katz, 1989; Dorez et al., 2003; Lopez-

Castillo et al., 1999; Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008; Potter et

al., 2010; Quattrin et al., 2006) and compassion fatigue (McMullen, 2007; Perry,

2008; Potter et al., 2010). Compassion satisfaction as proposed by Figley (2002b) has

been found to be protective against compassion fatigue in oncology caregiver

populations (Potter et. al., 2010; Rohan & Bausch, 2009). In addition to compassion

satisfaction, self-transcendence has been suggested to be another potential protective

factor that may enable oncology nurses to maintain a long-term ability to deal with

the day-to-day stresses to which they are exposed (Coward, 1998; Hunnibell et al.,

2008).

Though little studied in nurses, self-transcendence has been suggested to be

protective against burnout in oncology nurses (Hunnibell et al., 2008). The

relationship between self-transcendence and compassion fatigue, however, has yet to

be explored. Fostering psychosocial wellness in the workplace is a crucial strategy

for promoting oncology nurse retention and improving practice environments

(Medland, Howard-Ruben, & Whitaker, 2004; Potter et al., 2010). By understanding

compassion fatigue as the natural, predictable, treatable, and preventable

consequence of caregiving to traumatized and suffering individuals, we may be able

to help caring professionals work and be satisfied with their work (Figley, 1995).

Self-transcendence may be useful in helping to promote compassion satisfaction

since self-transcendence has been linked with improved coping and mental health in

various patient populations (Coward, 1990, 1991, 1995, 1996, 2003; Reed, 1991a)

and in one study of nurses (Hunnibell et al., 2008). However, this has yet to be

studied. More research is needed into its potential influence/benefits within the

oncology nursing population.

The demographic variables investigated in the present study were chosen

based on a review of the literature and the guiding theoretical frameworks. Figley's

theoretical framework suggests compassion stress, prolonged exposure to suffering,

traumatic recollections, and life disruptions are all factors that may increase a nurse's

risk for compassion fatigue (Figley, 2002b). These concepts were assessed in the

present study through demographic questions such as years of oncology nursing,

work setting, degree of life stress, and overall health rating. According to Reed's

(2008) theoretical framework, variables that may influence the process of self-

transcendence as it contributes to well-being include age, gender, cognitive ability,

life experiences, spiritual perspectives, social environment, and historical events.

These variables were addressed through demographic questions such as age, gender,

highest level of nursing education, oncology nursing certification, employment status,

work setting, years in oncology nursing, type of patient population cared for, degree

of life stress, overall health status, and degree to which religion/spirituality plays a

part in participants' lives.

A variety of demographic factors have been shown in the literature to affect compassion fatigue, burnout, compassion satisfaction, and self-transcendence. Abendroth and Flannery (2006) found trauma, anxiety, life demands, and excessive empathy were key determinants of compassion fatigue risk in their sample of hospice nurses. Ward-Griffin, St-Amant, and Brown (2011) in their study of compassion fatigue found double duty caregiving (ie, nurse-daughters who were caring for elderly parents) to be a factor contributing to compassion fatigue. Maytum, Heiman, and Garwick (2004) reported that insight and experience helped study participants develop short and long-term coping strategies to minimize and manage compassion fatigue episodes and prevent burnout.

Demographic variables that were investigated in this study based on the literature include: participant's age (Abendroth & Flannery, 2006; Bram & Katz, 1989; Frank & Adkinson, 2007; Hunnibell et al., 2008; Potter et al., 2010; Quattrin et al., 2006); gender (Abendroth & Flannery, 2006; Hunnibell et al., 2008); years in oncology nursing (Bram & Katz, 1989; Hunnibell et al., 2008; Potter et al., 2010; Quattrin et al., 2006); nursing educational level (Abendroth & Flannery, 2006; Bram & Katz, 1989; Potter et al., 2010); oncology certification status; degree of life stress outside of work (Abendroth & Flannery, 2006; Radley & Figley, 2007); personal health status (Abendroth & Flannery, 2006; Radley & Figley, 2007); and degree to which religion/spirituality plays a role in one's life (Alkema, Linton, & Davies, 2008, Frank & Karioth, 2006; Reed, 1991a). Demographic data were collected on the participants' employment status, work setting (Abendroth & Flannery, 2006;

McMullen. 2007; Potter et al., 2010), type of patient population to whom the nurse provides care (Maytum, Heiman, & Garwick, 2004).

High risk for compassion fatigue was found in outpatient work settings (McMullen, 2007) and in oncology specific work settings (Hunnibell, 2008; Hooper, et al., 2010). Prevalence of burnout is higher among nurses who work in stressful settings, such as oncology (Barrett & Yates, 2002; Bram & Katz, 1989; Dorz et al., 2003; Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008; Malach-Pines, 2000; Medland et al., 2004; Quattrin et al., 2006), and in nurses with higher educational levels and higher years of experience (Potter, et al., 2010). Due to the limited amount of studies in the literature exploring compassion fatigue, compassion satisfaction and self-transcendence in oncology nursing populations, gaps still remain on relationships among the primary study variables and demographic factors. Additional study of demographic variables is needed.

Chapter III

METHODOLOGY

This chapter includes a description of the research methodology which was employed in order to investigate the research questions and hypotheses of the study. The study utilized a survey and design that incorporated all items from: the Professional Quality of Life Compassion Satisfaction, Compassion Fatigue, and Burnout Subscales-Revision V (ProQOL-RV) (Stamm, 2010); Reed's (1987) Self-transcendence Scale (STS); and twelve demographic questions developed by the researcher based on a review of the literature of factors which may influence compassion fatigue, burnout, compassion satisfaction, and self-transcendence.

Participants

The sample for this study was comprised of oncology nurses who were members of the Oncology Nursing Society (ONS). Study participants had to be employed in a direct patient care role with oncology patients and have a valid e-mail address on file with the ONS. Study participants were obtained by drawing a random sample of nurses from the national ONS membership list. Random sampling was employed in order to obtain a sample that represented the larger target population of oncology nurses (Brink & Wood, 1998 p. 292). Permission to conduct this research and access the ONS membership list was obtained from the third party affiliate, "In Focus Marketing", which was the company that managed the ONS mailing list. In Appendix A is a copy of the permission letter. According to their policies and

procedures, In Focus Marketing sent out the e-mail Letter of Invitation for

participants (Appendix B) and the link to the study on behalf of the researcher to a

random sample of 2,000 Oncology Nursing Society members. A screener question

which stated "Are you an oncology nurse in the United States who provides direct

patient care?" ensured that all participants met the inclusion criteria for the study. For

this study "direct patient care" meant care of a patient provided personally by a staff

member (Mosby, 2009). All returned "undeliverable" e-mails were replaced with new

potential participants using a random selection process by In Focus Marketing to

ensure that the study had a total of 2,000 random valid e-mail addresses sent to

potential participants. After 2 weeks the target response rate had not been met, and In

Focus Marketing sent out a reminder e-mail on the researcher's behalf. A second

reminder e-mail was also sent at 4 weeks. Anonymity of participants to the researcher

was maintained as the In Focus Marketing staff were the only people with access to

actual email addresses and they randomly selected participants from the list of

Oncology Nursing Society members.

Inclusion Criteria

Inclusion criteria in this study were that all study participants were oncology

nurses currently working in a direct patient care role in the United States. Direct

patient care was defined as care of a patient provided personally by a staff member.

Direct patient care may involve any aspects of the health care of a patient, including

treatments, counseling, self-care, patient education, and administration of medication

(Mosby, 2009). Restrictions were not placed on length of time working in the

profession, so as to allow for a comparison of results between nurses with varying levels of work experience. Subjects were members of the Oncology Nursing Society (ONS) who had e-mail addresses on file. Oncology Nursing Society members were chosen as ONS is the largest professional oncology association in the world with over 37,000 members (Oncology Nursing Society, 2010). Over 34,000 ONS members are from the United States. Members from the United States ONS were used in an effort to reduce the possibility of language barriers and difficulty understanding the survey. Oncology nurses were studied as opposed to any other nursing specialty sample, as research shows that these nurses are exposed to intense suffering (Ferrell & Coyle, 2008) and stress (Bram & Katz, 1989; Medland, Howard-Ruben, Whitaker, 2004). Nurses who provide direct patient care were studied as they make up the majority of the staff that provides hands-on care to cancer patients, and have the most time to develop long term relationships or bonds with their patients. Restrictions were not placed on care settings so as to allow for a comparison between the various inpatient and outpatient settings. Nurses with e-mail addresses were used as the study took place via the online survey monkey platform. Declining participation in this study did not impact status with the Oncology Nursing Society in any way, and there was no penalty or loss of benefits for members who chose not to participate or to withdraw from the study.

Exclusion Criteria

Exclusion criteria in this study were: oncology nurses who were not members of the Oncology Nursing Society; nurses who were not currently living and practicing

in the United States; nurses who did not have e-mail addresses; and nurses who did

not provide direct patient care.

Power Analysis

In order to determine the number of participants required for this study, a

traditional Cohen power analysis (Cohen, 1988) that solves for number of participants

when effect size, alpha, and power are entered into the equation was conducted.

Standard assumptions for surveys were employed in the analysis for an alpha of 0.05,

and a power of 0.95, with a very conservative effect size of 0.05. Given these

parameters, power analysis revealed that a minimum of 463 participants would be

required to appropriately reject the null hypothesis. The effect size used is

conventional for surveys in which the magnitude of the effect is expected to be small.

In surveys, you need large sample sizes to account for the small effect (Cohen, 1988).

The Principal Investigator, after consulting with a statistician for the present study,

anticipated 500 participants (25%) from a population of 2000 potential participants.

In the end, four hundred sixty-seven participants responded to the surveys.

Procedure

Following achieving IRB approval from the university attended by the

principal investigator (PI) to conduct the study, the PI collaborated with In Focus

Marketing to send a letter of invitation (Appendix B) via electronic mail (e-mail) to

potential study participants, which was sent to their e-mail address on file with the

Oncology Nursing Society. The e-mail explained the nature of the study survey and

provided an active link to the informed consent for participants (Appendix C) and the electronic survey (Appendix D).

The recruitment letter was sent in two waves, approximately 2 weeks apart to allow ample time for potential participants to respond, in order to maximize participation. In Focus Marketing maintains the list of ONS members and was therefore responsible for the randomization of the sample. Using their standard randomization protocol, the approximate 37,000 ONS member list was first restricted to members with current United States addresses yielding 34,000 members and then restricted again to only include those members with current e-mail addresses on file. Once that list was obtained, 2,000 members were randomly selected as potential participants. The internet-based survey utilized the publicly available Survey Monkey platform to deliver all study items from the Self-transcendence Scale (Reed, 1987) and the Pro-QOL-RV Instrument (Stamm, 2010), in addition to a set of demographic items designed by the researcher (see Appendix D) to the 2,000 potential participants. Survey responses were anonymous and survey data were encrypted using enhanced security Verisign certificate Version 3, 128 bit encryption (surveymonkey.com). Response data were encrypted using this enhanced security so that once a survey was completed, it could not be linked to a respondent's e-mail, internet service provider (ISP) address, or any other identifying data by the researcher. Thus, the researcher could not compare demographic data on persons who participated with those who did not participate in the study, nor could the researcher re-email those who did not respond to increase response rate. Once the surveys were completed, anonymity was

maintained by archiving the electronic data records for participants on the password

protected Survey Monkey site. Hard copies of the survey responses were printed and

were stored in a locked file cabinet. Access to research records was limited to the

principal investigator and the research chairperson. No identifying information was

included that would make it possible to identify a participant in any scientific

publication that could derive from the research, and respondents were informed that

aggregate data collected from the study would be published and presented as part of

the principal investigator's dissertation.

Protection of Human Subjects

The risks of participating in this study were minimal. Completing

questionnaires on experiences as an oncology nurse (both positive and negative) may

have caused some participants temporary and mild distress as they contemplated

answers. In a personal e-mail communication with Dr. Charles Figley, expert in the

field of compassion fatigue, this issue was raised (see Appendix E). In this

communication, Figley states that he knows of approximately 100 studies using the

ProQOL or alternative measures to assess compassion fatigue in which there were no

reports of any iatrogenic effects. Figley also stated that "the principle in an IRB

decision tree is to err on the side of caution. That would be not to suggest your study

causes any type of distress". Based on this expert opinion, the decision was made not

to add a statement of risk in the informed consent but rather to offer a link at the end

of the study to respondents who may have felt as though they needed assistance or

more information on compassion fatigue. The link was to the Compassion Fatigue

Awareness Project's website. The Compassion Fatigue Awareness Project is a

nonprofit organization whose mission is to educate caregivers about authentic,

sustainable, self-care, and aid organizations in their goal of providing healthy,

compassionate care to those they serve (compassionfatigue.org). This website offered

a comprehensive list of varying resources available to those who may be suffering

from compassion fatigue. In Appendix F are selected examples of compassion fatigue

resources for caregivers from this website (compassionfatigue.org). All

questionnaires were completely anonymous. Although there were no direct benefits to

participating in this study, it was anticipated that this study would positively

contribute to the body of knowledge related to nursing and the emotional effects of

caring for patients with cancer. This study is significant to nursing in that it may raise

awareness of the issue of compassion fatigue in oncology nursing and may prompt

change in access to resources to prevent and manage compassion fatigue. This study

may also stimulate further research on nurses' experiences in caring for patients with

cancer. No remuneration was paid or given to individual respondents for

participation in this study.

Instruments

Participants were asked to complete 45 items derived from the two study

instruments (STS and ProQOL-RV) in addition to twelve demographic information

questions. The questions in the Pro-QOL-RV (Stamm, 2010) remained the same

without revision. Stamm (2010) states that one may substitute the appropriate target

group for the word "helper" if that is not the best term and that the ProQOL-RV test

may be freely copied and used as long as (a) author is credited, (b) no changes are made other than the one authorized change to the word "helper", and (c) it is not sold. The questions from the Self-transcendence Scale (Reed, 1987) also remained the same without revision. Permission for the use of the STS was obtained from the author, Dr. Pamela Reed (see Appendix G for a copy of the permission letter).

The Professional Quality of Life Scale (Pro-QOL)

The Professional Quality of Life Scale, commonly abbreviated ProQOL, is a 30-item, three dimensional scale designed to measure compassion fatigue, burnout, and compassion satisfaction in those who work in helping professions. The ProQOL was chosen for this study as it is the most commonly used measure of the negative and positive effects of helping others who experience suffering and trauma and has been in use on various populations in helping professions since 1995 (Stamm, 2010). The response set on the ProQOL is a 5 point likert scale ranging from 0 (never) to 5 (very often). The instrument provides for three scored domains, namely, compassion fatigue, burnout, and compassion satisfaction to better understand the interrelationships among these constructs. Once scored, responses are reflective of whether or not respondents had low, moderate, or high compassion fatigue, burnout, and compassion satisfaction scores (Stamm, 2010)**.** The ProQOL-RV (Revision 5) was used in this study as opposed to older versions of the ProQOL as according to Stamm (2010), despite it being nearly identical, there have been improvements made to refine grammar and simplify the scale for scoring. Scoring procedures for the ProQOL R-V are detailed in the ProQOL Concise Manual 2nd Edition (Stamm, 2010)

which states that beginning with the ProQOL-RV scores are reported in standardized

format by converting raw scores to a t-score. By using a standardized score, the

scores across the three subscales can be interpreted the same. For each scale, the

mean is 50 and the standard deviation is 10. The ProQOL Manual states that the

measure is best used in its complete form, however, cut scores have been established

to indicate relative risks or protective factors. These low and high cut scores are set at

the 25th and 75th percentiles. About 25% of people score below a raw score of 43

(low) and about 25% of people score above a raw score of 57 (high). Thus, we set a

score of 57 as high and a score of 43 as low. Those scores in the middle (44-56),

would be considered moderate. Scores for each of the subscales were used and ranged

from 15-60. There is computer code listed in the ProQOL Manual for scoring and a

self-score version is also available.

Reliability and validity of the Pro-QOL has been established (Stamm, 2009, p.

14). The scales of the ProQOL have good reliability. The alpha reliability for the

Compassion Satisfaction scale is $\alpha = .88$ (n=1130); the alpha reliability for the

Burnout scale is $\alpha = .75$ (n=976); and the Compassion Fatigue scale is $\alpha = .81$

(n=1135) with helping professionals. The instrument has good item to scale

properties with no single item compromising the reliability of the instrument. The

standard errors of the instrument are small: Compassion Satisfaction .22, Burnout .21,

and Secondary Traumatic Stress (Compassion Fatigue) .20, which suggests minimal

interference from error and optimum measurement of effect size (Stamm, 2009).

The ProQOL Scale has also been found to have good construct validity, with each domain assessing separate constructs reliability. The Compassion Fatigue scale is distinct and measures a concept separate from burnout. The interscale correlations show 2% shared variance (r=-0.23; co-σ = 5%; n=1187) with Compassion Fatigue and 5% shared variance (r=.-0.14; co-σ = 2%; n=1187) with Burnout. While there is shared variance between Burnout and Compassion Fatigue (co σ = 34%; n=1187), the two scales measure different constructs with the shared variance likely reflecting the distress that is common to both conditions (Stamm, 2009). The scales both measure negative affects but are clearly different. The Burnout scale does not assess the role of fear which the Compassion Fatigue scale does measure.

Earlier oncology nursing research studies, such as the pilot study conducted by McMullen (2007), used the ProQOL Revision III, while more recent studies such as those by Potter and colleagues (2010), Hooper and colleagues (2010), and Yoder (2010), utilized the ProQOL Revision IV. The latest version of the ProQOL (ProQOL RV) was used in this dissertation research study as opposed to earlier versions, as it has been revised to be simpler with refined grammar and a scale for scoring that is more easily understood (Stamm, 2010).

The Self-transcendence Scale (STS)

Self-transcendence was measured using the Self-Transcendence Scale (STS). The Self-Transcendence Scale is a one-dimensional scale that measures a search for meaning, expanded boundaries, new perspectives and openness, and a concern for the well-being of others, which all reflect self-transcendence (Reed, 1987). There are no

subscales for this measure. The STS is a scale adapted by Reed (1987) from an earlier 36-item instrument called the Developmental Resources of Later Adulthood (DRLA) Scale (Reed, 1986). The STS has 15 items, which are scored on a 4-point likert scale that ranges from 1 (not at all) to 4 (very much). The overall score is the level of self-transcendence which is obtained by adding the scores and dividing this number by the total number of questions that were answered. The scale score ranges are from 1 to 4. Higher scores reflect higher levels of self-transcendence. As part of the original Self-Transcendence Scale format (Reed, 1987), participants are also offered one open-ended question to write any additional comments that may help the researcher to better understand their views.

Construct validity and reliability of the STS has been established (Reed, 2003). Reliability has been estimated using Cronbach's coefficient alpha with ranges from $r = .80$ to $r = .88$ (Coward, 1990). Support for the construct validity of the instrument has been found through review of the scientific literature where there have been relationships between the Self-transcendence Scale and other measures (Reed, 1991a). Further, there has been examination of groups who scored on the STS as expected, in addition to secondary analyses of data from longitudinal correlational studies on developmental resources (Coward, 1990; Reed, 1991a).

Demographic Survey

Respondents were asked a set of 12 demographic questions with content validity based on review of the literature. These 12 questions were developed by the researcher to measure variables that have been noted in the literature to affect levels

of self-transcendence, burnout, compassion satisfaction, and compassion fatigue.

Demographic questions that were investigated in this research study included: age

(20-29, 30-39, 40-49, 50-59, 60-65, 65 or older); gender (male or female); years in

oncology nursing (less than 1, 1-3,4-10, 11-15, 16-20, or 20 or more); highest level of

nursing education (Diploma, Associate's Degree, Bachelor's Degree, Master's

Degree, Doctorate Degree); OCN certification (yes or no); employment status (full-

time, part-time, or per diem); work setting (hospital, outpatient setting, hospice, or

homecare); type of population (adult, pediatric, or patients of various ages); whether

or not they have heard of the term compassion fatigue before this study (yes or no);

degree of life stress outside of work; current health status; and degree to which

religion/spirituality plays a part in their life. The last three questions on degree of life

stress outside of work, health status, and degree to which religion/spirituality played a

part of their life, were measured using a 10 point scale where 1 was equal to the

lowest amount and 10 was equal to the highest amount.

According to Reed (2008), variables that may influence the process of self-

transcendence as it contributes to well-being include age, gender, cognitive ability,

life experiences, spiritual perspectives, social environment, and historical events.

These variables are addressed through the demographic questions on the survey in the

present study in the following ways. First, "age" and "gender" are assessed directly

by categorical self-report. Next, data on "cognitive ability" is assessed indirectly

through the questions on highest level of nursing education, and oncology nursing

(OCN) certification. Data on Reed's variable of "life experiences" is also assessed

indirectly through the demographic questions on employment status, work setting,

years in oncology nursing, type of patient population cared for, degree of life stress,

and overall health status. While the variable of "spiritual perspectives" is not directly

assessed in the present study, data on the degree to which religion/spirituality plays a

part in participants' lives was obtained. And lastly, whereas Reed's variables of

"social environment" and "historical data" were also not directly assessed in the

present research, anecdotal data on these variables was obtained via the open data

responses provided to the open-ended question on the Self Transcendence Scale

which asks the participant to "write down any additional comments to help the

researcher understand your views".

According to Figley's theoretical framework (1995), compassion stress,

prolonged exposure to suffering, traumatic recollections, and life disruptions are all

factors that may increase a nurse's risk for compassion fatigue. These risk factors are

assessed through the demographic questions in the present study in the following

ways. First, "compassion stress" and "life disruptions" are indirectly assessed in this

study through the demographic question on the rating scale for "degree of life stress".

Additional anecdotal data on these two risk factors were also obtained via the

responses provided to the open-ended question on the STS. The risk factor of

"prolonged exposure to suffering" was assessed by the demographic question on

years in oncology nursing and responses provided by the open ended question on the

STS. While the risk factor of "traumatic recollections" is not directly assessed in this

study, once again, anecdotal data were collected via the responses provided to the open-ended question on the STS.

Data Analysis

Study data was analyzed using a two-phase approach. First, descriptive statistics in the form of means, standard deviations, and frequency counts were calculated in order to understand the study sample studied. Second, study hypotheses were tested with inferential statistics to better understand the relationships between primary study variables. Specifically, Spearman bi-variate correlations were used to understand the strength and direction of the relationships between the variables in this study because distributions were skewed. Consistent with study hypotheses, the following inferential analyses were used:

- Spearman bi-variate correlation between STS and Compassion Fatigue, ProQOL-RV.

- Spearman bi-variate correlation between STS and Compassion Satisfaction, ProQOL-RV.

- Spearman bi-variate correlation between STS and Burnout, ProQOL-RV.

- Spearman bi-variate correlation between Compassion Fatigue and Burnout, ProQOL-RV.

- Spearman bi-variate correlations between demographic variables and primary study variables to establish a table of intercorrelations from which additional analyses were explored. Analyses of variance (ANOVA) were

used to examine differences on outcome variables for different levels of

select demographic variables.

Results were considered statistically significant when alpha values were less

than .05. Findings were reported both in *r* correlation values, as well as in the form of

r^2 to provide percentage variance explained by each variable. Based on initial

findings from *a priori* hypotheses, additional post-hoc analyses using least square

difference were conducted to further examine the data for significant differences

across dependent variables.

Chapter IV

RESULTS

This study focused on the emotional effects of oncology nursing. More specifically, this study focused on an investigation into the relationships between compassion fatigue, burnout, and compassion satisfaction among oncology nurses as well as investigating the influence of self-transcendence on these three variables. The following research questions and hypotheses were addressed:

Research Questions

1. What is the level of self-transcendence, compassion fatigue, burnout, and compassion satisfaction in oncology nurses?

2. What is the relationship between level of self-transcendence and compassion fatigue in oncology nurses?

3. What is the relationship between compassion fatigue and burnout in oncology nurses?

4. What is the relationship between level of self-transcendence and burnout in oncology nurses?

5. What is the relationship between level of self-transcendence and compassion satisfaction levels in oncology nurses?

6. What are the relationships among compassion fatigue, burnout, compassion satisfaction, self-transcendence, and demographic variables?

Hypotheses

1. There is a negative relationship between self-transcendence and compassion
    fatigue in oncology nurses.

2. There is a positive relationship between compassion fatigue and burnout in
    oncology nurses.

3. There is a negative relationship between self-transcendence and burnout in
    oncology nurses.

4. There is a positive relationship between self-transcendence and compassion
    satisfaction in oncology nurses.

5. Levels of compassion fatigue, burnout, compassion satisfaction, and self-
    transcendence will be related to demographic factors (age, gender, years of
    oncology nursing experience, employment status, work setting, type of patient
    population cared for by nurses, oncology certification, educational level,
    degree of life stress, overall health status, and religion/spirituality level).

Descriptive Data on the Sample and Analyses

The results section is presented in two parts: descriptive data on the sample

and analyses, and results related to the research questions and hypotheses. Data were

analyzed using the Statistical Package for Social Sciences (SPSS), Version #12. The

present study employed a survey methodology to recruit n=467 participants. Initial

visual inspection of the collected data revealed 62 cases with multiple missing data

points on the primary study variables. Upon further investigation into these cases, the

missing data was determined to be random and most likely the result of a failed

setting on the electronic survey, whereby participants were not supposed to be able to move onto the next question until the previous question had been answered. After expert statistical consultation, it was determined that scores could not accurately be obtained on the subscales of those 62 cases with the multiple missing data elements and thus, these cases were eliminated, thereby providing the final sample of 405 participants. All descriptive and inferential data analytic procedures are based on data from these 405 participants.

Appropriate assumptions for parametric inferential analyses were not met prior to hypothesis testing as data did not form a normal distribution, and thus, Spearman bivariate correlations (a non-parametric statistic) were used (Brink & Wood, 1998). Alpha for rejection of the null hypothesis was established at $p < 0.05$. No additional database modifications were required. Prior to analysis using inferential statistics to test the study hypotheses, descriptive statistics in the form of means, standard deviations, and frequency counts were calculated. Additional statistical analysis in the form of ANOVAs were used in analyses where the independent variable was categorical.

Age, Gender, and Educational Level

The research sample consisted of 405 oncology nurses throughout the United States. Listed in Table 1 are the age, gender, and educational levels completed by the sample. The ages of the nurses in the sample ranged from 20 to aged 65 or older with the most nurses 40.2% (n=163) falling into the age 50-59 years old category (age was collected in discrete categories in the present survey and therefore actual ages were

not available to produce values for minimum and maximum range). In regards to

gender, the research sample was primarily female (96.8%, n=392). Gender was not

found to be significantly related to any of the primary study variables. This is likely

due to the fact that the majority of the participants were females with only 13 males

participating in the study. Educational levels of the participants ranged from

completion of a diploma program (n=33, 8.1%) to doctoral degree (n=5, 1.3%). Of

the total participants, 72.4 % (n=293) had a Bachelor's degree in nursing or higher

degree.

Table 1

Age, Gender, and Educational Level of Sample

Variable	Frequency	Percentage
Age		
20-29	37	9.1%
30-39	66	16.3%
40-49	94	23.2%
50-59	163	40.2%
60-64	36	8.9%
65 or older	9	2.3%
Gender		
Male	13	3.2%
Female	392	96.8%
Educational Level Completed		
Diploma	33	8.1%
Associate Degree	79	19.5%
Bachelor's Degree	181	44.7%
Master's Degree	107	26.4%
Doctoral Degree	5	1.3%

Years in Oncology Nursing, Employment Status, Work Setting, Type of Patient

Population, and Oncology Certification Status

Frequency data on the number of years each participant had in oncology

nursing, their employment status, work setting, type of patient population they serve,

and oncology certification status are presented in Table 2. Participants' years in

oncology nursing ranged from 1 year to 34 or more years, with the majority of

respondents (60.2%, n=244) working 11 years or more. In regards to employment

status, nurses worked full-time, part-time, and per diem, with the majority of

participants in this study working full time (84.9%, n=344). Work settings included

inpatient (hospital), outpatient, hospice and homecare, with the majority of

respondents working in the outpatient setting (62.2%, n=252). The majority of study

participants worked with adult patient populations (82%, n=383) and were certified in

oncology nursing (73.1%, n=296).

Table 2

Years in Oncology Nursing, Employment Status, Work Setting, Type of Patient Population Served and Oncology Certification Status

Years in Oncology Nursing	Frequency	Percentage
1-5	102	25.2%
6-10	59	14.6%
11-20	114	28.1%
21-33	111	27.4%
34 or more	19	4.7%
Employment Status		
Full-time	344	84.9%
Part-time	46	11.4%
Per Diem	15	3.7%
Work Setting		
Inpatient (Hospital)	148	36.5%
Outpatient	252	62.2%
Hospice	4	1.1%
Home Care	1	.2%
Type of Patient Population Served		
Adult	383	82.0%
Pediatric	3	0.6%
Both	19	4.1%
Oncology Certification Status		
Certified	296	73.1%
Not Certified	109	26.9%

Level of Life Stress

Participants were asked to evaluate their level of life stress on a scale ranging from 1 (low stress) to 10 (high stress). In Table 3 are the scores on Level of Life Stress. The responses indicate that participants generally perceived themselves to have moderate levels of life stress with a mean of 5.2 and a standard deviation of 2.2.

Table 3

Frequencies and Percentages for Level of Life Stress

Level of Life Stress	Frequency	Percentage
1	9	2.1%
2	37	9.1%
3	57	14.1%
4	68	16.8%
5	56	13.8%
6	46	11.4%
7	66	16.3%
8	44	10.9%
9	12	3.0%
10	10	2.5%

Overall Health Rating

Participants were asked to rate their perceived health on a 10 point likert scale ranging from 1 (poor health) to 10 (excellent health). Frequencies and percentages on the overall health rating are included in Table 4. Responses indicate that participants generally perceived themselves to have very good to excellent health with a mean of 7.9 and a standard deviation of 1.6, with 67.2% (n=272) of respondents selecting "8", "9", or "10".

Table 4

Frequencies and Percentages for Overall Health Ratings

Overall Health	Frequency	Percentage
1	0	.0%
2	0	.0%
3	4	1.0%
4	11	2.7%
5	27	6.7%
6	28	6.9%
7	63	15.5%
8	104	25.7%
9	123	30.4%
10	45	11.1%

Religion/Spirituality Level

As a measure of perceived religion/spirituality, participants were asked to report the degree to which religion/spirituality plays a role in their life using a 10 point likert scale ranging from 1 (low) to 10 (high). In Table 5 are the results which indicate that religion/spirituality plays a large role in over half the respondents' lives with 55.5% (n=225) reporting "8", "9", or "10" ratings (mean=7.1, standard deviation=2.7).

Table 5

Frequencies and Percentages for Religion/Spirituality Ratings

Religion/Spirituality Level	Frequency	Percentage
1	14	3.5%
2	15	3.7%
3	29	7.2%
4	24	5.9%
5	33	8.1%
6	25	6.2%
7	40	9.9%
8	67	16.5%
9	65	16.0%
10	93	23.0%

Prior to testing study hypotheses, descriptive statistics were obtained for primary study variables using the Professional Quality of Life subscales and the Self-transcendence Scale which are summarized in Table 6. Compassion satisfaction raw scores ranged from a low of 6 to a high of 50, with a mean score of 42.7 (*SD*= 5.6). Burnout raw scores ranged from a low of 10 to a high of 39, with a mean score of 21.2 (*SD*= 5.1). Compassion fatigue raw scores ranged from a low of 10 to a high of 45 with a mean score of 22.7 (*SD*= 5.2). Utilization of interpretation guidelines from the ProQOL manual suggests that, on average, participants had moderate levels of compassion satisfaction, with few participants at either extreme. Notably, burnout and compassion fatigue were comparatively low for this sample, with average scores observed substantially below t-score cut-off guidelines for these scales. The cut off guideline for the burnout scale is 57 and the cutoff guideline for the compassion fatigue scale is 40. With regard to the Self-Transcendence Scale, scores were high (*M*=3.46, *SD*=0.35) on this 4-point scale.

Table 6.

Ranges, Means, and Standard Deviations for Pro-QOL Subscales and Self-transcendence Scale

	Range Low	Range High	Mean	Standard Deviation
ProQOL				
Compassion Satisfaction	6	50	42.7	5.6
Burnout	10	39	21.2	5.1
Compassion Fatigue	10	45	22.7	5.2
Self-Transcendence	1.87	4	3.46	0.35

In Table 7 are the frequencies and percentages for the individual questions on the Pro-QOL Scale. As can be seen in Table 7, the majority of respondents reported being happy with 84.4**%** (n=346) endorsing "often" or "very often" to question number 1, "I am happy"; 82.3% (n=336) endorsing "often" or "very often" to question number 20, "I have happy thoughts and feelings about those I help and how I could help them"; and 93.6% (n=381) endorsing "often" or "very often" to question number 30, "I am happy that I chose to do this work". The majority of respondents also reported high levels of satisfaction with 95.3% (n=391) endorsing "often" or "very often" to question number 3, "I get satisfaction from being able to help people", and 84.8% (n=346) endorsing "often" or "very often" to question number 18, "My work makes me feel satisfied".

Table 7

Frequencies and Percentages for Individual Questions on the Pro-QOL Scale

ProQOL Items	Never		Rarely		Sometimes		Often		Very often		Mean	SD
	N	%	N	%	N	%	N	%	N	%		
1. I am happy.	0	0	4	1.0	60	14.6	207	50.5	139	33.9	4.17	0.70
2. I am preoccupied with more than one person I help.	8	2.0	84	20.5	160	39	114	27.8	44	10.7	3.25	0.96
3. I get satisfaction from being able to help people.	0	0	1	0.2	18	4.4	128	31.2	263	64.1	4.59	0.59
4. I feel connected to others.	1	.2	7	1.7	62	15.1	169	41.2	171	41.7	4.22	0.78
5. I jump or am startled by unexpected sounds.	20	4.9	161	39.3	142	34.6	55	13.4	32	7.8	2.80	1.00
6. I feel invigorated after working with those I help.	1	.2	23	5.6	97	23.7	183	44.6	106	25.9	3.90	0.86
7. I find it difficult to separate my personal life from my life as a helper.	37	9.0	138	33.7	152	37.1	62	15.1	21	5.1	2.74	0.99
8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I help.	130	31.7	224	54.6	41	10.0	12	2.9	3	.7	1.86	0.76
9. I think that I might have been affected by the traumatic stress of those I help.	85	20.7	176	42.9	122	29.8	18	4.4	9	2.2	2.24	0.91
10. I feel trapped by my job as a helper.	185	45.1	158	38.5	52	12.7	11	2.7	4	1.0	1.76	0.85
11. Because of my helping, I have felt "on edge" about various things.	59	14.5	167	40.9	147	36.0	28	6.9	7	1.7	2.40	0.88
12. I like my work as a helper.	0	0	2	.5	40	9.8	166	40.7	200	49.0	4.38	0.68
13. I feel depressed because of the traumatic experiences of the people I help.	196	48.0	68	16.7	128	31.4	4	1.0	12	2.9	2.24	0.80
14. I feel as though I am experiencing the trauma of someone I have helped.	132	32.4	202	49.5	60	14.7	12	2.9	2	0.5	1.90	0.79

Table 7

Frequencies and Percentages for Individual Questions on the Pro-QOL Scale

ProQOL items	Never N	%	Rarely N	%	Sometimes N	%	Often N	%	Very often N	%	Mean	SD
15. I have beliefs which sustain me.	5	1.2	13	3.2	59	14.5	115	28.2	216	52.9	4.28	0.91
16. I am pleased with how I am able to keep up with helping techniques and protocols.	1	.2	5	1.2	74	18.1	201	49.3	127	31.1	4.10	0.75
17. I am the person I always wanted to be.	3	.7	16	3.9	106	26.0	199	48.8	84	20.6	3.85	0.82
18. My work makes me feel satisfied.	0	0	6	1.5	56	13.7	185	45.3	161	39.5	4.23	0.73
19. I feel worn out because of my work as a helper.	22	5.4	103	25.2	194	47.5	65	15.9	24	5.9	2.92	0.93
20. I have happy thoughts and feelings about those I help and how I could help them.	0	0	8	2.0	64	15.7	213	52.2	123	30.1	4.11	0.73
21. I feel overwhelmed because my work load seems endless.	17	4.2	110	27.0	178	43.7	70	17.2	32	7.9	2.98	0.96
22. I believe I can make a difference through my work.	0	0	3	.7	37	9.1	170	41.8	197	48.4	4.38	0.68
23. I avoid certain activities or situations because they remind me of frightening experiences of the people I help.	0	0	195	47.9	177	43.5	29	7.1	6	1.5	1.62	0.68
24. I am proud of what I can do to help.	2	0.5	1	.2	22	5.4	129	31.7	253	62.2	4.55	0.66
25. As a result of my helping, I have intrusive, frightening thoughts.	235	57.7	130	31.9	35	8.6	5	1.2	2	0.5	1.55	0.74
26. I feel "bogged down" by the system.	33	8.1	106	26.0	178	43.7	61	15.0	29	7.1	2.87	1.00
27. I have thoughts that I am a "success" as a helper.	1	.2	9	2.2	67	16.5	207	50.9	123	30.2	4.09	0.76
28. I can't recall important parts of my work with oncology patients.	125	30.7	196	48.2	62	15.2	16	3.9	8	2.0	1.98	0.89
29. I am a very caring person.	0	0	2	.5	16	3.9	127	31.2	262	64.4	4.59	0.59
30. I am happy that I chose to do this work.	0	0	2	0.5	24	5.9	100	24.6	281	69.0	4.62	0.62

In Table 8 are frequencies and percentages for the individual questions on the Self-transcendence Scale. As can be seen in Table 8, the majority of respondents described themselves positively as: "Helping others in some way" (with 82.9%, n=340, reporting "very much" to item number 8); "Having an ongoing interest in learning" (with 81.2%, n=333 reporting "very much" to item number 9); and "Sharing my wisdom or experience with others" (with 71.0%, n=291 stating "very much" to item number 6). Participants reported very much on "Finding meaning in my past experiences" (71.2%, n=292 on item number 7). Participants responses on this scale included some negative self-aspects with few 26.8% (n=110) endorsing "very much" to item number 13 "Letting others help me when I may need it". Only 27.6% (n=113) reported "very much" to item number 15 "Letting go of my past losses"; and only 30.5% (n=125) reported "very much" to item number 14 "Enjoying my pace of life". In table 9 are the correlation coefficients for the research questions and hypotheses.

Results for Research Questions/Hypotheses

Research Question 1. The first research question was: What is the level of self-transcendence, compassion fatigue, burnout, and compassion satisfaction in oncology nurses? This question was answered with descriptive statistics including ranges, means and standard deviations as presented in Table 6 and with the summary of correlation coefficients listed in Table 9. Results reveal that 21.7% (n=88) of respondents were at high risk for compassion fatigue (score ≥56) and 24.1% (n=98) of respondents were at high risk for burnout (score ≥56). On average, participants had moderate levels of compassion satisfaction (M=42.7, SD=5.6) and high levels of self-

transcendence (*M*=3.46, *SD*=0.35). Compassion fatigue scores ranged from 10 to 45

with a mean score of 22.7 (SD=5.2). Burnout scores ranged from 10-39 with a mean

score of 27 (SD=5.2).

Table 8

Frequencies and Percentages for Individual Questions on the Self-transcendence Scale

	Not at all		Very little		Somewhat		Very much			
Scale items	N	%	N	%	N	%	N	%	Mean	SD
1. Having hobbies or interests I can enjoy.	3	.7	31	7.6	123	30.0	253	61.7	3.53	0.67
2. Accepting myself as I grow older.	5	1.2	13	3.2	159	38.8	233	56.8	3.51	0.62
3. Being involved with other people or my community when possible.	6	1.5	54	13.2	184	44.9	166	40.5	3.24	0.73
4. Adjusting well to my present life situation.	3	0.7	13	3.2	199	48.5	195	47.6	3.43	0.59
5. Adjusting to changes in my physical abilities.	10	2.4	35	8.5	226	55.1	139	33.9	3.20	0.69
6. Sharing my wisdom or experience with others.	1	0.2	5	1.2	113	27.6	291	71.0	3.69	0.50
7. Finding meaning in my past experiences.	1	0.2	9	2.2	109	26.6	292	71.2	3.69	0.51
8. Helping others in some way.	1	0.2	4	1.0	66	16.1	340	82.9	3.82	0.41
9. Having an ongoing interest in learning.	1	0.2	3	0.7	73	17.8	333	81.2	3.80	0.44
10. Able to move beyond some things that once seemed so important.	2	0.5	15	3.7	180	43.9	213	52.0	3.47	0.59
11. Accepting death as a part of life.	1	0.2	12	2.9	117	28.5	281	68.5	3.66	0.53
12. Finding meaning in my spiritual beliefs.	10	2.4	39	9.5	123	30.0	238	58.0	3.44	0.76
13. Letting others help me when I may need it.	2	0.5	78	19.0	220	53.7	110	26.8	3.07	0.69
14. Enjoying my pace of life.	6	1.5	50	12.2	229	55.9	125	30.5	3.15	0.68
15. Letting go of my past losses.	2	0.5	45	11.0	250	61.0	113	27.6	3.16	0.62

Table 9.

Correlation Coefficients for Study Hypotheses

	Compassion Fatigue	Burnout	Compassion Satisfaction	Self-transcendence
Self-transcendence	-0.20***	-0.57***	0.53***	1.00
Compassion Satisfaction	-0.15	-0.51	1.00	
Burnout	0.60***	1.00		
Compassion Fatigue	1.00			

Note. *** $p < .001$.

Table 10

High Risk Scores for Compassion Fatigue and Burnout

	n	Percentage
Compassion fatigue (>=56)	88	21.7%
Burnout (>=56)	98	24.1%

Note. Scores >=56 place participant at high risk for scale.

Research Question 2/Hypothesis 1. The second research question was: What is the relationship between level of self-transcendence and compassion fatigue in oncology nurses? The associated study hypothesis posited that there is a negative relationship between self-transcendence and compassion fatigue in oncology nurses. This hypothesis was tested using a bi-variate correlation (*r*) to measure the strength and direction of the linear relationship between these two variables. The results indicate that there was a weak but statistically significant negative relationship between self-transcendence and compassion fatigue, $r(408) = -.20, p < 0.001; r^2 = 0.04$). Thus, the results provide some evidence to support this hypothesis.

Research Question 3/Hypothesis 2. The third research question was: What is the relationship between compassion fatigue and burnout in oncology nurses? The

associated study hypothesis predicted that there would be a positive relationship between compassion fatigue and burnout in oncology nurses. This hypothesis was examined using a bi-variate correlation (r) to examine the strength and direction of the linear relationship between these two variables. The results indicated that there was a moderate statistically significant positive relationship between these variables, with greater compassion fatigue being associated with greater burnout, r (408) = .60, $p < 0.001$; $r^2 = 0.36$). Thus, the results provide evidence to support this hypothesis.

Research Question 4/Hypothesis 3. The fourth research question was: What is the relationship between level of self-transcendence and burnout in oncology nurses? The associated study hypothesis predicted that there would be a negative relationship between self-transcendence and burnout in oncology nurses. This hypothesis was tested using a bi-variate correlation (r) to measure the strength and direction of the linear relationship between these two variables. The results indicate that there was a moderate, statistically significant negative relationship between self-transcendence and burnout, $r(408) = -.57$, $p < 0.001$; $r^2 = 0.33$). Thus, the results provide evidence to support this hypothesis.

Research Question 5/Hypothesis 4. The fifth research question was: What is the relationship between level of self-transcendence and compassion satisfaction in oncology nurses? The associated study hypothesis predicted that there would be a positive relationship between self-transcendence and compassion satisfaction in oncology nurses. This hypothesis was tested with a bi-variate correlation (r) to examine the strength and direction of the linear relationship between these two

variables. The results indicated that there was a moderate, statistically significant

positive relationship between self-transcendence and compassion satisfaction, $r(408)$

= .53, $p < 0.001$; $r^2 = 0.28$). Thus, the results provide evidence to support this

hypothesis.

 Research Question 6/Hypothesis 5. The sixth research question was: What are

the relationships among the primary study variables (compassion fatigue, burnout,

compassion satisfaction, and self-transcendence) and the demographic variables of

age, gender, years of oncology nursing experience, employment status, work setting,

type of patient population cared for by nurses, oncology certification status,

educational level, degree of life stress, overall health rating, and religion/spirituality

level? The fifth study hypothesis was that compassion fatigue, burnout, compassion

satisfaction, and self-transcendence would be related to the demographic variables. In

order to test this hypothesis, correlational analyses were done. In Table 11 are the

correlations between each demographic variable and the primary study variables. A

number of significant correlations emerged from this analysis. Specifically, when

considering the primary study variables: Higher compassion fatigue was correlated

with lower age, less years in oncology nursing, higher life stress, and lower overall

health rating; High burnout was correlated with lower age, less years in oncology

nursing**,** higher life stress, lower overall health rating, and lower religion/spirituality.

Higher compassion satisfaction was correlated with higher age, higher number of

years in oncology nursing, lower life stress, higher overall health rating, and higher

religion/spirituality. Higher self-transcendence was correlated with higher age, lower life stress, higher overall health ratings, and higher religion/spirituality.

Gender was not found to have any statistically significant relationships in this study. The demographic variables of employment status, work setting, patient population cared for by nurses, oncology certification status, and educational level were also not found to have any statistically significant relationships with the primary study variables (compassion fatigue, burnout, compassion satisfaction, and self-transcendence). However, there were statistically significant relationships found among demographic variables. Full-time employment status was correlated with inpatient (hospital) work setting. Oncology certification was correlated with lower stress levels. Other statistically significant relationships included higher overall health was correlated with higher educational levels, higher religion/spirituality, and lower life stress; Higher age was correlated with more years in oncology nursing, more employment (working full-time), inpatient work setting, higher religion/spirituality, no oncology certification, lower educational level, and lower life stress; Oncology certification was correlated with lower stress levels; More years in oncology nursing was correlated with inpatient work setting, care for adult patient populations, and no oncology certification.

Table 11.

Table of Intercorrelations Between Primary Study Variables and Demographic Variables

	ST	CS	BO	CF	Age	GEN	YIN	ES	WS	PP	OC	EL	LS	OHR	RS
1. Self-transcendence	1.00	0.53*	-0.57*	-0.20*	0.14**	-0.02	0.08	0.07	0.04	-0.09	-0.05	0.10	-0.27*	0.29*	0.46*
2. Compassion Satisfaction		1.00	-0.51*	-0.15*	0.13**	-0.07	0.11**	-0.01	0.05	-0.09	-0.06	0.09	-0.15*	0.21*	0.24*
3. Burnout			1.00	0.60*	-0.16*	0.08	-0.10**	-0.03	-0.08	0.00	0.02	-0.06	0.26*	-0.31*	-0.28*
4. Compassion Fatigue				1.00	-0.13**	0.08	-0.11**	-0.04	-0.03	0.01	0.07	-0.04	0.17*	-0.22*	0.01
5. Age					1.00	-0.06	0.56*	0.15*	0.20*	0.09	-0.30*	-0.15*	-0.13**	-0.03	0.20*
6. Gender						1.00	0.00	0.04	0.07	-0.02	-0.05	0.05	0.06	-0.07	-0.01
7. Years in Nursing							1.00	0.09	0.22*	0.15*	-0.45*	0.08	0.04	0.00	0.07
8. Employment Status								1.00	0.14**	0.08	-0.02	-0.04	-0.05	0.03	0.01
9. Work Setting									1.00	0.02	-0.13	-0.01	0.00	0.11	0.02
10. Patient Population										1.00	-0.01	0.02	-0.01	0.01	-0.04
11. Oncology Certification											1.00	-0.02	-0.10**	0.02	-0.04
12. Educational Level												1.00	0.00	0.15*	0.04
13. Life Stress													1.00	-0.15*	-0.05
14. Overall Health Status														1.00	0.21*
15. Religion/Spirituality															1.00

 * denotes p <.05; ** denotes p < .01; ST=Self-transcendence; CS=Compassion Satisfaction; BO=Burnout; CF=Compassion Fatigue; GEN=Gender; YIN=Years in Nursing; ES=Employment Status; WS= Work Setting; PP=Patient Population Cared for by Nurses; OC=Oncology Certification; EL=Education Level; LS=Life Stress; OHR=Overall Health Rating; RS=Religion/Spirituality

Exploratory Analyses. Additional exploratory analyses were also conducted

as part of this research. Specifically, the three continuous demographic variables of

life stress, overall health rating, and religion/spirituality were converted to discrete

variables of low (1 to 3), moderate (4 to 6), and high (7 to 10). In Table 12 are the

frequencies and percentages for these converted variables. Visual inspection of these

data indicate a broad variability of perceived life stress, with over forty percent

(41.5%, n=170) of respondents indicating moderate stress, one quarter (25.1%,

n=103) with low stress, and approximately one-third (32.2%, n=132) indicating high

stress. Health ratings were less variable and notably high, with the majority of

participants (81.7%, n=335) reporting high overall health. Similarly,

religion/spirituality was rated high by most participants (64.6%, n=265). Twenty

percent (n=82) indicated moderate religion/spirituality, and fewer participants

(14.1%, n=58) reported low spirituality.

In terms of trends that approached statistical significance in the present study,

p values of 0.06 or 0.07 would be considered trends towards statistical significance.

Study results either achieved significance (p<0.05) or did not. There were no trends.

Table 12.

Frequencies and Percentages for Converted Demographic Variables of Life Stress,

Overall Health, and Religion/Spirituality

Variable	Low (1-3)		Moderate (4-6)		High (7-10)	
	N	%	N	%	N	%
Life Stress	103	25.1	170	41.5	132	32.2
Overall Health	4	1.0	66	16.1	335	81.7
Religion/Spirituality	58	14.1	82	20	265	64.6

Additional inferential analyses were done to compare groups with low, moderate, and high ratings on these converted variables (life stress, overall health, and religion/spirituality) to the primary study variables (compassion fatigue, burnout, compassion satisfaction, and self-transcendence). Table 13 is a summary of these results. Results indicated that there were significant differences between participants reporting low, moderate, and high stress on self-transcendence, $F(2, 402) = 4.04$, $p = .018$, compassion satisfaction, $F(2, 402) = 4.78$, $p = .009$, burnout, $F(2, 402) = 13.7$, $p < 0.001$, and compassion fatigue, $F(2, 402) = 4.04$, $p = .018$. Low stress was associated with high compassion satisfaction and high self-transcendence while high stress was associated with high burnout and high compassion fatigue. Significant differences was also observed for health status for self-transcendence, $F (2, 402) = 3.89$, $p = .002$, compassion satisfaction, $F (2, 402) = 3.82$, $p = .023$, burnout, $F (2, 402) = 9.33$, $p < 0.001$, and compassion fatigue, $F (2, 402) = 3.83$, $p = .021$. High health ratings were associated with high compassion satisfaction and high self-transcendence, while low health ratings were associated with high compassion fatigue and burnout. Significant differences were also found for religion/spirituality, for compassion satisfaction, $F (2, 402) = 12.38$, $p < .001$ and burnout, $F (2, 402) = 14.64$, $p < 0.001$. High religion/spirituality was associated with high compassion satisfaction and low burnout. In Table 14 are the post-hoc comparisons for these variables. The post-hoc test used in the analysis was least square difference (LSD). Discrete scores were set for this analysis by performing a median split on the raw data and then examining the resulting categorical groups (low=1-3, moderate=4-6, and high=7-

10).Visual inspection of post-hoc results reveal significant differences across nearly all dependent variables. Specifically, the "low" to "high" comparisons typically reached significance, however, "low" to "moderate" and "moderate" to "high" typically did not achieve sufficient variance within these post-hoc comparisons. Where differences were observed, the mean differences represented approximately an 0.90 variance differential between comparisons.

Reliability and Validity of Measures

Reliabilities of the ProQOL instrument subscales within the present study of oncology nurses are lower than the data for the general helping professions sample listed by Stamm (2009). Current study results were: Compassion Satisfaction, Cronbach coefficient alpha = .64; Burnout, Cronbach coefficient alpha = .58; Compassion Fatigue, Cronbach coefficient alpha = .48). Stamm (2009) reported reliabilities for Compassion Satisfaction, Cronbach coefficient alpha = .88 (n=1130); Burnout, Cronbach coefficient alpha= .75 (n=976); and Compassion Fatigue, Cronbach coefficient alpha= .81 (n=1135). While Stamm's (2009) general sample data does include some data from nurses and other healthcare providers, it also includes data from therapists, social workers, and other professionals across various fields which likely accounts for the differences. Reliability data for the STS instrument within the present study was a Cronbach coefficient alpha = .68 for self-transcendence. This result in the present study of oncology nurses was lower than the reliability estimates found within the general sample which ranges from a Cronbach's coefficient alpha of r = .80 to r = .88 (Coward, 1990; Reed, 1989). These results were however similar to those of Hunnibell et al., 2008 who also reported a lower

Cronbach coefficient alpha = .77 in their study of oncology and hospice nurses. This study was not designed to determine/estimate psychometric validity.

Table 13

Analysis of Variance: Heath Status, Life Stress and Religion/Spirituality

		SS	df	Mean Square	F	*p*
Health status						
Compassion Satisfaction	Between	181.65	2.00	90.83	3.82[*]	0.023
	Within	9547.86	402.00	23.75		
	Total	9729.52	404.00			
Burnout	Between	453.53	2.00	226.76	9.33[*]	0.001
	Within	9769.77	402.00	24.30		
	Total	10223.29	404.00			
Self-transcendence	Between	204.64	2.00	102.32	3.89[*]	0.002
	Within	10592.16	402.00	26.35		
	Total	10796.80	404.00			
Compassion Fatigue	Between	2.35	2.00	1.18	3.83[*]	0.021
	Within	46.77	402.00	0.12		
	Total	49.12	404.00			
Life stress						
Compassion Satisfaction	Between	226.2	2.0	113.1	4.78[*]	0.009
	Within	9503.3	402.0	23.6		
	Total	9729.5	404.0			
Burnout	Between	652.5	2.0	326.3	13.7[*]	0.001
	Within	9570.8	402.0	23.8		
	Total	10223.3	404.0			
Self-transcendence	Between	212.8	2.0	106.4	4.04[*]	0.018
	Within	10584.0	402.0	26.3		
	Total	10796.8	404.0			
Compassion fatigue	Between	3.8	2.0	1.9	4.04[*]	0.018
	Within	45.4	402.0	0.1		
	Total	49.1	404.0			
Religion/spirituality						
Compassion Satisfaction	Between	564.41	2.00	282.20	12.38[*]	0.001
	Within	9165.11	402.00	22.80		
	Total	9729.52	404.00			
Burnout	Between	694.16	2.00	347.08	14.64[*]	0.001
	Within	9529.14	402.00	23.70		
	Total	10223.29	404.00			
Self-transcendence	Between	67.60	2.00	33.80	1.27	0.28
	Within	10729.20	402.00	26.69		
	Total	10796.80	404.00			
Compassion Fatigue	Between	9.18	2.00	4.59	46.21[*]	0.00
	Within	39.94	402.00	0.10		
	Total	49.12	404.00			

Note. [*]p < 0.001.

Table 14

Post Hoc Analyses for Low, Moderate, and High Scores on Life Stress, Health Status, and Religion/Spirituality

Dependent Variable	Comparison 1	Comparison 2	Mean Difference (I-J)	Std. Error
Life Stress				
Compassion Satisfaction	Low (1-3)	Moderate (4-6)	1.09	0.61
		High (7-10)	1.98**	0.64
	Moderate (4-6)	Low (1-3)	-1.09	0.61
		High (7-10)	0.89	0.56
	High (7-10)	Low (1-3)	-1.98**	0.64
		Moderate (4-6)	-0.89	0.56
Burnout	Low (1-3)	Moderate (4-6)	-1.89**	0.61
		High (7-10)	-3.36**	0.64
	Moderate (4-6)	Low (1-3)	1.89**	0.61
		High (7-10)	-1.47*	0.57
	High (7-10)	Low (1-3)	3.36**	0.64
		Moderate (4-6)	1.47*	0.57
Compassion Fatigue	Low (1-3)	Moderate (4-6)	-0.84	0.64
		High (7-10)	-1.90*	0.67
	Moderate (4-6)	Low (1-3)	0.84	0.64
		High (7-10)	-1.05	0.60
	High (7-10)	Low (1-3)	1.90*	0.67
		Moderate (4-6)	1.05	0.60
Self-transcendence	Low (1-3)	Moderate (4-6)	0.12**	0.04
		High (7-10)	0.25**	0.04
	Moderate (4-6)	Low (1-3)	-0.12**	0.04
		High (7-10)	0.13**	0.04
	High (7-10)	Low (1-3)	-0.25**	0.04
		Moderate (4-6)	-0.13**	0.04
Health Status				
Compassion Satisfaction	Low (1-3)	Moderate (4-6)	-1.36	2.51
	Moderate (4-6)	Low (1-3)	1.36	2.51
		High (7-10)	-1.66*	0.66
	High (7-10)	Low (1-3)	3.02	2.45
		Moderate (4-6)	1.66*	0.66
Burnout	Low (1-3)	Moderate (4-6)	0.19	2.54
		High (7-10)	2.98	2.48
	Moderate (4-6)	Low (1-3)	-0.19	2.54
		High (7-10)	2.79**	0.66
	High (7-10)	Low (1-3)	-2.98	2.48
		Moderate (4-6)	-2.79**	0.66
Compassion Fatigue	Low (1-3)	Moderate (4-6)	0.27	2.64
		High (7-10)	2.14	2.58

(continued)

Table 14

Post Hoc Analyses for Low, Moderate, and High Scores on Life Stress, Health Status, and Religion/Spirituality

Dependent Variable	Comparison 1	Comparison 2	Mean Difference (I-J)	Std. Error
	Moderate (4-6)	Low (1-3)	-0.27	2.64
		High (7-10)	1.86*	0.69
	High (7-10)	Low (1-3)	-2.14	2.58
		Moderate (4-6)	-1.86*	0.69
Self-transcendence	Low (1-3)	Moderate (4-6)	-0.05	0.18
		High (7-10)	-0.25	0.17
	Moderate (4-6)	Low (1-3)	0.05	0.18
		High (7-10)	-0.20**	0.05
	High (7-10)	Low (1-3)	0.25	0.17
		Moderate (4-6)	0.20**	0.05
Religion/Spirituality Compassion Satisfaction	Low (1-3)	Moderate (4-6)	0.18	0.82
		High (7-10)	-2.37**	0.69
	Moderate (4-6)	Low (1-3)	-0.18	0.82
		High (7-10)	-2.55**	0.60
	High (7-10)	Low (1-3)	2.37**	0.69
		Moderate (4-6)	2.55**	0.60
Burnout	Low (1-3)	Moderate (4-6)	0.14	0.84
		High (7-10)	2.83**	0.71
	Moderate (4-6)	Low (1-3)	-0.14	0.84
		High (7-10)	2.69**	0.62
	High (7-10)	Low (1-3)	-2.83**	0.71
		Moderate (4-6)	-2.69**	0.62
Compassion Fatigue	Low (1-3)	Moderate (4-6)	-1.41	0.89
		High (7-10)	-0.78	0.75
	Moderate (4-6)	Low (1-3)	1.41	0.89
		High (7-10)	0.63	0.65
	High (7-10)	Low (1-3)	0.78	0.75
		Moderate (4-6)	-0.63	0.65
Self-transcendence	Low (1-3)	Moderate (4-6)	-0.08	0.05
		High (7-10)	-0.36**	0.05
	Moderate (4-6)	Low (1-3)	0.08	0.05
		High (7-10)	-0.28**	0.04
	High (7-10)	Low (1-3)	0.36**	0.05
		Moderate (4-6)	0.28**	0.04

Note. $* p < 0.05$; $**p < 0.001$.

Additional Data

While not a qualitative study, in keeping with the Self-Transcendence Scale original

format, participants were offered one open-ended question to write any additional comments that may help the researcher to better understand their views. Out of the 405 participants, 23.5% (n=95) chose to respond to this question. After statistical consultation with qualitative research experts, comments were analyzed as nominal level data placed in topical categories to be counted by the researcher. Validity was checked by doing a content analysis. Content analysis is "a research technique for the objective, systematic, and quantitative description of the manifest content of communication" (Berelson, 1952, p. 74; Franzosi, 2004). Comments were sorted into six common topics which were: Validating the Need for this Research Study (n= 17); Persevering in this Difficult Line of Work (n=28); High Home Stress Environment (n=9); High Work Stress Environment (11); Suggestions for Future Research (n=7); and General Responses (n=23). In Table 15 are examples of responses in each category listed as direct quotes.

Table 15

Open Ended Responses by Topic

Topic	Response
Validating Need for this Research	
	This is a compelling survey and one that I hope as oncology nurses we learn more about some of the psychosocial issues we confront in our daily practice. Whether new or seasoned, I believe it should be addressed and talked about.
	I am pleased to see this subject studied. I believe I had compassion fatigue in my oncology work and home life at one time, but resolved it. I actively take measures now to stay engaged, but prevent getting worn out. I realize that my present per diem status makes that more accessible than working full time in oncology. I hope to stay working in oncology for another decade.
	…With the present economy, the state of health care, the sicker patients being seen in the hospital, and the demands of healthy living forces many of us to really press for limits, and priorities. Sometimes compassion gets lost in all of this and on the other hand it becomes enhanced as you realize we all have the same struggles.

Table 15

Open Ended Responses by Topic

Topic	Response
Persevering in this Difficult Line of Work	…Very necessary to study the effects of helping our patients and the negative implications that might arise. I never thought of how similar coping skills (patients and nurses) can benefit...we can choose to be overwhelmed by cancer and death, or find strength and meaning in our work and transcend to become even better nurses… I am very excited that you are exploring this subject. I know many nurses that internalize feelings from this profession, including myself…
	The amount of compassion you give to person after person on a daily basis has to be left at work. Family would never be able to comprehend all that goes on.
	I had a patient in 1979 that told me it didn't matter whether she lived or died but the fact that I was there to make the journey with her was what did matter.
	…I started working 12hr shifts every other weekend on the Hospital Oncology unit (10 years since hospital work). My full time job is a place of acceptance but everything else, especially hospital work, is highly anxiety producing, together w/ living alone now… I rarely attend church but do pray & read scripture & talk with a few friends about Godly things when we get together on occasion.
	So I don't burn out, I go to work with three goals. First, the things that are absolutely necessary to do, second, the things I should do for my patients, third, the times that I have the time to do the "extras". When I leave work I have accomplished one of my goals. Hopefully number three…But I don't leave feeling frustrated.
	I believe I was brought to this work …by God. I am completely suited to it and can be deeply and compassionately involved with my patients during the time I am with them, but then am able to "turn off" and focus on my life. My wife and teenage daughter do not like to hear anything about my work, which at times is very disappointing and frustrating. I feel I cannot discuss the stresses, joys or difficulties of it at home which also helps to keep separation between the difficult emotions of work. My personal life is very full and differently stressful…
	I think that staffing concerns and the degree of value felt by staff from providers, coworkers and administration influences fatigue factors and job satisfaction. However, it is our relationship with patients and their loved ones that helps me keep my passion for oncology nursing. They teach us so much about life and about dying, to appreciate the moments, to be gracious, to have gratitude, to be forgiving, to have faith and hope, and to be an advocate. My coworkers and I share the work load, share our experiences and take care of each other along with our patients. We are fortunate to have a chaplain that provides spiritual care, including Spiritual Healing Touch, to our patients and families and who is available to staff as well. We have a Cancer Guide as well who addresses emotional, financial, including insurance, work and disability concerns, home and family concerns as well as the transitional times along the cancer care continuum. She is a support to staff as well. Staff feel we are

Table 15

Open Ended Responses by Topic

Topic	Response
	lucky to have such a supportive team to work with. It makes a huge difference in our work place so that we can give the care we need to patients, to stay focused and balanced, in our work lives and our personal lives. It is an exciting specialty to be in. I wouldn't choose to be anywhere else.
	I believe as nurses we would be much better at handling the stress of our careers if we learned to care for each other as much as we care for our patients. Having time to spend with patients to talk and listen is extremely important. To care for a patient one needs to know them.
	… Love the oncology outpatient setting. My coworkers who are all at least 10 years at this clinic worry about me "burning out" I am taking their advice already. When a patient asks if I will take care of them every time, I now say no, little by little I see how they are right. I may have compassionate fatigue.
	I have enjoyed oncology nursing for 19 years. I focus most on the good I do for my patients rather than the loss experienced. Families often come back after the loss to express gratification for making their loved one have "good times getting chemo" and that's what makes this job great. We celebrate the success and smile about the great people we get to encounter that in other jobs you might not have the opportunity. I love oncology nursing!
	Life and age experiences have affected my attitude and thus care of my patients. I tell and show them my empathy for what they are going through. My expertise has grown through all my patient care. I love coming to work. I have a small patient population and I am able to get to know and help them and family…
	I have cried many times over the loss of a patient, but realize death is the natural end of life. I fall in love with all my patients, they are strong people.
	About 2 years ago, I did experience compassion fatigue and depression. Changing to part-time, taking time off, developing outside interests and staying connected spiritually has made me healthy again.
	I have worked 5 years in inpatient oncology setting in the hematology oncology division, where we put patients through bone marrow and stem cell transplants. It is a very fast pace and intense environment so I left and now work in an outpatient clinic where we enroll and treat patients on new clinical trials. I feel this is a better fit for me because you don't directly deal with patients passing away. I feel I will not suffer from "burnout".
	I bring a measure of understanding and life experience to my oncology patients that younger staff find difficulty doing because of the intense needs that these patients have to address.

Table 15

Open Ended Responses by Topic

Topic	Response
	Oncology nursing is the most rewarding and difficult job I have ever had. There are days I think I have the best job in the world and others I feel I have the worst. I believe the support of family, friends and co-workers is vital to surviving this kind of work.
	I feel I learned early on from my mentor to empathize with my patients and not sympathize. You can be much more helpful to them, if you look at it this way. I love being an oncology nurse. I can't think of another type of nursing I would ever want to do.
	I was taught early on in my career as a nurse that you get back what you give and this continually comes to my mind in that I feel that I get back so much more than I give. My age and the life lessons that I have learned are significant to the way I feel about being an oncology nurse, if I wasn't a spiritual person I can see that this job could eventually be an emotional drain on me. Although I get sad over seeing a patient suffer physically, but more often emotionally, I make such a difference in their lives that I am filled up with joy that I have this gift to offer to them when medication alone can't help. Thank you for the opportunity to participate in this survey.
	Oncology is a great place to be for someone who likes helping people. Patients are appreciative of someone who cares for them, especially when they are treated like they are part of your family. Having a good spiritual anchor is also necessary, without that some patient outcomes are just too much.
	I see many patients daily and so many have a strong connection with God whom I believe is in control of our destiny. Many are bitter. Many are afraid. To listen is the important part.
	I feel balance in life is the key to prevent compassion fatigue. When I'm not allowed to take a vacation or scheduled time off, I begin to burn out. My employer does not realize this. We are given the time, but not allowed to take it freely. It has to fit into their schedule. Now that I think about it, very little is said about compassion fatigue at work. That's probably why we have such a high turn-over rate. I work in an oncology-only hospital. You would think they would care more about nurse compassion fatigue. I know many nurses call in sick to take "mental days". This only leads to short staffing and creates greater fatigue on the rest of the staff. It's a vicious cycle. Thanks for letting me vent, but it's the truth.
	I work full time in Bone Marrow Transplant. I have done this for 5 years (ever since I graduated from college). I am in school part-time to be an NP. I use exercise to help keep my stress level down. I work out 4 times a week. I am not religious. I guess a bit spiritual. I tend to pull away from patients who are dying because I still am not comfortable with that.

Table 15

Open Ended Responses by Topic

Topic	Response
	…I recognized I was experiencing severe compassion fatigue, burnout (in addition to being an oncology nurse, I also am president of a cancer support ministry at my church). I started therapy at this time, and it has helped very much! I now can accept I don't have to be the savior of the world!
	I am sensitive to compassion fatigue. I've experienced it before at a previous job (floor nurse in a Bone Marrow Transplant Unit - left there after 3 years to go to a clinic, and now I'm in patient education at a community hospital),…I make special efforts now to make sure I give time to myself, too.
High Home Stress Environment	
	Currently my stress level is magnified due to death of my mother and an uncle both within 2 days of each other. The work environment here is very stressful due to threats of layoffs and shifting of workload to other areas that I had not previously had to do.
	I am suffering from my own chronic illness which has made it difficult for me to put 100% into my job of caring for oncology patients at this time. My husband died March 17th from gallbladder cancer. He was only 58 and just diagnosed in May. That's why I checked 10 for life stresses. We were married 29 years, together 31.
	The stress in my life is mostly from going to school to get my MSN/Education degree. Will be finished in spring 2012. Working full-time, family, and adding school work is a juggling act, but one I am managing. School activities do add stress to my life.
	Just lost my father-in-law to lung cancer. (4 weeks after his diagnosis). My role as an oncology nurse is in flux at this time.
	I am an 8 year breast cancer survivor that went to nursing school at age 46 to help others that have been diagnosed with cancer. I am currently studying to become oncology certified. The thing that bothers me the most sometimes is survivor guilt. I have lost a younger sister to GBM (Glioblastoma Multiform brain tumor) That has a significant impact.
	I have been an oncology nurse for 30 years now. I love it. These are the most caring and appreciative people to work with. I have more issues with my own personal stress outside of work issues, marriage, my employer, but not the actual nursing part of my job. I find great satisfaction in being a nurse, especially an oncology nurse. I even lost a spouse to cancer 16 years ago.

Table 15

Open Ended Responses by Topic

Topic	Response
High Work Stress Environment	
	Nurse to patient ratio is 6:1 is the primary cause of stress and worry in my care for my patients. I can't keep up!
	The longer you provide direct care to oncology patients - the more difficult it is to engage with sorrow over death. It almost makes you feel numb at times. Acute care BMT (bone marrow transplant) feels at times like we "kill them all" - it can give you a very distorted view of oncology care.
	I have worked night shift for 25 years. The intensity of care has increased due to increased knowledge of disease processes and the number of procedures/treatments available to our patients. We are often short-staffed making for longer shifts, My sleep is usually 5-6 hours between shifts which increases fatigue. I am currently looking for a quieter day shift position in care management.
	When I tell people that I work in Oncology, the most common comment I get back is "Isn't that depressing?" I feel that when any person hears the word "cancer" as a diagnosis, they eventually come to terms with the fact that, unless they are cured, that is how they will pass. Therefore, I feel that patients, after a while, become grateful and search for any extension to life that care can provide. Therefore, these patients are grateful. I like feeling like I helped them, and therefore this profession makes me proud. What is stressful is the general flow of work--we never get consistent breaks, and meals are fragmented and interrupted. Also, our backs ache because we stoop all day long, as the chairs don't rise. That is what is frustrating about my job.
	…Stress at work is great right now with potential budget cuts/layoff etc. This has a huge impact on caregivers.
	I think being overworked and under appreciated by employers makes this situation worse
	I left in patient oncology nursing after 1.5 years for oncology clinical research because the patient load and demands were too high. I was completely stressed out and run-down.
	I started as a chemotherapy infusion nurse last July…I believe that oncology nurses take themselves way too seriously. I have seriously considered going back to critical care because of the kind of nurses that I found as co-workers in oncology, almost all of them have this martyr thing going on that makes them tedious to work with. They are very fragile and very religious. I am a practicing Buddhist and I consider myself very spiritual, but not religious. They seem unable to approach their lives with a balance of work and life that is both compassionate and professional…

Table 15

Open Ended Responses by Topic

Topic	Response
	My work in oncology nursing has primarily been in stem cell transplant where patient stay is very long. This has been hard for me. I am looking for an oncology nursing position where patient contact time is not quite so intense.
Suggestions for Future Research	
	I was a little surprised that ethnicity and/or race was not included in the demographic information.
	You asked the question about certified nurses, but you limited it to Oncology related credentials. You should have broadened the question to include certifications in related fields especially since you asked if people work inpatient, outpatient, and hospice. It seemed narrow and limited and it will skew your results.
	Your question about work location does not include alternative work environments such as managed care or nurse navigation; both apply to me.
	Some of the questions are black or white. Sometimes there are grey areas in our lives. The category of education did not include if the person is working toward obtaining a higher degree or certification.
General Responses	
	…Oncology nursing is hard, but it is one of the best jobs in the world. The relationships we form, we touch other people in a very real way. I am proud to be an oncology nurse!
	I love what I do - I may on occasion wish for a day off but I haven't in over 19 years said I hate the thought of going to work!

Responses are listed as direct quotes from participants.

Also included at the end of the demographic section of the questionnaire was a question which asked respondents, "Prior to this study, have you ever heard of the term compassion fatigue?". Responses were: 78.3% (n=317) responded "yes" while 21.7% (n=88) responded "no". Oncology nurses are a vulnerable population at risk for compassion fatigue. There is a need for increased study, education, and awareness about compassion fatigue within this population as 21.7% of participants were not aware of the term compassion fatigue.

Chapter V

DISCUSSION OF RESULTS

This chapter will provide a discussion of the study, sample characteristics, and study findings. Study findings in relation to previous studies, the guiding theoretical frameworks, and the research questions and hypotheses will be discussed. Limitations, conclusions, implications for nursing, and recommendations for future research will also be addressed

Study

This study examined the emotional effects of oncology nursing. More specifically, this study examined the prevalence of compassion fatigue, burnout and compassion satisfaction in oncology nurses, as well as assessed the relationship between self-transcendence and compassion fatigue, burnout, and compassion satisfaction. The reason why this study was conducted is that literature shows oncology nurses are at risk for adverse emotional effects such as compassion fatigue and burnout, and gaps in the literature remain. Both compassion fatigue and burnout are distinct concepts that have the ability to cause adverse effects on oncology nurses and additional research was needed to not only distinguish between compassion fatigue and burnout and their prevalence within the oncology nursing population, but also to assess the influence of potential protective factors such as compassion satisfaction and self-transcendence. In this study items from the ProQOL-RV Professional Quality of Life Compassion Satisfaction, Compassion Fatigue, and

Burnout Subscales-Revision V (Stamm, 2010), the Self-transcendence Scale (Reed, 1987), and demographic questions designed by the researcher were utilized. A random sample of 467 oncology nurses working in direct patient care roles throughout the United States participated in the study however, out of the 467, sixty two had missing data for a final sample of 405 participants. Overall results of this study found low levels of compassion fatigue and burnout along with high levels of self-transcendence and compassion satisfaction, therefore suggesting self-transcendence and compassion satisfaction as protective factors.

Sample Characteristics

Four hundred and five oncology nurses participated in this study. The majority of the sample surveyed for this study was female (96.8%) and worked full-time (84.9%). These numbers are consistent with the findings from the 2008 National Sample Survey of Registered Nurses (http://bhpr.hrsa.gov/healthworkforce/rnsurvey2008.html) which found the majority (93%) of nurses to be female and working full-time (63.2%). The ages of nurses who participated were 48.6% under 50 (n=197) and 51.4% over 50 (n=208). These results are also consistent with the national average which lists 48 as the median age for practicing nurses (National Sample Survey of Registered Nurses, 2008).

The sample characteristics of the present study are similar to other recent studies in the literature, Hunnibell et al. (2008), in a study of self-transcendence and burnout in oncology and hospice nurses, found 94% of their sample to be female with an average age of 45.2 years, and 78.1% of oncology nurses worked full time. In a

recent study of compassion fatigue and burnout prevalence among oncology nurses conducted by Potter et al. (2010), a mean age of 39.9 years was found which is younger than that found in both the present study and that of Hunnibell. Quinal and colleagues also reported the presence of a younger sample in their study of secondary traumatic stress (compassion fatigue) in oncology staff, with a mean age of 36.6 years. Quinal et al. (2009) also reported a predominantly (90.7%) female sample. In a study of the experience of compassion fatigue in clinical oncology nurses conducted by Perry et al. (2011), a mean age in years is not reported however, authors state that 74% of respondents were 50 or younger.

Despite the present study results being consistent with national averages in several variables, there were also some differences. For example, nurses who participated in this study were more educated, with 72.4% having a BSN or higher, as opposed to the national average of only 50%, and 73.1% held certifications in their specialty as opposed to a national average of only 35.7% (National Sample Survey of Registered Nurses, 2008). The sample for this study came from an oncology nursing professional organization, and as such 100% of respondents were current members. These results were similar to those found in the study by McMullen (2007) in which 100% (n=38) of the sample were also current members of an oncology professional organization. Quinal et al. (2009) found 25.6% (n=11) of oncology staff studied were members of an oncology nursing society. Possible reasons for the low rate of professional organization membership in Quinal's sample is that it was younger and less educated, with an average age of 36.6 years and only 32.7% (n=16) reporting

having a bachelor's degree. In the study by Hunnibell and colleagues, 57.7% had a

BSN or above and similar results were found by Potter et al. (2010), who reported

55.5% of respondents had a BSN or higher level of education. Perry et al. (2011)

reported the highest numbers with 68% of their respondents reporting having had a

BSN or above. Race and marital status were two demographic factors that were not

investigated in the present study. Comments from oncology nurses suggest

race/ethnicity is a demographic variable which may be important to include in future

research with one nurse stating "I was a little surprised that ethnicity and/or race was

not included in the demographic information". Also, marital status may be a factor

contributing to high home stress with one respondent stating "My husband died

March 17th from gallbladder cancer. He was only 58, diagnosed in May. That's why I

checked 10 for life stresses. We were married 29 years, together for 31." and another

stating, "I work full time in a free-standing physician's office infusion room...due to

recent divorce, I started working…every other weekend on a hospital oncology

unit… My full time job is a place of acceptance but everything else, especially

hospital work, is highly anxiety producing, together w/ living alone now". Based on

these comments, marital status, including being widowed, warrants further study.

Study Findings for Theoretical Frameworks

This study was guided by Figley's compassion fatigue framework (Figley,

1995) and Reed's self-transcendence theoretical framework (1991b). Figley's

theoretical framework centers on the concepts of empathy and exposure and asserts

that caregivers (especially therapists) who are exposed to trauma and suffering on a

repeated basis and respond with empathy are at risk for compassion fatigue (Figley,

1995). Since empathy is a core aspect of providing oncology nursing care (Feldstein

& Gemma, 1995; Kash, Holland, Breitbart, Berenson, Dougherty, Ouellette-Kobasa,

& Lesko, 2000), and oncology nurses are exposed to repeated instances of trauma and

suffering, it was likely that oncology nurses would also be at risk. Results of this

research support this assertion as 21.7% (n=88) of respondents scored at high risk for

compassion fatigue. These results are consistent with previous studies of compassion

fatigue in oncology nurses such as McMullen (2007) who also found 21% of

oncology nurses studied at high risk for compassion fatigue and Potter et al. (2010)

who found 36% of their sample at high risk for compassion fatigue. Both Potter and

McMullen used the ProQOL to study compassion fatigue. Using the Secondary

Traumatic Stress Scale, Quinal and colleagues (2009) found a compassion fatigue

(secondary traumatic stress) rate similar to that which Potter found, with 38% having

moderate secondary traumatic stress. Also in a mixed nursing population study of

compassion fatigue, conducted by Hooper, Craig, Janvrin, Wetsel and Reimels

(2010), the oncology nurses studied reportedly reflected a risk for higher compassion

fatigue than did the nurses of other specialties studied.

   According to Vachon (2001), compassion fatigue can result from oncology

nurses' constant need to give and support others. Results of the present study showed

38.5% (n=158) of respondents endorsed "often" or "very often" to item number 2 on

the ProQOL which states "I am preoccupied with more than one person that I help"

and 20.2% (n=83) endorsed "often" or "very often" to item number 8 which states, "I

find it difficult to separate my personal life from my life as a helper". Historically, to suggest that oncology nurses have emotional needs and risks in response to the demands of caring for cancer patients has not been popular, even among the nurses themselves (Feldstein and Gemma, 1995). While oncology nurses may be uncomfortable with the fact that they, too, need care, the fact is that the work they do is hard and there can be adverse emotional effects from witnessing repeated death and suffering. In a study conducted by Rodriques and Chaves (2008), results showed that the main stress factor reported for oncology nurses was patient deaths. According to the literature, despite oncology nurses playing a pivotal role in providing end of life care, they are often excluded from grief resolution endeavors. These results were further supported by low endorsement of items indicative of grief work/support on the STS Scale, such as item number 13 "Letting others help me when I may need it" whereby only 26.8% (n=110) endorsed "very much" and item number 15 "Letting go of my past losses" whereby only 27.6% (n=113) endorsed "very much".

Figley's theoretical framework on compassion fatigue (1995) includes 11 variables which are used to help explain compassion fatigue risk. Some variables (such as patient exposure, empathetic response, compassion stress, prolonged exposure, traumatic recollections, and life disruptions) are seen as risk factors for compassion fatigue, while others (such as sense of achievement/satisfaction and disengagement) may be considered protective. While participants of this study scored high on many items reflecting variables seen as risk factors for compassion fatigue, they also scored high on items considered protective. Examples of risk factors include

patient exposure (which was demonstrated by the inclusion criteria that all respondents be direct caregivers) and prolonged exposure which was demonstrated by 60.2% (n=244) of nurses in this study reported working in oncology for 10 years or more. A risk factor of "life disruptions" was also demonstrated by 32.7% (n=132) of respondents in this study reporting a high degree of life stress outside of work, and many respondents mentioning stress as a common topic in their open ended responses. For example, one participant stated "Currently my stress level is magnified due to death of my mother and an uncle both within 2 days of each other", while another reported "I am suffering from my own chronic illness which has made it difficult for me to put 100% into my job of caring for oncology patients at this time". Examples from the open ended responses which reflected the protective factors of Figley's framework such as achievement/satisfaction are: "I have enjoyed oncology nursing for 19 years. I focus most on the good I do for my patients rather than the loss experienced. Families often come back after the loss to express gratification for making their loved one have "good times getting chemo" and that's what makes this job great. We celebrate the success and smile about the great people we get to encounter, that in other jobs you might not have the opportunity" and "I had a patient in 1979 that told me it didn't matter whether she lived or died but the fact that I was there to make the journey with her was what did matter".

Examples of study findings which reflect the protective factor of compassion satisfaction include: 95.3% (n=386) of respondents reported "often" or "very often" to the ProQOL item "I get satisfaction from being able to help people"; 84.8%

(n=346) of respondents reported "often" or "very often" to the ProQOL item number 18 which states "My work makes me feel satisfied"; and 93.6% (n=379) of respondents reported "often" or "very often" to the ProQOL item "I am happy that I chose to do this work". Study findings of compassion satisfaction mentioned in the open ended responses include: "…it is our relationship with patients and their loved ones that helps me keep my passion for oncology nursing. They teach us so much about life and about dying, to appreciate the moments, to be gracious, to have gratitude, to be forgiving, to have faith and hope, and to be an advocate"; "I have enjoyed oncology nursing for 19 years. I focus most on the good I do for my patients rather than the loss experienced. Families often come back after the loss to express gratification for making their loved one have "good times getting chemo" and that's what makes this job great. We celebrate the success and smile about the great people we get to encounter that in other jobs you might not have the opportunity. I love oncology nursing!", and "I was taught early on in my career as a nurse that you get back what you give and this continually comes to my mind in that I feel that I get back so much more than I give… Although I get sad over seeing a patient suffer physically but more often emotionally, I make such a difference in their lives that I am filled up with joy that I have this gift to offer to them when medication alone can't help".

Examples of study findings which reflect the protective factor of disengagement on the Pro-QOL included less than one-quarter (20.2%, n=83) reported "often" or "very often" to "I find it difficult to separate my personal life

from my life as a helper". This is also exhibited by examples of disengagement mentioned in the open ended responses such as : "I wouldn't want to do anything else but oncology nursing, but having a loving family, excellent hobbies and definite separation from work keeps balance…"; "…I am completely suited to it (oncology nursing) and can be deeply and compassionately involved with my patients during the time I am with them, but then am able to "turn off" and focus on my life.…"; and "About 2 years ago, I did experience compassion fatigue and depression. Changing to part-time, taking time off, developing outside interests, and staying connected spiritually has made me healthy again".

In addition to Figley's compassion fatigue framework, Reed's self-transcendence theory (Reed, 1991b) was also used to guide this study. Self-transcendence theory proposes self-transcendence is developed by introspective activities and concerns about the welfare of others and by integrating perceptions of one's past and future to enhance the present (Reed, 1991b). Self-transcendence is considered to be a characteristic of developmental maturity whereby there is an expansion of self-boundaries and orientation toward broadened life perspectives and purpose. In order to measure self-transcendence in this study, the Self-transcendence Scale (STS) was used. Results from the STS also contribute to the protective factor of disengagement, with 91.7% (n=376) reporting "somewhat" or "very much" on the Self-transcendence Scale to "Having hobbies or interests I can enjoy", and 88.6% (n=363) reporting endorsing "somewhat" or "very much" to "Letting go of past losses"; Results also showed that participants scored a high overall level of self-

transcendence (mean=3.46), and self-transcendence itself can help one disengage by integrating perceptions of one's past and future to rise above current difficulties and enhance the present.

Overall, respondents in this study had a high level of self-transcendence as indicated by a mean score =3.46 out of 4.0 on the STS. These results may be attributed to several factors. First, one of the concepts central to self-transcendence theory includes wellbeing or a sense of feeling wholeness and health. This was exhibited by 81.7% (n=335) of respondents in this study who rated their health as excellent with a rating of 7 to 10 on the 1 to 10 scale. High overall health ratings were also found in this study to be positively correlated with high self-transcendence levels with r=0.29, p<.05. A second concept central to self-transcendence theory includes vulnerability or an awareness of personal mortality (Reed, 1991b). Participants of this study demonstrated a clear presence of awareness of personal mortality with 97% (n=398) endorsing "somewhat" or "very much" in response to "Accepting death as a part of life" on the Self-transcendence Scale. Mortality was also mentioned in responses to the open ended questions. Examples include: "…I tend to pull away from patients who are dying because I still am not comfortable with that", and " I have cried many times over the loss of a patient, but realize death is the natural end of life…".

Spirituality and religion have also been linked to increased levels of self-transcendence in the literature (Hunnibell, et al., 2008) and results of the present study found similar results with 88% (n=361) of participants endorsing "somewhat"

or "very often" to "Finding meaning in my spiritual beliefs" on the Self-transcendence Scale. These results are further supported by 64.6% (n=265) of respondents reporting a high level to which religion/spirituality plays a role in their life, and 81.1% (n=331) reporting "often" or "very often" on the Pro-QOL Scale to "I have beliefs which sustain me". Religion and spirituality were also common topics in the open ended responses. Examples include: "… I rarely attend church but do pray and read scripture and talk with a few friends about Godly things when we get together on occasion."; I believe I was brought to this work …by God. I am completely suited to it and can be deeply and compassionately involved with my patients during the time I am with them…"; "… We are fortunate to have a chaplain who provides spiritual care, including Spiritual Healing Touch, to our patients and families and who is available to staff as well…"; " …if I wasn't a spiritual person, I can see that this job could eventually be an emotional drain on me…"; "… Having a good spiritual anchor is also necessary, without that some patient outcomes are just too much."; "I see many patients daily and so many have a strong connection with God whom I believe is in control of our destiny…"; "I am not religious. I guess a bit spiritual."; and "…in addition to being an oncology nurse, I also am president of a cancer support ministry at my church…".

High overall religion/spirituality ratings were found in this study to be positively correlated with high self-transcendence levels (r=0.46, p<.05). Results of this study are consistent with the work of Hunnibell and colleagues (2008) who found a high level of self-transcendence among oncology nurses (3.37 on the STS), and

high religion/spirituality ratings with 69% of their sample reporting

religion/spirituality was "very important".

Self-transcendence is in part defined as a characteristic of developmental

maturity and just over half the sample (50.2%, n=203) was aged 50 or older. Higher

age was found in this study to be positively correlated with high self-transcendence

levels (r=0.14, p<.05). These results are consistent with previous studies which also

linked higher age to higher self-transcendence (Reed, 1986, 1991a; Ellermann &

Reed, 2001). In comparing their findings with other studies, Ellermann and Reed

(2001) found that self-transcendence was higher among groups of older participants,

although still significant among the middle-aged participants. In the present study,

several respondents mentioned age in their open ended responses. Examples include:

"Life and age experiences have affected my attitude and thus care of my patients…";

"I bring a measure of understanding and life experience to my oncology patients that

younger staff find difficult to do because of the intense needs that these patients have

to address"; and "I was taught early on in my career as a nurse that you get back what

you give, and this continually comes to my mind in that I feel that I get back so much

more than I give. My age and the life lessons that I have learned are significant to the

way I feel about being an oncology nurse…".

In summary, this study was guided by Figley's compassion fatigue theoretical

framework (Figley, 1995) and Reed's self-transcendence theoretical framework

(1991b). Study results obtained through the use of study instruments and an open

ended question provided some support for hypotheses developed from these theories.

Study Findings for Research Questions and Hypotheses

Research Question 1.

The first research question was: What is the level of self-transcendence, compassion fatigue, burnout, and compassion satisfaction in oncology nurses? This question was answered with descriptive statistics including ranges of means and standard deviations with results revealing that 21.7% (n=88) of respondents were at high risk for compassion fatigue and 24.1% (n=98) of respondents were at high risk for burnout. On average, participants had moderate levels of compassion satisfaction (M=42.7, SD=5.6) and high levels of self-transcendence (*M*=3.46, *SD*=0.35).

Research Question 2 and Hypothesis 1

The second research question was: What is the relationship between level of self-transcendence and compassion fatigue in oncology nurses? The associated study hypothesis posited that there is a negative relationship between self-transcendence and compassion fatigue in oncology nurses. It was expected that oncology nurses with high levels of self-transcendence would have low levels of compassion fatigue, therefore supporting a negative relationship. This hypothesis was tested with bivariate correlation and results supported the hypothesis. As self-transcendence increased in this sample, compassion fatigue decreased. A statistically significant low/weak negative correlation between these two variables was shown with $r(408) = -.20, p < 0.001; r^2 = 0.04$ (= 4% shared variance). Thus, the results provide some evidence to support this hypothesis.

Results of this study showed the study nurses had high levels of self-transcendence with a mean average score of 3.46 on the STS (Reed, 1987), and a low (21.7%,n=88) number of nurses studied showed a high risk for compassion fatigue based on their scores on the Pro-QOL (Stamm, 2009). While no other studies currently exist in the literature which assessed the relationship between self-transcendence and compassion fatigue, a study by Hunnibell et al., (2008) did also assess self-transcendence in oncology nurses. Results of the present study were similar to those found by Hunnibell and colleagues, where the mean score on the STS was also high at 3.37 indicating a high level of self-transcendence. With the exception of Hunnibell et al., (2008), no other studies on self-transcendence in oncology nurses were found in the literature, and no studies were found that assess the relationship between self-transcendence and compassion fatigue in any other populations. Future research is needed in this area as gaps in knowledge exist on self-transcendence in the literature.

Compassion fatigue prevalence results in this study (21.7%) were found to be similar to results of McMullen (2007), who also studied oncology direct care nurses. They reported an overall rate of 21 % (n=8) in their sample to be at risk for compassion fatigue. Reasons for this similarity may be that McMullen's sample also consisted of oncology nurses who worked in direct patient care roles and were members of an oncology nursing professional organization. Compassion fatigue results of the present study were lower than the results found by Potter and colleagues (2010) (21.7% versus 36%). Reasons for the higher compassion fatigue risk in the

Potter and colleagues sample may be attributed to the sample consisting of not only

nurses, but also doctors, radiology technicians, and other non-nursing oncology

personal who all worked in one Midwestern cancer center. Similar to Potter et al

(2010), Quinal and colleagues (2009) found a compassion fatigue (secondary

traumatic stress) rate of 38%. Reasons for this similarity may be that this study,

though predominantly nursing (76.7%), also included non-nursing oncology staff,

such as nursing assistants and unit secretaries. In a mixed nursing population study of

compassion fatigue conducted by Hooper, Craig, Janvrin, Wetsel and Reimels (2010),

oncology nurses had higher risk for compassion fatigue than the other specialties

studied although an exact rate was not published.

Research Question 3 and Hypothesis 2

The third research question was: What is the relationship between compassion

fatigue and burnout in oncology nurses? The associated study hypothesis predicted

that there would be a positive relationship between compassion fatigue and burnout in

oncology nurses therefore it was expected that oncology nurses with high levels of

compassion fatigue would have high levels of burnout. This hypothesis was examined

using a bi-variate correlation (r) to examine the strength and direction of the linear

relationship between these two variables. The results indicated that there was a

moderate, statistically significant positive relationship between these variables, with

greater compassion fatigue associated with greater burnout, r (408) = .60, $p < 0.001$;

$r^2 = 0.36$). Thus, the results provide support for this hypothesis. In this study, the R^2

meaningfulness (amount of variance) results for question #3/Hypothesis #2 revealed

1/3 covariance between compassion fatigue and burnout. Results indicated that there is overlap between the two constructs of compassion fatigue and burnout. However, this does not imply that they are one in the same. An alternative explanation is that each share variance with a third (perhaps unidentified construct).

Overall results of this study showed 21.7% (n=88) of respondents at high risk for compassion fatigue, and 24.1% (n=98) of the sample at high risk for burnout using the Pro-QOL Scale. The results in the present study are further supported by similar to results found by Perry (2010) who showed that 36% (n=55) of the sample was at high risk for compassion fatigue and 38% (n=58) of respondents were at high risk for burnout using the Pro-QOL Scale. While a second study by McMullen (2007) also used the Pro-QOL Scale, published results list a compassion fatigue risk of 21% (n=8), and a burnout risk of 36% (n=14). Whereas burnout is a result of organizational factors, there may have been some common geographical or organizational factors within McMullen's small sample to account for this result. All of the participants in McMullen's study were members of the Oncology Nursing Society's Mercer County New Jersey local chapter. Being that membership criteria for this local chapter included living in one New Jersey county which encompasses both inner city and upper-middle class suburban settings, geographic and organizational factors may have contributed to higher burnout in nurses.

Research Question 4 and Hypothesis 3

The fourth research question was: What is the relationship between level of self-transcendence and burnout in oncology nurses? The associated study hypothesis

predicted that there would be a negative relationship between self-transcendence and burnout in oncology nurses therefore it was expected that oncology nurses with high levels of self-transcendence would have low levels of burnout. This hypothesis was tested using a bi-variate correlation (r) to measure the strength and direction of the linear relationship between these two variables. The results indicate that there was a moderate, statistically significant negative correlation between self-transcendence and burnout, $r(408) = -.57$, $p < 0.001$; $r^2 = 0.33$). Thus, the results provide evidence to support this hypothesis. As self-transcendence increased in this sample, burnout decreased.

The results of this study are consistent to those of Hunnibell and colleagues (2008), in which self-transcendence was also found to have a significant negative correlation with burnout in a sample of hospice and oncology nurses. Hunnibell and colleagues (2008) used the STS and the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1996). In Hunnibell and colleagues (2008) study, oncology nurses had a higher rate of overall burnout (48%, n=153) and lower levels of self-transcendence than the hospice nurses (40%, n=98) studied, therefore their results suggested self-transcendence as a potential protective factor against burnout.

Research Question 5 and Hypothesis 4

The fifth research question was: What is the relationship between level of self-transcendence and compassion satisfaction in oncology nurses? The associated study hypothesis predicted that there would be a positive relationship between self-transcendence and compassion satisfaction in oncology nurses therefore it was

expected that oncology nurses with high levels of self-transcendence would have high

levels of compassion satisfaction. This hypothesis was tested with a bi-variate

correlation (*r*) to examine the strength and direction of the linear relationship between

these two variables. The results indicated that there was a moderate significant

positive correlation between self-transcendence and compassion satisfaction, $r(408) =$

.53, $p < 0.001$; $r^2 = 0.28$). Thus, the results provide evidence to support this

hypothesis.

Specific compassion satisfaction scores on the Pro-QOL ranged from a low of

6 to a high of 50, with a high mean score of 42.7 (*SD*= 5.6). These results are similar

to those found by Potter (2010), which showed an average compassion satisfaction

score of 38.3 (SD=7.2) and McMullen (2007) who showed an average compassion

satisfaction score of 37(SD not reported) using the Pro-QOL. Stamm (2009) reported

an average score among all previous users across varying disciplines of the ProQOL

to be 37, thus demonstrating a higher-than-average rate of compassion satisfaction

among most of the oncology staff studied.

In regard to the Self-Transcendence Scale, scores for self-transcendence were

also high (*M*=3.46, *SD*=0.35) on the STS. Current study findings were similar to the

results found by Hunnibell and colleagues (2008) in oncology nurses, who reported a

mean score of 3.37 on the Self-transcendence Scale. While Hunnibell and colleagues

state that this STS Scale result was lower than that of the hospice nurses studied (3.37

as opposed to 3.49), the self-transcendence score for oncology nurses was still

considered high by STS standards. With the exception of Hunnibell et al., (2008), no other studies of self-transcendence in oncology nurses were found in the literature.

Research Question 6 and Hypothesis 5

The sixth research question was: What are the relationships among the primary study variables (compassion fatigue, burnout, compassion satisfaction, and self-transcendence) and the demographic variables (age, gender, years of oncology nursing experience, employment status, work setting, type of patient population cared for by nurses, oncology certification status, educational level, degree of life stress, overall health rating, and religion/spirituality level)? The fifth hypothesis examined if there was a relationship between the primary study variables (compassion fatigue, burnout, compassion satisfaction, and self-transcendence) and demographic factors (age, gender, years of oncology nursing experience, employment status, work setting, type of patient population cared for by nurses, oncology certification, educational level, degree of life stress, overall health rating, and religion/spirituality level). For hypothesis 5, it was expected that levels of compassion fatigue, burnout, compassion satisfaction, and self-transcendence would be related to the demographic factors of age, gender, years of oncology nursing, employment status, work setting, type of patient population, oncology certification, educational level, degree of life stress, overall health rating, and religion/spirituality level.

In order to test this hypothesis, intercorrelation analyses were conducted and a number of significant correlations emerged. Specifically, when considering the primary study variables: High compassion fatigue was correlated with lower age, less

years in oncology nursing, higher life stress, and lower overall health rating. This finding is important as it helps to identify a profile of oncology nurses who may be at higher risk for compassion fatigue.

When considering the primary variables in this study, high burnout was correlated with lower age, less years in nursing, and higher life stress. In addition, high burnout was also correlated with lower overall health ratings and lower religion/spirituality. High compassion satisfaction and high self-transcendence were both positively correlated with higher age, higher overall health rating, higher religion/spirituality, and lower life stress. High compassion satisfaction was also positively correlated with higher number of years in nursing.

Gender was not found to have any statistically significant relationships in this study or in any of the other recent studies reviewed. This may be due to the fact that small numbers of men participated, such as 3.2% (n=13) in this study. While the demographic variables of employment status, work setting, patient population cared for by nurses, oncology certification status, and educational level were not found to have any statistically significant relationships with the primary study variables (compassion fatigue, burnout, compassion satisfaction, and self-transcendence), there were some statistically significant relationships found among the demographic variables. Examples of these relationships include Higher overall health was correlated with higher educational levels, higher religion/spirituality, and lower life stress; Higher age was correlated with higher years in oncology nursing, more employment (working full-time), inpatient work setting, higher religion/spirituality,

no oncology certification, lower educational level, and lower life stress; Oncology certification was correlated with lower stress levels; More years in oncology nursing was positively correlated with work setting, caring for adult patient populations, and no oncology certification.

Additional results were obtained for hypothesis 5 from the open-ended comments from participants. In keeping with the original design of the Self-transcendence Scale (Reed, 1987), an additional question which was open ended was asked. Participants were asked to provide any additional comments that may help the researcher to better understand their views. Comments included six topic areas from the 23.5% (n=95) who chose to answer this question. Topic areas included: Validating the Need for this Research Study (n= 17); Persevering in this Difficult Line of Work (n=28); High Home Stress Environment (n=9); High Work Stress Environment (11); Suggestions for Future Research (n=7); General Responses (n=23).

The category of "Persevering in this Difficult Line of work" had the most comments which were similar to some of the areas found in a qualitative study by Perry (2008) which looked at how exemplary oncology nurses seem to avoid compassion fatigue. The three primary themes that arose from the data in Perry's study were: experiencing moments of connection with patients, making moments matter with patients, and having energizing moments with patients (Perry, 2008). Examples of topics in the current study similar to themes found by Perry (2008) include: "I believe I was brought to this work…by God. I am completely suited to it

and can be deeply and compassionately involved with my patients during the time I

am with them" (Experiencing Moments of Connection); "I had a patient in 1979 that

told me it didn't matter whether she lived or died but the fact that I was there to make

the journey with her was what did matter."(Making Moments Matter with Patients);

"I have enjoyed oncology nursing for 19 years. I focus most on the good I do for my

patients rather than the loss experienced. Families often come back after a loss to

express gratification for making their loved one have good times getting chemo and

that's what makes this job great" (Having Energizing Moments with Patients).

Similar comments from oncology nurses whose lived experiences encompassed these

three themes were found to facilitate the avoidance of compassion fatigue in Perry's

2008 study. The fact that similar topics previously identified as protective by Perry

(2008) came up in this present research may help account for the relatively low rate

(21%) of compassion fatigue.

Also included at the end of the demographic section of the questionnaire was

a question in which respondents were asked prior to this study, had they ever heard of

the term compassion fatigue. Results of this study showed 78.3% (n=317) responded

"yes" while 21.7% (n=88) responded "no". These results show increase in the study

sample an improvement, since a similar question was asked of oncology nurses by

McMullen in 2007, and less than half (47% n=16) of oncology nurses studied had

heard of the term. However, whereas oncology nurses are theoretically a vulnerable

population for compassion fatigue, there is still a demonstrated need for increased

study, education, and awareness within this population about compassion fatigue. In

summary, six research questions and five hypotheses were supported within the present study. Comments by participants provided support for the presence of compassion fatigue, burnout, and compassion satisfaction in this population.

Study Strengths

Strengths of this study identified by the researcher include it utilized a national, randomly selected sample. Results may be generalized to United States oncology nurses who are members of the Oncology Nursing Society who have the same demographic characteristics as the sample studied. National samples are important in nursing research as working conditions, educational levels, attitudes, and access to resources may vary greatly among different geographic regions in the United States. (Spetz, 2010). Randomization of the sample is a strength of this study as with random sampling, each element of the population has an equal, independent chance of being selected (Polit & Beck, 2013). Randomization increases the likelihood of a representative sample of oncology nurses which increases the generalizability of the findings to oncology nurses who fit the characteristics of the sample investigated in this study. Previous studies have been limited to the use of convenience sampling (McMullen, 2007; Perry, 2008; Potter et al., 2010, 2013).

Other strengths of the present study include that it was conducted using instruments that have established reliability and validity. The scales of the ProQOL have good reliability and have been found to have good construct validity, with each domain assessing separate constructs (Stamm, 2009, p. 14). The construct validity and reliability of the STS has also been established (Reed, 2003). Reliable and valid

instruments help to ensure the accurate measurement of the concepts being investigated. This study confirmed moderate reliability of the STS and the ProQOL Revision-V instruments using a randomized oncology nursing sample.

Results of this study also added to the body of knowledge on factors contributing to high risk of compassion fatigue and burnout in oncology nurses. These factors included lower age, less years as a nurse, higher life stress, and lower overall health ratings, as well as lower religion/spirituality for burnout. Findings provide support for specific components of the theoretical frameworks used in this study of oncology nurses. Components of Figley's compassion fatigue concept and Reed's self-transcendence concept were both supported by responses on the ProQOL and STS instruments, as well as the anecdotal data collected via the open ended responses. Many of the participants in the present study scored high on several items reflecting variables seen as risk factors for compassion fatigue in Figley's theoretical framework such as patient exposure (all respondents were direct caregivers), prolonged exposure (majority of participants reported working in oncology for 10 years or more), and "life disruptions" (as evidenced by reported high degrees of life stress outside of work, and many respondents mentioning stress as a common topic in their open ended responses). Participants also scored high on items considered protective for compassion fatigue such as compassion satisfaction, and ability to disengage.

Overall, respondents in this study had a high level of self-transcendence as indicated by a mean score =3.46 out of 4.0 on the STS. The results of respondents in

this study also scored high on the three major self-transcendence theoretical areas namely wellbeing (overall health), awareness of personal mortality (ie, accepting death as a part of life), and religion/spirituality. This data together with the data obtained from the demographic questions for the study together help add to the knowledge on factors contributing to and protecting against compassion fatigue and burnout.

Study Limitations

Limitations of this study included methodological issues in regards to the sample. First, the sample came from a nursing professional organization. Nurses who join professional organizations may have different characteristics than those nurses who don't belong to professional organizations, such as a higher degree of professional interest (due to their voluntary nature), more financial resources (ability to pay membership costs), and more available free time (due to the time commitment to participate in ONS organization meetings). Nurses who are not members of a professional organization, such as ONS, may have answered the questions differently, and this limits the generalizability of the findings to members of the Oncology Nursing Society who have the same demographic characteristics as the sample studied, and not other nonmember oncology nurses, or to other specialties in nursing. Secondly, the use of an e-mail survey may have had an impact on some of the responses, as not all members of ONS had e-mail addresses on file. Those without e-mail addresses were not part of the potential participants used for the random sample and they may have answered questions differently. Also, while the study did consist

of a national random sample of oncology nurses living in the United States, there was no demographic question to assess what region of the United States participants lived in and therefore, researchers could not assess potential regional differences when interpreting responses. Out of the 2,000 oncology nurses solicited, only 467 (23.4%) responded. Inspection of the collected data revealed 62 cases with multiple missing data pieces on primary study variables which were eliminated, thus leaving a final sample of only 405 (20.3%). Nurses who were truly suffering from symptoms of compassion fatigue and burnout may not have taken the time to participate in the study. This study relied on participant self-report and measured compassion fatigue, burnout, and compassion satisfaction at a single point in time (the past 30 days) therefore, there is a possibility that respondents' perceptions could change over time due to changes in individual and workplace circumstances. Therefore, a longitudinal study may be useful in the future. It should also be noted that despite the established reliability and validity of the Pro-QOL tool, it is not diagnostic and that there are no official diagnoses in the International Statistical Classification of Diseases and Health Related Problems 10th Revision (ICD-10) or in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, 2000) for compassion fatigue.

There were several limitations identified by participants in the open ended comment section. These limitations included: not including a question on race/ethnicity, not assessing any additional nursing certifications other than those in oncology, and not including categories for nurses to check who are currently in the process of obtaining a higher degree or certification. Other limitations were: not

including categories for alternative work environments such as managed care or nurse navigator. As per the comments, some respondents felt as though having this additional data collected could have better explained their responses.

Summary

In summary, oncology nurses work in an emotionally demanding profession in which they may witness repeated episodes of patient suffering and death placing them at risk for adverse emotional effects such as compassion fatigue and burnout. Despite this risk, many oncology nurses describe a powerful sense of satisfaction with their work, known as compassion satisfaction. Self-transcendence has previously been shown to have protective abilities against the adverse emotional effect of burnout. The purpose of this study was to assess the prevalence of compassion fatigue, burnout, and compassion satisfaction among oncology nurses in the United States, and the relationship among self-transcendence and compassion fatigue, burnout, and compassion satisfaction. The relationship among compassion fatigue, burnout, compassion satisfaction, self-transcendence and demographic factors were explored. Hypotheses investigated in this study were: there would be a negative relationship between self-transcendence and compassion fatigue; a positive relationship between compassion fatigue and burnout; a negative relationship between self-transcendence and burnout; and a positive relationship between self-transcendence and compassion satisfaction in oncology nurses. Levels of compassion fatigue, burnout, compassion satisfaction, and self-transcendence were hypothesized to be related to demographic variables, namely age, gender, years in oncology

nursing, employment status, work setting, type of patient population cared for by

nurses, oncology certification, educational level, life stress, health status, and

religion/spirituality. The study used a descriptive correlational design. A national

random sample of 405 nurses who were members of an oncology nursing professional

organization and worked in direct patient care roles were studied. Figley's

Compassion fatigue and Reed's Self-transcendence theoretical frameworks were used

in this study. Instruments were: the Professional Quality of Life Compassion

Satisfaction, Compassion Fatigue, and Burnout Subscales-Revision V (ProQOL-RV);

the Self-transcendence Scale (STS); and 12 demographic questions. Instruments were

administered online via Survey Monkey. Data were analyzed using descriptive

statistics, correlational analyses, and analysis of variance (ANOVA). A $p < .05$ level of

significance was used. Results indicated that the study hypotheses were supported.

There was a significant negative correlation between self-transcendence and

compassion fatigue; a significant positive correlation between compassion fatigue and

burnout with greater compassion fatigue being associated with greater burnout. There

was a significant negative correlation between self-transcendence and burnout, and a

positive correlation between self-transcendence and compassion satisfaction.

Statistically significant correlations were found among compassion fatigue, burnout,

compassion satisfaction, and age, nursing experience, life stress, health rating, and

religion/spirituality. Low levels of compassion fatigue and burnout were associated

with high levels of self-transcendence and compassion satisfaction. Findings suggest

self-transcendence and compassion satisfaction are possible protective factors against compassion fatigue and burnout.

Conclusions

Overall results of this study found low levels of compassion fatigue and burnout along with high levels of self-transcendence and compassion satisfaction among oncology nurses. Results of this study are important and contribute to nursing and healthcare in several ways. Potential risk for adverse emotional effects such as compassion fatigue and burnout in oncology nurses has great significance to society. Previous literature reported that caregivers suffering from compassion fatigue may not be able to provide the same level of empathy and quality of care as nurses not experiencing compassion fatigue or burnout. Compassion fatigue can result in reduced patient satisfaction, increased medical errors, and turnover (Pfifferling & Gilley, 2000). Previous oncology nursing literature also cites burnout as having the potential to result in similar adverse outcomes such as reduced patient satisfaction, decreased productivity, and increased turnover (Leiter, Harvie, & Frizzell, 1998; Potter, et al, 2010). Job-related burnout among nurses has also been recently linked to increased healthcare-associated infection rates which cost hospitals millions of dollars annually (Cimiotti, Aiken, Sloane, & Wu, 2012). Burnout has been identified as the result of organizational stressors faced by oncology nurses such as a very high workload, insufficient training, or a non-supportive work environment, and compassion fatigue has been identified as the result of emotional stressors such as bearing witness to patients' trauma, suffering, and death. While the two concepts are

distinct (Alkema, Linton, & Davies, 2008) and differ in etiology, onset, impact, and treatment, it is important to note that this research showed a statistically significant positive relationship between the two. Although both compassion fatigue and burnout have the ability to cause adverse emotional effects, there is still no professional standard of practice in place for education, assessment, prevention, or treatment within the oncology nursing profession for compassion fatigue or burnout.

It had been suggested in the literature that self-transcendence may act as a potential protective factor against burnout and be useful in helping oncology nurses maintain long-term ability to deal with the day-to-day stresses to which they are exposed (Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008). The present study findings also suggest self-transcendence as a potential protective influence on burnout.

The relationship between self-transcendence and compassion fatigue had yet to be explored prior to this study. Self-transcendence was also found to be protective against compassion fatigue. A statistically significant positive correlation was also found in this study between self-transcendence and compassion satisfaction, suggesting compassion satisfaction's protective properties. No prior research studies were found in the literature which explored the relationship between self-transcendence and compassion fatigue or the relationship between self-transcendence and compassion satisfaction among oncology nurses or any other populations. Thus, this study added to the body of knowledge on the relationship between self-

transcendence and compassion fatigue as well as self-transcendence and compassion satisfaction in oncology nurses.

Recommendations for Future Research

Recommendations for future research include additional research on compassion fatigue, burnout, compassion satisfaction, and self-transcendence in oncology nurses. While this was not an intervention study, findings indicate that there was compassion fatigue and burnout in the participants in this study. Compassion satisfaction and self-transcendence were also found in study participants and findings suggest that they were protective factors against compassion fatigue and burnout. Future research should focus on investigating other potential protective factors for preventing the development of compassion fatigue and burnout such as religion and spirituality.

The current study design was cross sectional and included participants' feelings at one point in time. Future research could include a longitudinal study that could better assess participants' level of compassion fatigue, burnout, compassion satisfaction, and self-transcendence over time. A study of new oncology nurses followed over time could be conducted in order to assess risk factors. Future research should replicate the current study with a larger national sample in order to confirm findings and assess possible causal relationships between study variables. Future research should also focus on further establishing any differences between the concepts of compassion fatigue and burnout. In this study, the R^2 meaningfulness results for question #3/Hypothesis #2 revealed 1/3 covariance, which based on these

results, suggest that there is overlap between the two concepts of compassion fatigue and burnout. Future research could also measure more directly some concepts in Figley's theoretical framework such as empathetic concern, empathetic response, and traumatic recollections. These three concepts were not directly measured in the present study.

Future studies should investigate other demographic variables including race, region in the United States where participants live, and exact numerical age. Certain racial groups have been shown in the literature to have higher spirituality which could potentially affect self-transcendence scores. While data on religion/spirituality was collected in the present study, data on race was not. According to the literature, nurses' working conditions, educational levels, attitudes, and access to resources may vary greatly among different geographic regions in the United States (Spetz, 2010). While the present study included a national random sample, data on specific regions where participants lived was not collected and this information may be useful. Age is also a factor which has been shown in the literature to affect level of self-transcendence. Obtaining the exact ages of the participants may be more useful than obtaining age ranges. In the present study data on age was obtained using ranges. Reed (2008), listed gender as factor that may influence self-transcendence. It is recommended to replicate this study with a larger sample of male oncology nurses. The present study only had 13 male participants and males may have different levels of compassion fatigue, burnout, compassion satisfaction, and self-transcendence than females.

Future research should focus on development and evaluation of interventions that promote self-transcendence and compassion satisfaction as well as reduce compassion fatigue and burnout. It is important to identify interventions which promote psychosocial wellness in oncology nurses who are experiencing compassion fatigue and burnout. This need for future research was evidenced in the open ended comments by participants such as: "This is a compelling survey and one that I hope as oncology nurses we learn more about some of the psychosocial issues we confront in our daily practice… I believe it (compassion fatigue) should be addressed and talked about."; "I am pleased to see this subject studied. I believe I had compassion fatigue in my oncology work and home life at one time, but resolved it"; "Very necessary to study the effects of helping our patients and the negative implications that might arise…". Future qualitative research studies which include participants perceptions of their experience related to compassion fatigue, burnout, compassion satisfaction, and self-transcendence could add to the body of knowledge on these variables. Future qualitative research should also focus on identifying what oncology nurses believe nurses should do to prevent compassion fatigue and burnout.

Future research should also further investigate protective factors against compassion fatigue and burnout, namely, compassion satisfaction and self-transcendence and the degree of protection each factor contributes. According to Reed (1991a) activities to promote self-transcendence include self-care measures such as counseling, journaling, and meditation. Some other ways to promote self-care in the literature include meditation (Kearney, Weininger, Vachon, 2009) relaxation

techniques (Potter et al., 2013), reflective writing (Kearney et al., 2009), humor (Domrose, 2011), and peer counseling/support (McMullen, 2007; Potter et al., 2013). Additional research is needed on how to best effectively promote self-care among oncology nurses and integrate it into their everyday practice.

Additional research should be done in partnership with oncology nursing organizations, such as The Oncology Nursing Society in order to obtain large samples of oncology nurses. It is important to study nurses who work in oncology that are not members of professional organizations, as they may have different demographic characteristics, different stressors, access to fewer resources, and possibly more compassion fatigue and burnout.

Implications for Nursing

Results of this study indicated that 21% of the oncology nurses surveyed had never heard of the term "compassion fatigue". While this is an improvement over the study conducted earlier by McMullen (2007), which revealed 53% of the nurses surveyed had never heard of the term, it demonstrates that there is still a need for increased education and awareness among oncology nurses about compassion fatigue. Lack of knowledge regarding compassion fatigue and the potential adverse emotional effects of oncology nursing as a risk factor for compassion fatigue and negative effects (Hildebrandt, 2012; Lindberg, 2012; Perry et al., 2011; Potter et al., 2013). Oncology nurses and their employers have a responsibility to recognize the existence of compassion fatigue and implement interventions to manage and prevent compassion fatigue (Aycock & Boyle, 2009). Currently, very little emphasis is placed

on maintaining the psychological well-being of nurses working in the emotionally

challenging field of oncology and a clear cultural shift is needed. This is evidenced by

the continued absence of the discussion of compassion fatigue, burnout, or other

psychological side effects in the Oncology Nursing Society's Core Curriculum

Manual (Itano & Taoka, 2005) and the lack supportive resources available to

oncology nurses (Aycock & Boyle, 2009). There is also no standardization of what

resources should be available for oncology nurses to use to counter these phenomena

(Aycock & Boyle (2009). Resources identified by Aycock & Boyle (2009) included

three major categories consisting of onsite professional resources, educational

programs, and specialized retreats. McMullen (2007) found that despite her sample

having access to religious and professional medical counselors, very few utilized

them and the majority of her participants instead preferred to seek support from peers

to address their work related emotional distress.

Nurses in general have a tendency to put the needs of others before

themselves. Until these emotional effects are accepted and recognized by leaders in

oncology care, nurses may not feel comfortable speaking about or dealing with these

issues and may continue to have negative emotional effects. Understanding factors

related to compassion fatigue and burnout can empower nurses to utilize preventive

measures that promote self-care, improve patient outcomes, and optimize therapeutic

relationships (Abendroth, 2011).

A voluntary, periodic, confidential assessment of compassion fatigue and

burnout risk along with a list of available resources within an institution could be

helpful. Allowing the staff the time to use these resources while at work would be beneficial. Routinely scheduling activities or allowing brief periods of personal time throughout the day for nurses to participate in self-transcendence activities such as meditation, journaling, yoga, or support groups may be beneficial. Managers could also help promote compassion satisfaction through activities such as sharing positive feedback from patients and families with their staff. The benefits of these interventions and programs should be evaluated through formal research studies. It is important to identify interventions which promote psychosocial wellness in oncology nurses. Some oncology nurses experiencing compassion fatigue may need treatment such as the Accelerated Recovery Program (ARP).The ARP is a five-session treatment/training protocol to assist health-care professionals in resolving their symptoms of compassion fatigue by utilizing a video-enhanced narrative protocol as well as "neoteric" therapies (Gentry & Baranowsky, 1999). Employers should provide support to nurses who need to attend recovery programs.

The need for these vital interventions was validated by participant's comments in the present study such as "Now that I think about it, very little is said about compassion fatigue at work. That's probably why we have such a high turn-over rate. I work in an oncology-only hospital. You would think they would care more about nurse compassion fatigue. I know many nurses call in sick to take "mental days". This only leads to short staffing and creates greater fatigue on the rest of the staff. It's a vicious cycle…". Future research studies which include participants perceptions of their experiences related to compassion fatigue, burnout, compassion satisfaction, and

self-transcendence could add to the body of knowledge on interventions which affect the health and well-being of oncology nurses. The challenge is for healthcare organizations to promote the psychological wellbeing of oncology nurses by developing and evaluating interventions, resources, and programs which prevent compassion fatigue and burnout, as well as promote compassion satisfaction and self-transcendence.

Results of this study in conjunction with those conducted by McMullen (2007), Hunnibell and colleagues (2008), and Potter and colleagues (2010, 2013) suggest that emotional effects from oncology nursing, such as compassion fatigue and burnout do appear to be prevalent among oncology nurses. However, gaps in the literature remain in regards to a standard for education, assessment, prevention, and treatment of adverse emotional effects of compassion fatigue and burnout in this vulnerable population. Until the emotional effects of oncology nursing are truly understood and given the full attention they deserve, one cannot expect to attract, heal, and retain our valuable oncology nursing staff.

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APPENDIX A

Permission to Use Oncology Nursing Society Sample

From: BDonley@infocusmarketing.com
To: adenaannromeo@hotmail.com
Date: Thu, 5 Aug 2010 17:28:12 -0400
Subject: RE: Oncology Nursing Society List Rental Material

Hi Adena,

ONS has approved your request for the mailing list. Please let me know how you would like to proceed.

 --
Beth Donley
Customer Service Rep
Phone: 800.708.5478 x3248
Fax: 540.878.2201

INFOCUS Marketing
4245 Sigler Road, Warrenton, VA 20187
www.InfocusMarketing.com

Facebook | www.Facebook.com/InfocusMarketing

-->
Ask me how INFOCUS can get your next mail campaign out the door and on time!
www.InfocusMarketing.com/directmail.aspx

APPENDIX B

Letter of Invitation for Participants

Dear Fellow Oncology Nurse:

My name is Adena Romeo-Ratliff and I am an Oncology Nurse and a student in the Seton Hall University College of Nursing, Ph.D. program. I am currently working on my dissertation and through my research I am seeking to explore the emotional effects of oncology nursing. More specifically, this study will investigate the presence of compassion fatigue, burnout, and compassion satisfaction in oncology nurses and the influence of self-transcendence. I hope that the information obtained from this study will help to further identify the unique day to day stresses to which oncology nurses are exposed and help to develop strategies to foster psychosocial wellness among oncology nurses.

Your name was chosen from a random sample of oncology nurses. Please read this letter and ask any questions you may have before agreeing to participate in this study. If you should have questions I can be reached via e-mail at romeoade@shu.edu or via phone at 609-540-0042.Your involvement in the study is completely voluntary and anonymous. Participation in this research activity will entail completing a survey regarding compassion fatigue, burnout, compassion satisfaction, and self-transcendence. Withdrawal from this study can be done at any time and will not impact status with any nursing professional organization in any way. There is no penalty or loss of benefits for members who choose to withdraw from this study.

There are no foreseeable risks associated with the survey. The survey is expected to

take approximately15 to 30 minutes to complete. There are no direct benefits from

participating in this study, however, the results of this study may better help to

determine whether or not oncology nurses are at risk for emotional effects such as

compassion fatigue and burnout and what influence self-transcendence and

compassion satisfaction may have as protective factors for oncology nurses.

The survey will be completed using the Survey Monkey online survey system. No

identifying information will be collected from the participants, thus ensuring that

responses remain anonymous. The data will be stored by Adena Romeo-Ratliff, the

principal investigator, in a secure, locked file cabinet. Completing the survey is

considered voluntary consent to participate in the study. This study was approved by

the Institutional Review Board of Seton Hall University. To ensure anonymity, there

is no username required for log-in purposes. We ask that you complete this survey

only once.

All questions or concerns about the survey may be referred to the research team:

Adena Romeo-Ratliff, Principal Investigator (romeoade@shu.edu or 609-540-0042)

and Kathleen Sternas, Ph.D., RN Chairperson of my dissertation research study

(sternaka@shu.edu or 973-275-2154).

If you would like to participate in this study, please click the following link:

http://www.surveymonkey.com/s/XXW7XBG

Please note: This survey will be available from Feb. 15, 2011 to March 28, 2011.

Thank you for your time and participation.

Sincerely,

Adena Romeo-Ratliff, RN, MSN, OCN, APN-C Principal Investigator

romeoade@shu.edu

APPENDIX C

Informed Consent for Participants

Dear Fellow Oncology Nurse:

Study Affiliation

You are being asked to participate in a research study conducted by Adena Romeo-Ratliff who is an oncology nurse and a student in the Seton Hall University College of Nursing, Doctor of Nursing in Philosophy program. This study seeks to explore the relationship between self-transcendence, compassion fatigue, and burnout in oncology nurses. Your name was chosen from a random sample of oncology nurses. Please read this letter and ask any questions you may have before agreeing to participate in this study. If you should have questions the researcher can be reached via e-mail at romeoade@shu.edu or via phone at 609-540-0042

Purpose

The purpose of this research study is to study the emotional effects of oncology nursing. Information gained from this study will add to the body of nursing knowledge new information on compassion fatigue, burnout, compassion satisfaction, and self-transcendence in the oncology nursing population and help guide future strategies for prevention of compassion fatigue and burnout. Individual participation time is estimated to be about 15 to 30 minutes.

Procedures

If you agree to be a participant in this research, we ask that you check the box below and then complete the survey online via the link to the survey monkey online tool.

Instruments

The survey instruments to be used to gather information for this study will be the Self-transcendence Scale (STS) and the Professional Quality of Life Scale Revision 5 (Pro-QOL-RV). Participants will be asked a total of 56 questions, this is the number derived from the two instruments (the STS and the Pro-QOL-RV) with 11 additional demographic questions included.

Voluntary Nature of the Study

Your participation is strictly voluntary. If you choose not to participate, it will not affect you in any way. There is no penalty or loss of benefits for not participating or withdrawing from the study.

Anonymity

This study will be completely anonymous. Response data will be encrypted so that once a survey is completed, it will not be linked to a respondent's e-mail, internet service provider (ISP) address, or any other identifying data in any way.

Confidentiality

Participant data will be securely stored. Data will be encrypted so that once a survey is completed, it will not be linked to a respondent's name, e-mail address, internet

protocol (IP) address, or any other identifying data. Any downloaded data will be stored electronically on a USB memory key and kept in a locked file cabinet.

Data Access

Access to research records will be limited to the nurse conducting this study who is a doctoral student at Seton Hall University and the student's research Chairperson. In any paper that may be published, no information will be included that would make it possible to identify a participant. Aggregate data collected from this study may be published and or used as part of the nursing doctoral student's dissertation.

Risks of Being in the Study

There are no foreseeable physical risks to participation, as it only involves the completion of an online survey. At the end of the survey will be a web link that participants can access if they need resources or information on compassion fatigue or burnout.

Benefits to Being in the Study

There are no direct benefits to participants who participate in this study. Potential benefits of participation are that information provided may positively contribute to the knowledge base for nursing on the emotional effects of caring for patients with cancer. This study may also raise awareness of the issues of compassion fatigue, burnout, compassion satisfaction, and self-transcendence in oncology nursing.

Remuneration

No remuneration will be paid or given to individual respondents for participation in this study.

Contact Information

The doctoral student researcher conducting this study is Adena Romeo-Ratliff, RN, MSN, OCN, APN-C. She may be reached at romeoade@shu.edu or 609-540-0042. The student's research Chairperson, Kathleen Sternas, Ph.D, RN who can be reached at sternaka@shu.edu or 973-275-2154. The Institutional Review Board (IRB) to contact for answers to pertinent questions about the research and research subjects' rights is the Seton Hall University Institutional Review Board at 400 South Orange Avenue, South Orange, New Jersey 07079. The telephone number for the IRB at Seton Hall University is 973-313-6314.

Consent

Consent to participate is indicated by checking the box below and then completing the survey. If you choose not to participate, we ask that you do not click the box and do not follow the link to complete the survey. Thank you for your time and interest.

Sincerely,

Adena Romeo-Ratliff, RN, MSN, OCN, APN-C

Yes, I hereby consent to participate.
No, I do not consent to participate.

APPENDIX D

Instruments

Understanding the Emotional Effects of Oncology Nursing

Informed Consent to Participate

Dear Fellow Oncology Nurse:

Study Affiliation

You are being asked to participate in a research study conducted by Adena Romeo-Ratliff who is an oncology nurse and a student in the Seton Hall University College of Nursing, Doctor of Nursing in Philosophy program. This study seeks to explore the relationship between self transcendence, compassion fatigue, and burnout in oncology nurses. Your name was chosen from a random sample of oncology nurses. Please read this letter and ask any questions you may have before agreeing to participate in this study. If you should have questions the researcher can be reached via e-mail at romeoade@shu.edu or via phone at 609-540-0042

Purpose

The purpose of this research study is to study the emotional effects of oncology nursing. Information gained from this study will add to the body of nursing knowledge new information on compassion fatigue, burnout, compassion satisfaction, and self transcendence in the oncology nursing population and help guide future strategies for prevention of compassion fatigue and burnout. Individual participation time is estimated to be about 15 to 30 minutes.

Procedures

If you agree to be a participant in this research, we ask that you check the box below and then complete the survey online via the link to the survey monkey online tool.

Instruments

The survey instruments to be used to gather information for this study will be the Self Transcendence Scale (STS) and the Professional Quality of Life Scale Revision 5 (Pro-QOL-RV). Sample questions from the Self Transcendence Scale are: "At this time of my life, I see myself as having hobbies or interests I can enjoy" and "At this time in my life, I see myself as accepting myself as I grow older". Sample questions from the Professional Quality Of Life Scale are: "I am happy" and "I am preoccupied with more than one person I help". Participants will be asked a total of 57 questions, this is the number derived from the two instruments (the STS and the Pro-QOL-RV) with the inclusion of 12 additional demographic questions.

Voluntary Nature of the Study

Your participation is strictly voluntary. If you choose not to participate, it will not affect you in any way. There is no penalty or loss of benefits for not participating or withdrawing from the study.

Anonymity

This study will be completely anonymous. Response data will be encrypted so that once a survey is completed, it will not be linked to a respondent's e-mail, internet service provider (ISP) address, or any other identifying data in any way.

Confidentiality

Participant data will be securely stored and confidentiality will be maintained by having survey data encrypted and not linked to a respondent's name, e-mail address, internet protocol (IP) address, or any other identifying data. Any downloaded data will be stored electronically on a USB memory key and kept in a locked file cabinet.

Data Access

Access to research records will be limited to the nurse conducting this study who is a doctoral student at Seton Hall University and the student's research Chairperson, Dr. Kathleen Stemas. In any paper that may be published, no information will be included that would make it possible to identify a participant. Aggregate data collected from this study may be published and or used as part of the nursing doctoral student's dissertation.

Understanding the Emotional Effects of Oncology Nursing

Risks of Being in the Study

There are no foreseeable physical risks to participation, as it only involves the completion of an online survey. At the end of the survey will be a web link that participants can access if they need resources or information on compassion fatigue or burnout.

Benefits to Being in the Study

There are no direct benefits to participants who participate in this study. Potential benefits of participation are that information provided may positively contribute to the knowledge base for nursing on the emotional effects of caring for patients with cancer. This study may also raise awareness of the issues of compassion fatigue, burnout, compassion satisfaction, and self transcendence in oncology nursing.

Remuneration

No remuneration will be paid or given to individual respondents for participation in this study.

Contact Information

The doctoral student researcher conducting this study is Adena Romeo-Ratliff, RN, MSN, OCN, APN-C. She may be reached at romeoade@shu.edu or 609-540-0042. The student's research Chairperson, Kathleen Sternas, Ph.D, RN can be reached at sternaka@shu.edu or 973-275-2154. The Institutional Review Board (IRB) to contact for answers to pertinent questions about the research and research subjects' rights is the Seton Hall University Institutional Review Board at 400 South Orange Avenue, South Orange, New Jersey 07079. The telephone number for the IRB at Seton Hall University is 973-313-6314.

Consent

Consent to participate is indicated by checking the box below and then completing the survey. If you choose not to participate, we ask that you do not click the box and do not follow the link to complete the survey. Thank you for your time and interest.

Sincerely,
Adena Romeo-Ratliff, RN, MSN, OCN, APN-C

Do you consent to participate in this study?

◯ Yes, I hereby consent to participate.

◯ No, I do not consent to participate.

Please answer the following questions to see if you are eligible to participate in this study.

Are you an oncology nurse in the United States?

◯ Yes

◯ No

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Understanding the Emotional Effects of Oncology Nursing

Do you provide direct patient care to cancer patients?

(Direct care in nursing is defined as the care of a patient provided personally by a staff nurse. Direct patient care may involve any aspects of the health care of a patient, including treatments, counseling, patient education, self care education, and administration of medication).

○ Yes

○ No

Please indicate the extent to which each item below describes you. There are no right or wrong answers. I am interested in your frank opinion. As you respond to each item, think of how you see yourself <u>at this time of your life</u>. Choose the answer that is the best response for you.

	Not at all	Very Little	Somewhat	Very Much
Having hobbies or interests I can enjoy.	○	○	○	○
Accepting myself as I grow older.	○	○	○	○
Being involved with other people or my community when possible.	○	○	○	○
Adjusting well to my present life situation.	○	○	○	○
Adjusting to changes in my physical abilities.	○	○	○	○
Sharing my wisdom or experience with others.	○	○	○	○
Finding meaning in my past experiences.	○	○	○	○
Helping others in some way.	○	○	○	○
Having an ongoing interest in learning.	○	○	○	○
Able to move beyond some things that once seemed so important.	○	○	○	○
Accepting death as a part of life.	○	○	○	○
Finding meaning in my spiritual beliefs.	○	○	○	○
Letting others help me when I may need it.	○	○	○	○
Enjoying my pace of life.	○	○	○	○
Letting go of my past losses.	○	○	○	○

Understanding the Emotional Effects of Oncology Nursing

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, a helper. Consider each of the following questions about you and your current work situation. Select the answer that honestly reflects how frequently you've experienced these things in the last 30 days.

	Never	Rarely	Sometimes	Often	Very Often
I am happy.	○	○	○	○	○
I am preoccupied with more than one person I help.	○	○	○	○	○
I get satisfaction from being able to help people.	○	○	○	○	○
I feel connected to others.	○	○	○	○	○
I jump or am startled by unexpected sounds.	○	○	○	○	○
I feel invigorated after working with those I help.	○	○	○	○	○
I find it difficult to separate my personal life from my life as a helper.	○	○	○	○	○
I am not as productive at work because I am losing sleep over traumatic experiences of a person I help.	○	○	○	○	○
I think that I might have been affected by the traumatic stress of those I help.	○	○	○	○	○
I feel trapped by my job as a helper.	○	○	○	○	○

Continued...

	Never	Rarely	Sometimes	Often	Very Often
Because of my helping, I have felt "on edge" about various things.	○	○	○	○	○
I like my work as a helper.	○	○	○	○	○
I feel depressed because of the traumatic experiences of the people I help.	○	○	○	○	○
I feel as though I am experiencing the trauma of someone I have helped.	○	○	○	○	○
I have beliefs that sustain me.	○	○	○	○	○
I am pleased with how I am able to keep up with helping techniques and protocols.	○	○	○	○	○
I am the person I always wanted to be.	○	○	○	○	○
My work makes me feel satisfied.	○	○	○	○	○
I feel worn out because of my work as a helper.	○	○	○	○	○
I have happy thoughts and feelings about those I help and how I could help them.	○	○	○	○	○

Understanding the Emotional Effects of Oncology Nursing

Continued...

	Never	Rarely	Sometimes	Often	Very Often
I feel overwhelmed because my work load seems endless.	○	○	○	○	○
I believe I can make a difference through my work.	○	○	○	○	○
I avoid certain activities or situations because they remind me of frightening experiences of the people I help.	○	○	○	○	○
I am proud of what I can do to help.	○	○	○	○	○
As a result of my helping, I have intrusive, frightening thoughts.	○	○	○	○	○
I feel "bogged down" by the system.	○	○	○	○	○
I have thoughts that I am a "success" as a helper.	○	○	○	○	○
I can't recall important parts of my work with oncology patients.	○	○	○	○	○
I am a very caring person.	○	○	○	○	○
I am happy that I chose to do this work.	○	○	○	○	○

Now please tell me a little bit about yourself.

First, what is your age?

○ 20-29

○ 30-39

○ 40-49

○ 50-59

○ 60-64

○ 65 or older

What is your gender?

○ Male

○ Female

Understanding the Emotional Effects of Oncology Nursing

How many years have you been an oncology nurse?

◯ 1-5

◯ 6-10

◯ 11-20

◯ 21-33

◯ 34 or more

What is your employment status?

◯ Full-time

◯ Part-time

◯ Per Diem

What type of setting do you work in?

◯ Inpatient (Hospital)

◯ Outpatient (Infusion Room, Clinic, or Physician Office)

◯ Hospice

◯ Home Care

What is the age of the patient population you work with?

◯ Adult

◯ Pediatric

◯ Both

Are you oncology certified (OCN, AOCN, or CPON)?

◯ Yes

◯ No

Understanding the Emotional Effects of Oncology Nursing

What is your highest level of nursing education?

○ Diploma

○ Associate Degree in Nursing

○ Bachelor's Degree in Nursing

○ Master's Degree in Nursing

○ Doctorate Degree in Nursing

On a scale of 1-10, please rate the degree of life stress that you have outside of work with 1 being the lowest possible amount and 10 being the highest.

○ 1 - Lowest

○ 2

○ 3

○ 4

○ 5

○ 6

○ 7

○ 8

○ 9

○ 10 - Highest

Understanding the Emotional Effects of Oncology Nursing

On a scale of 1-10, please rate your overall health with 1 being poor and 10 being excellent.

○ 1 - poor
○ 2
○ 3
○ 4
○ 5
○ 6
○ 7
○ 8
○ 9
○ 10 - excellent

On a scale of 1-10, please rate the degree to which religion/spirituality plays a role in your life with 1 being the lowest possible amount and 10 being the highest.

○ 1 - lowest
○ 2
○ 3
○ 4
○ 5
○ 6
○ 7
○ 8
○ 9
○ 10 - highest

Prior to this study, had you ever heard of the term "compassion fatigue"?

○ Yes
○ No

Understanding the Emotional Effects of Oncology Nursing

The survey is now completed. If you would like more information on compassion fatigue or need resources for assistance, please go to www.compassionfatigue.org

Thank you so much for taking the time to complete this study. In this box, please write down any additional comments that may help us understand your views.

APPENDIX E

Personal E-Mail Communication on Compassion Fatigue

Expert Dr. Charles Figley

From: Charles Figley, Ph.D. [charlesfigley@gmail.com]

Sent: Tuesday, October 12, 2010 8:01 PM

To: Adena A Romeo

Subject: Re: FW: Compassion Fatigue Question

Hello,

Sorry. See below...

On Tue, Oct 12, 2010 at 6:19 PM, Adena A Romeo <adena.romeo@student.shu.edu>
wrote:

Hello Dr. Figley. I tried to e-mail you last month with a question and have yet to

receive a reply. I understand that you may be very busy but incase you did not receive

the first e-mail, I am re-sending now and cc'ing some of your other listed e-mail

contacts. Thank you for any help you could give me with this matter.

Adena Romeo-Ratliff, Doctoral Student

From: Adena A Romeo

Sent: Friday, September 17, 2010 10:56 AM

To: Figley@tulane.edu

Subject: Compassion Fatigue Question

Hello Dr. Figley. My name is Adena Romeo-Ratliff and I am a Nursing PhD student at Seton Hall University in New Jersey and am also a former student of your Figley Institute having taken your Compassion Stress Management and Compassion Fatigue Therapist courses in October of last year. I am an oncology nurse by profession and am interested in studying the concepts of compassion fatigue, compassion satisfaction, and burnout in oncology nurses using the Professional Quality of Life Scale-Revision V (ProQOL-RV) by Stamm (2009).

OK

I am writing to you to request your advice as an expert in the field on compassion fatigue regarding an issue that has come up with my dissertation committee. My committee feels as though taking the ProQOL may cause some study participants mild distress as they contemplate their answers and they would like for me to offer a resource to them at the end of the study to contact should they feel the need to.

I know of approximately 100 studies using this or alternative measures in which there were no reports of iatrogenic effects. On the other hand, the solution your "committee" is suggesting might have the opposite effect; by alerting the research participants that some of them ". . . may experience mild distress as they contemplate their answers..." that you can ". . . offer a resource to them at the end of the study. . . .

" The principle in an IRB decision tree is to error on the side of caution. That would

be not to suggest your study causes any type of distress.

Charles

In your expert opinion, what one resource would be best to list for these nurses (they

will consist of a random sample from throughout the US). Thank you so much for

your consideration in this matter.

Adena Romeo-Ratliff, RN, MSN, OCN, APN-C

Assistant Nurse Manager of the B2 Oncology Unit

University Medical Center at Princeton

&

Nursing PhD Student

Seton Hall University

--

Prof. Charles R. Figley, Ph.D., the Paul Henry Kurzweg, MD Distinguished Chair in

Disaster Mental Health at Tulane University and Director of the CCC PhD Program

and Graduate School of Social Work Professor. Editor of Traumatology:

http://tmt.sagepub.com/. Phone: 504-862-3473 Email:

Figley@Tulane.edu Web:charlesfigley.com

APPENDIX F

Selected Examples of Caregiver Resources from www.compassionfatigue.org

Caregiver Wellness

Compassion Fatigue and Chronic Sorrow Workshops

Jan Spilman, MEd. RCC

PO Box 44062

Burnaby, BC V5B 4Y2

(604) 297-0609

www.caregiverwellness.ca

caregiverwellness@shaw.ca

Compassion Fatigue Awareness Project

Patricia Smith, Founder

www.compassionfatigue.org

patricia@compassionfatigue.org

Compassion Fatigue Awareness Project, Australia

Malcolm Lindridge, Licensed Associate

61 7 3200 5611

dlindrindge@bigpond.com

Compassion Unlimited

J. Eric Gentry Ph.D.

3205 South Gate Circle #21

Sarasota, Fl 34239

(941) 720-0143

(941) 827-9459 (fax)

www.compassionunlimited.com

Gift From Within

Joyce Boaz, Executive Director

16 Cobb Hill Rd.

Camden, ME 04843

(207) 236-8858

(207) 236-2818 (fax)

www.giftfromwithin.org

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 Healthy Caregiving, LLC

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NurseFit

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Professional Quality of Life

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Green Cross Academy of Traumatology

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Sidran Institute

Traumatic Stress Education & Advocacy

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Traumatic Stress Institute/Center for Adult & Adolescent Psychotherapy, LLC

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APPENDIX G

Permission to use Self-transcendence Scale

STS Request Form

I, Adena Romeo-Ratliff, request permission to copy the Self Transcendence Scale (STS) for use in my dissertation research titled, *An Investigation into the Relationship of Self Transcendence on Compassion Fatigue, Burnout, and Compassion Satisfaction in Oncology Nurses.*

In exchange for this permission, I agree to submit to Dr. Reed items 1 and 2 below, and 3 if available:

1. An abstract or copy of my study purpose and findings, which includes the range of STS scores and the mean STS score in my group of participants, and correlations between the STS scale scores and other measures used in my study. (This will be used by Dr. Reed to assess construct Validity).

2. The reliability coefficient as computed on the scale from my sample (Cronbach's alpha).

3. A computer print out or file listing the STS data on each subject, along with my data coding dictionary as available.

Any other information or findings that could be helpful in assessing the reliability or validity of the instrument would be greatly appreciated (e.g. problems with items, comments from participants, other findings).

This data will be used to establish a normative data base for clinical populations. No other use will be made of the data submitted. Credit will be given to me in reports of normative statistics that make use of the data I submitted for pooled analyses.

Date: 7/30/2010
Name: Adena Romeo-Ratliff, RN, MSN, OCN, APN-C
Position Doctor of Philosophy in Nursing-Student Seton Hall University
Mailing Address: 21 Huntington Drive Burlington, NJ 08016
Email Address: adenaannromeo@hotmail.com

Permission is hereby granted to copy the STS for use in the research described above.

Signature *Pamela G. Reed* ___ Date *August 17, 2010*
Pamela G. Reed, PhD, MSN, FAAN