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Compassion Satisfaction and Compassion Fatigue Among Pediatric Nurses and the Impact on Patient Satisfaction

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**COMPASSION SATISFACTION AND COMPASSION FATIGUE AMONG
PEDIATRIC NURSES AND THE IMPACT ON PATIENT SATISFACTION**

By

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DISSERTATION

Submitted in Partial Fulfillment of the
Requirements for the Degree of

**Doctor of Philosophy
Nursing**

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Dedication

This dissertation is dedicated to my family and friends. My husband, Chris, has been unwavering in his support as I pursued my dream. He was loving, encouraging, and supportive during this journey, always making sure I had good coffee while writing and also picking up more than his fair share of tasks around our home. To my parents, Marvin and Patricia Crandall, who always instilled the importance of education, hard work, and goal setting. While my mom is not here to see this day, I know she would be proud. My sister, Lori, has always been there for me to listen, to encourage, and to make sure that I have fun. To my beautiful daughter, Renata, I know that I am not your biological mother, but you are a gift to me. I appreciate all you have added to my life. Also, to Peg Crandall, my dad's wife who never failed to ask about how I was doing and who provided encouragement and support. Thank you to my friends who I did not see as much as I like because I had to work on my classes or write. To my writing group who was always available to offer advice, critique, and ideas for strengthening my work. Thank you Sophia Bowers, Carol Hinton, and Dee Mulcahy. I always felt energized after we met and talked about our research. Again, thank you all for everything you did to make this work possible. I am grateful for your love, support, and guidance.

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ABSTRACT

Compassion fatigue and compassion satisfaction are two inter-related concepts. Individuals in helping professions may occasionally face compassion fatigue from giving so much of themselves to others. Compassion fatigue has been studied in a variety of settings: medical, social work, nursing, law enforcement, and fire departments, to name a few. While some researchers have studied nurses, little published work has focused exclusively on nurses who care for specialty pediatric populations. Additionally, there is scant research on whether compassion satisfaction and compassion fatigue are associated with patient satisfaction. The purpose of this study was to determine the level of compassion satisfaction and compassion fatigue among pediatric nurses and whether there was an association with patient satisfaction. This descriptive study was conducted in a large academic medical center in the Southwestern United States. A convenience sample of 231 nurses working with children in inpatient or outpatient settings completed an online demographic questionnaire and the Professional Quality of Life (ProQOL) 5 tool, which measured compassion satisfaction and two dimensions of compassion fatigue: burnout and secondary traumatic stress. Results of this

study showed that the nurses had a moderate to high level of compassion satisfaction, a low level of burnout, and a low to moderate level of secondary traumatic stress. There were no differences in the level of compassion satisfaction or burnout related to demographic characteristics, clinical unit type, or years of experience of nurses. There were no differences in the levels of compassion satisfaction or compassion fatigue based on the levels of patient satisfaction according to unit type.

Keywords: compassion satisfaction, compassion fatigue, patient satisfaction, nurse sensitive indicators, pediatric nurses

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CHAPTER 1: INTRODUCTION

The purpose of this study is to describe the extent of compassion fatigue and compassion satisfaction among pediatric nurses and to determine the relationships among compassion satisfaction, compassion fatigue, and patient satisfaction. The study setting is a large academic medical center situated in an urban area in the Southwestern United States. The medical center is a Level I trauma center and has many pediatric specialties not found in other parts of the state. Additionally, the center serves as a regional referral center from surrounding states.

Prevalence of Compassion Fatigue and Compassion Satisfaction in Nurses

Nurses are the largest group of healthcare providers in the United States. According to the 2008 National Nurses Survey, there are 3.1 million registered nurses (RN) in the United States (Health Resources and Services Administration, 2010). While there is no overall estimate of the level of compassion satisfaction and compassion fatigue among nurses in general, there are studies that show nurses in specialty areas are at risk for compassion fatigue. There are several studies that show high levels of compassion fatigue among oncology nurses (Barnard, Street, & Love, 2006; Medland, Howard-Ruben, & Whitaker, E. 2004; Potter et al., 2010). Hooper et al. (2010) compared levels of compassion satisfaction, burnout, and compassion fatigue in emergency department nurses (n = 49) with nurses in intensive care units (ICUs; n = 32) and inpatient oncology (n = 12) and nephrology (n = 16) units in a hospital located in the Southeastern United States. Approximately one-fifth of their sample had low levels of compassion satisfaction, and over a quarter had high levels of burnout or compassion fatigue (Hooper et al.) The studies described above were conducted with nurses who cared for adult patients exclusively or primarily. This study seeks to

determine the levels of compassion satisfaction and compassion fatigue among nurses caring for pediatric patients and how they relate to patient satisfaction.

Specific Aims

1. Describe the extent of compassion fatigue and compassion satisfaction among pediatric nurses on specialty care units.
2. Determine if there are differences in the level of compassion fatigue and compassion satisfaction among pediatric nurses based on demographic characteristics.
3. Determine whether units that have higher levels of compassion fatigue score lower on nurse sensitive patient satisfaction indicators.

Compassion Satisfaction and Compassion Fatigue

Compassion Satisfaction

Compassion satisfaction is described as the positive feelings and emotions of caring for others and being able to perform a job well. Nurses who experience compassion satisfaction are satisfied with their work and feel invigorated by the work they do. They are happy, feel successful and want to continue to do the work they are engaged in because they feel they are making a difference for others (Stamm, 2010). Compassion satisfaction allows nurses to experience connectedness with their patients regardless of their condition and prognosis and leads to meaningful, positive interactions between the nurse and patients and their families (Young, Derr, Cicchillo, & Bressler, 2011).

Compassion Fatigue

Joinson (1992) first used the term compassion fatigue as a potential risk for professionals involved in health care, human services, or spiritual care such as social workers, nurses, counselors, ministers, and law enforcement and emergency services

personnel. A key feature of individuals in these kinds of occupations is that “the essential product they deliver is themselves,” but the human needs they try to address are “infinite” (Joinson, p. 117). Nurses are prone to compassion fatigue because, by disposition and training, they tend to place the needs of others before their own wellbeing (Joinson). Often the problems, needs, and stresses of patients and family members are so overwhelming, that nurses or other caregivers themselves become overwhelmed. Compassion fatigue is emotionally devastating and can appear any time in a nurse’s career and can occur more than once in the course of a career (Joinson). In recent years, compassion fatigue has been defined as consisting of dimensions of burnout and secondary trauma (Stamm, 2010).

Burnout. Burnout includes feelings of depersonalization, exhaustion, and ineffectiveness (Melvin, 2015). It can lead to an inability to perform one’s job and may cause a nurse to become ineffective, depressed, apathetic, and detached from his or her work (Boyle, 2011; Hunsaker, Chen, Maughan, & Heaston, 2015; Portnoy, 2011; Stamm, 2010). Burnout is generally associated with work environment factors including unreasonable workload expectations, exposure to negative attitudes among co-workers and lack of resources and administrative support (Melvin). Burnout generally occurs gradually; over time it can lead to low morale, dissatisfaction, and turnover (Portnoy; Vahey, Aiken, Sloane, Clarke, & Vargus, 2004). The nurse experiencing burnout often is unhappy, ineffective, disconnected and insensitive to the work environment.

Secondary trauma. Secondary trauma develops through exposure to patients who have, themselves, experienced trauma. The onset of secondary trauma is sudden and rapid and generally occurs after caring for a patient who has experienced significant physical or emotional trauma. It is a somewhat rare condition (Stamm, 2010), but when it occurs, it

becomes increasingly difficult for the nurse to separate private from professional life as a caregiver or helper. The symptoms of secondary trauma include forgetting things, difficulty sleeping, feelings of being overwhelmed, and sudden surfacing of intrusive images or recollections of the event or the (Stamm).

Stories Compassion Satisfaction and Compassion Fatigue Experienced by Nurses

Caring for Specialty Pediatric Patients

Compassion satisfaction. Melissa is a pediatric nurse on a specialty unit whose patient population is primarily children who have been diagnosed with cancer. She sees children from infancy through young adulthood. Patients who are cared for in the unit range from those who are newly diagnosed with a hematological or oncological disease, to those who are at the end of their life. She has been a nurse on the unit for the past five years, the entirety of her nursing career.

Melissa enjoys her job and caring for patients who have complex diagnoses. She often cares for patients who require a significant amount of support and are labeled by her fellow nurses as problem patients. While Melissa cares deeply about her patients and forms strong bonds with her chronic long-term patients, she is careful to create boundaries, never giving patients her personal cell phone number or other information about herself and her family. She also rarely works overtime. Melissa feels she can provide the best care for her patients when she has the ability to give of herself without depleting herself. To ensure she can be emotionally available for her patients without depleting herself emotionally and physically, she puts her family first, making sure she spends adequate time with both her family and friends and takes time for herself to pursue activities she enjoys such as stamping, exercising, teaching teens at her church, and attending Bible study. Melissa states this makes

her feel that she has time to be rejuvenated so she can be her best when she is working with critically ill patients and their families at a difficult time in their life. She thoroughly enjoys her job and caring for her patients.

Melissa feels that it is an honor and privilege to care for the patients who are entrusted to her. She is involved in her unit's shared governance activities and her community and places her family first. She expresses sincere appreciation for her work and those with whom she works. She is often rewarded with notes of thanks, "I Care Awards" from her patients, families, and co-workers and has been the recipient of a Daisy Award. "I Care" Awards are written by co-workers, patients, families, or others who wish to recognize an employee. "I Care" is an acronym that stands for the following (University of New Mexico Hospitals, n.d.):

- I** Integrity, accountability, and decisiveness in commitment to excellence;
- C** Compassion and respect in our interactions with students, patients, and colleagues;
- A** Advancement of our institutional mission while supporting professional and personal growth;
- R** Respecting diversity in people and thinking;
- E** Effective Utilization of our resources

The *Daisy Award* is an award for nurses who possess extraordinary clinical skills and compassion. Daisy stands for Diseases Attacking the Immune System. The Barnes family created the award after their son, Patrick, died of a rare autoimmune disease. Over 1900 hospitals in the United States and 14 other countries participate in the Daisy Award program. Patients, families, and co-workers make nominations and a committee of peers in each participating facility selects a recipient monthly from the blinded nominations. Recipients are

awarded a certificate, a hand-carved stone sculpture entitled, “A Healer’s Touch”, crafted by artists in Zimbabwe, and a celebratory banner for their nursing unit along with Cinnabon cinnamon rolls for the entire unit (Daisy Award Foundation, n.d.).

Melissa has been able to balance her life in such a way that she has experienced satisfaction in caring for others. Melissa’s score on the compassion satisfaction scale would likely be high.

Compassion fatigue. Susan has been a nurse for 25 years on a Pediatric Intensive Care Unit. She is a single mother who works two full-time jobs to make ends meet and to help support her daughter and granddaughter and pay college expenses for her son. She is often tired, stressed and depressed. When she is at work, she feels that she is going through the motions of providing care for her patients. She feels she has seen so much that she can no longer feel or cry. Her unit often cares for children who have been severely abused by a parent, family member, or other caregiver. She used to cry for these patients, but since she sees the situation so frequently she no longer feels she can be supportive and allow herself to feel for the patients.

Susan is a competent, skilled caregiver, but she feels emotionally used up and has contemplated leaving the nursing profession; however, she does not know what other career she would pursue. Because of her feelings and stress level, she has become apathetic and angry and often feels depressed. When she does have a day off, she lays in bed or on the couch and watches old movies and binges on junk food. She rarely does anything for herself; always giving what time and extra dollars she has to her children and other family members. She is burned out and often uses that exact phrase. Susan is experiencing the signs and symptoms of compassion fatigue and will likely continue to experiencing these feelings

unless she finds a way to take care of herself, set boundaries and find an outlet for the extreme amount of stress she is experiencing. She would likely score high on measures of burnout or secondary trauma (Stamm, 2010).

Patient Satisfaction

Patient satisfaction is becoming more important as hospitals are being compared to one another on national consumer and governmental websites and there are financial penalties for hospitals whose patient satisfaction is not on par with other organizations or is not improving. While there are many aspects to patient satisfaction, patient satisfaction has been associated with factors that are within the purview and influence of nursing and the nursing care provided (Kutney-Lee et al., 2009). Studies have also found that nurses who are experiencing difficulties with compassion fatigue and burnout may be too exhausted to provide care that supports patient satisfaction and a positive patient experience (Boyle, 2011; McHugh, & Ma, 2014).

Nurse Sensitive Indicators

Nurse sensitive indicators are those specific items on the patient satisfaction survey that nurses can directly influence (Heslop & Lu, 2014). Nurse sensitive indicators can also be patient care outcomes that are influenced by the care provided, such as pressure ulcers, falls, readmissions, and catheter related urinary tract or blood stream infections (Albanese et al., 2011). The focus of nursing sensitive indicators in this study are related to those that are classified as nurse sensitive indicators on the Press Ganey Patient Satisfaction Survey such as: (a) friendliness/courtesy of the nurses and (b) nurses' attitude toward your child's requests.

Glossary

Pediatric and Neonatal Nurses

Pediatric nurses. Registered nurses who care for patients from birth through age 18 or, in some cases, age 21. Pediatric nurses practice in the following settings: pediatric intensive care unit, pediatric specialty care unit, general pediatrics unit, Carrie Tingley inpatient unit, pediatric hematology/oncology clinic, pediatric infusion, pediatric emergency department, pediatric specialty care clinics, and the pediatric operating room.

Neonatal nurses. Registered nurses who care for patients from birth through discharge from the hospital from their initial neonatal period. Neonatal nurses practice in the level II or III Newborn Intensive Care Unit (NBICU).

Specialty Care Units

Specialty care units within the Academic Medical Center will be defined in this section. The units include both inpatient units and outpatient clinics. Specific populations served by each area will be described.

Pediatric intensive care unit (PICU). The Pediatric Intensive Care Unit is a 20-bed unit for patients from newborn to age 18 who are seriously ill. Occasionally, a patient over 18 is admitted to the unit if they have a diagnosis that is chronic and is in the realm of pediatric providers (e.g., cystic fibrosis). Additionally, patients who are small in stature and/or cognitively delayed may be admitted to this unit. The patients require critical medical and nursing care and are diagnosed with a variety of conditions, including non-accidental and accidental trauma as well as serious medical and surgical conditions.

Newborn intensive care unit Level II (ICN-3 and ICN-4). There are two Level II nurseries within the organization, a 16-bed unit and a 12-bed unit. They are located on

different floors within the hospital and while both serve the neonatal population, they have slightly different admission criteria. The 12-bed unit has four beds that are designated to babies requiring transitional care shortly after birth. These conditions include low blood sugars, respiratory concerns, and other medical conditions that require observation for less than 24 hours and are not conducive to couplet care in the Mother Baby unit. This unit also cares for babies who are born to mothers who had drug exposure during their pregnancy, those requiring treatment for high bilirubin, and those who were born prematurely and require more time to feed and grow. This unit does admit babies directly from the newborn clinic if they are less than 14 days of age. If a baby requires admission after 14 days of life, they would be admitted to another appropriate pediatric unit within the hospital.

The 16-bed unit cares primarily for babies who have had a stay in the NBICU and transfer to the ICN-4 after their condition stabilizes. These babies have chronic conditions, need to gain weight and mature physiologically before they are ready to be discharged home with their parents. This unit does not admit babies who have been discharged from the hospital after birth. The unit does admit babies that are directly transported by the Neonatal Transport Team from outlying hospitals.

Newborn intensive care unit Level III (NBICU). The NBICU is a 36-bed unit that admits patients directly after birth who require an intensive level of care. The babies cared for in this unit can be admitted from the hospital's labor and delivery suite, the operating room or transported in via the Neonatal Transport Team. The Neonatal Transport Team transports babies from outlying areas within the state and regionally. This unit provides care for congenital conditions, including pre-operative cardiac care, babies requiring

extracorporeal membrane oxygenation (ECMO), mechanical ventilation, and aggressive intensive medical support and specialized care.

Pediatric hematology/oncology, renal, and transplant inpatient unit (PSCU). The PSCU is a 20-bed unit that generally admits patients from infancy to age 18. There are occasions that the unit does have patients who are older than age 18. Considerations to admit patients over the age of 18 include patients who are cognitively delayed, have a chronic condition and have been cared for in the unit previously, are on a pediatric cancer treatment protocol, or who are small in stature for their age. Typical diagnoses for this unit include cancers diagnosed in childhood that require medical or surgical intervention on an inpatient service, renal transplants, patients with blood cancers or other hematological conditions, including patients diagnosed with hemophilia. The unit accepts patients who require either a floor level of care or a progressive level of care also called sub-acute care (SAC).

General pediatric unit (GPU). The GPU is a 34-bed unit that admits patients with a variety of chronic and acute care conditions. While the unit is called general pediatrics, it will be included in this study since they care for a variety of patients who require advanced care for their chronic conditions. The unit generally admits patients from infancy to age 18. There are occasions that the unit does have patients who are older than age 18. Considerations to admit patients over the age of 18 include patients, who are cognitively delayed, have a chronic condition and have been cared for in the unit previously, or have not transitioned to an adult provider and adult service at the time of admission. Common diagnoses of patients admitted to this unit include: cystic fibrosis, diabetes, patients who have tracheostomies, ventilated patients who are stable, patients with short bowel syndrome requiring hyperalimentation, general surgical patients such as those requiring post-operative care after

a tonsillectomy or appendectomy or other short-term admission. This unit takes patients who require either a floor level of care or progressive care, also called ICU step-down level of care or SAC.

Carrie Tingley inpatient unit (CTI). CTI is a 15-bed unit that generally admits patients from infancy to age 21. On very rare occasions, this unit does have patients who are older than age 21. Considerations to admit patients over the age of 21 include patients who are cognitively delayed, have a chronic condition and have been cared for in the unit previously, are being treated by a pediatric orthopedic surgeon or who are small in stature for their age. The primary population of this unit is patients who require acute, pediatric rehabilitation or those who are recovering from orthopedic surgery. When the unit does not have enough patients to fill their beds with the primary population, other general pediatric patients are admitted, including those requiring post-operative care, babies who have been born with in-utero drug exposure, or other patients requiring inpatient care.

Pediatric Hematology/Oncology outpatient clinic. The pediatric hematology/oncology clinic cares for patients who require outpatient services related to a hematology or oncology diagnoses. This clinic primarily serves patients who are between infancy and age 18, but does see patients who are older than 18 who are on a pediatric oncology protocol or those who have not been transitioned to an adult hematology or oncology provider.

Pediatric infusion unit (PIU). The PIU is an outpatient unit that sees patients who require ongoing infusions on an outpatient basis. The infusions can be daily, weekly, or several times a month. The unit is open Monday through Friday only. Types of infusions administered include chemotherapeutic agents, biologic agents, immunological agents,

antibiotics and other agents not conducive to administration in the home, but do not require admission to the hospital. The unit generally serves patients from infancy through age 18, but on occasion does see patients who are over the age of 18 and are on a pediatric oncology protocol.

Pediatric emergency department (Peds ED). The Peds ED is 12 bay emergency department dedicated to the treatment of pediatric patients. The nurses who work in this area are specially trained pediatric nurses who care for patients from infancy through age 18, including pediatric trauma patients. The unit has dedicated space for pediatric patients that is physically separated from the adult emergency department. Patients from this area are often admitted to one of the pediatric units after assessment and stabilization. Patients are also discharged home from this area after medical treatment.

Pediatric specialty care clinics. There are a variety of pediatric specialty clinics within the organization. These include services such as nephrology, rheumatology, endocrinology, cystic fibrosis, gastroenterology, cardiology, cardiothoracic surgery, urology, pediatric surgery, pulmonology, genetics, neurology, neurosurgery, dysmorphology, dermatology, behavioral health, nutrition, sedation, orthopedics, pain, ENT and rehabilitation. Many of the patients seen in these clinics travel from outside the metropolitan area for services that are not available in other locations. Many of the patients who are seen in these clinics have chronic conditions and require specialized, complex nursing care. Because of the patient acuity and care provided, nurses who work in these areas are classified as inpatient nurses by the organization. The clinics generally serve patients from infancy through age 18, but occasional exceptions are made.

Pediatric urgent care clinic. The Pediatric urgent care clinic is open six days a week, Monday through Friday from 8 am to 7:30 pm, and on Saturdays from 9 am to 2 pm. The clinic sees patients from infancy to age 18 with a variety of conditions including: allergies, asthma, colds, sore throats, fever, ear infections, minor concussions, pain, nausea and vomiting, strains and sprains, urinary tract infections and other minor ailments.

Pediatric operating room. The pediatric operating room provides services for 13 sub-specialties. It is a specifically designed six room pediatric surgical center that provides services for both inpatient and outpatient procedures for children from infancy to age 18. The operating room has the capability to serve patients who require routine surgical care as well as those who require the most complex, specialty care. The unit is staffed with nurses who are specifically trained to care for pediatric patients in the perioperative setting. The pediatric operating room also has a dedicated post-operative recovery unit. Both inpatient and outpatient procedures are performed in the operating room.

Compassion Satisfaction

Theoretical definition. Based on prior theory and research (Stamm, 2010; Young et al., 2011), compassion satisfaction will be defined as the positive feelings and emotions the nurse experiences as a result of his or her work..

Operational definition. Compassion satisfaction will be measured using the compassion satisfaction (CS) subscale on the Professional Quality of Life (ProQOL) 5 tool (Stamm, 2010).

Compassion Fatigue

Theoretical definition. For the purpose of this study, compassion fatigue is defined as “the emotional, physical, and spiritual exhaustion from witnessing and absorbing the

suffering of others” (Sabo, 2011). Compassion fatigue comprises dimensions of burnout and secondary traumatic stress (Stamm, 2010).

Operational definition. Compassion fatigue will be measured using the ProQOL 5 tool on which the dimensions of compassion fatigue are represented by separate scales of the ProQOL 5, the Burnout (BO) Scale and the Secondary Trauma Scale (STS) (Stamm, 2010). Burnout subsumes feelings of exhaustion, lack of enthusiasm, ineffectiveness, hopelessness, cynicism and reduced ability to perform at work (Boyle, 2011; Hunsaker, Chen, Maughan, & Heaston, 2015; Stamm). Secondary trauma pertains to the “emotional toll that compromises professional functioning and diminishes quality of life.” (National Childhood Stress Network, 2011, p. 1).

Patient Satisfaction

Patient satisfaction will be measured using the Nurse Sensitive Indicator section on Press Ganey Patient Satisfaction Surveys on the selected units (Press Ganey, 2004). The Press Ganey survey is a reliable and valid tool and is sent to all patients discharged from the hospital and to a random sample of outpatients. Patients and families are asked to complete the survey and return directly to Press Ganey. For pediatric patients, either the parent or the child may fill out the patient satisfaction survey. Children as young as 12 should be encouraged to fill out their own survey based on their experiences; however, it is unknown who actually fills out each individual survey since the survey is mailed out, responses are anonymous, and the survey tool does not ask whether the patient or parent completed the survey. Press Ganey enters the survey responses and comments and provides the hospital with a statistical analysis of the results. The results allow comparison between units and other

like hospitals. This study will attempt to find the relationships between patient satisfaction, compassion fatigue and compassion satisfaction.

Nurse sensitive indicators. Nurse sensitive indicators are patient attitudes and outcomes that nurses directly influence. These are operationally defined as the global nurse sensitive indicator score for the inpatient and outpatient patient satisfaction surveys. The individual scale items that comprise the global scores for the inpatient and outpatient surveys are described in detail in Chapter 3.

Strengths and Limitations

The strengths of this quantitative study are the primary investigator will use two tools that are valid and reliable: the ProQOL 5 (Stamm, 2010) and the Press Ganey Patient Satisfaction survey (Presson et al., 2017). The ProQOL 5 will be administered to a group of pediatric nurses in a variety of inpatient and outpatient pediatric units to determine their levels of compassion satisfaction and compassion fatigue. Aggregated unit-level results of compassion satisfaction and fatigue will be examined according to patient satisfaction results to determine whether *units with higher levels of patient satisfaction are characterized by survey respondents who report higher levels of compassion satisfaction and lower levels of compassion fatigue*. Limitations of this study include a relatively small sample size of nurses in pediatric units from a single academic medical center.

This study will identify the prevalence of compassion satisfaction and compassion fatigue among pediatric nurses working in an academic medical center on pediatric specialty units and clinics. The study will also explore the relationship between compassion fatigue and compassion satisfaction on specific units and will determine whether there are differences in levels of compassion satisfaction and compassion fatigue based on the

demographic characteristics of the nurses participating in this study. This study is intended to fill several gaps in the existing literature by exploring the levels of compassion satisfaction and compassion fatigue among pediatric nurses and determining the relationship of these concepts to patient satisfaction.

CHAPTER 2: LITERATURE REVIEW

Compassion fatigue and compassion satisfaction are salient issues in nursing since studies have shown that nurses who experience compassion fatigue and burnout are more likely to become ineffective, apathetic, depressed, detached and leave the profession (Boyle, 2011; Hunsaker, Chen, Maughan, & Heaston, 2015). Additionally, high levels of burnout are related to lower patient satisfaction scores (Burtson & Stickler, 2010; Potter, et al., 2010; Vahey, Aiken, Sloane, Clarke, & Vargus, 2004). As the nursing workforce ages (Collins-McNeil, Sharpe, & Benbow, 2012), it is important for nursing leaders to create a supportive work environment to increase compassion satisfaction and decrease compassion fatigue among nurses.

To date, research on compassion fatigue and compassion satisfaction in nursing has been conducted primarily with nurses who care for adult patients. A number of studies have been conducted outside of the U. S., in countries such as Taiwan, India, Australia, Belgium, China and the United Kingdom. Few studies have focused primarily on pediatric nurses in the U. S. (Berger, Polivka, Smoot, & Owens, 2015; Branch & Klinkenberg, 2015) and none that could be located examined multiple pediatric specialties across multiple inpatient and multiple outpatient settings. Additionally, there is a lack of research that explores the relationship between compassion fatigue and patient satisfaction. This chapter provides an overview of the compassion satisfaction, compassion fatigue and patient satisfaction literature and identifies gaps in the current research. The topics in this chapter include: compassion satisfaction, compassion fatigue, burnout, secondary traumatic stress, a theoretical framework to help guide the research, the impact of work environment on

compassion satisfaction and compassion fatigue, patient satisfaction, nurse sensitive indicators and the effect of nursing satisfaction on patient satisfaction.

Pediatric Nursing

Pediatric nursing is a satisfying career; however, pediatric nursing also presents many challenges based on continuous exposure to child abuse, trauma, illness, pain, suffering and death in a population where these occurrences are expected to be relatively small in comparison with the adult population. This is particularly difficult for nurses who work with children since many nurses have their own children (Coetzee & Klopper, 2010). Compassion fatigue and secondary traumatization is additive as the lifespan for children with chronic illness increases and nurses and other healthcare providers have prolonged exposure to suffering and death in children (Meadors & Lamson, 2008). In a study conducted by Coetzee and Klopper, findings suggest if compassion fatigue is not identified and dealt with at an early stage, the capacity for full restoration to a pre-compassion fatigue state is lost. Compassion fatigue and the manifestations of such are cumulative and if nurses continue down the path of compassion fatigue, adverse outcomes for nursing in general may occur. These adverse results include nurses leaving the profession. The study recommends further research to determine the circumstances that lead a nurse from compassion discomfort to compassion stress and finally to compassion fatigue. Identifying these components and determining interventions that would assist in preventing progression from compassion discomfort to full-blown compassion fatigue and identifying interventions that could be implemented at the unit or the hospital level could help improve patient satisfaction and reduce turnover in the profession. Additionally, the authors suggest that a theory of compassion fatigue be developed.

In a thematic analysis of 13 quantitative and 11 qualitative studies, Zander, Hutton and King (2010) found that there are additional stressors related to pediatric oncology work. These stressors include grief, loss, bereavement, as well as moral and ethical dilemmas related to treatment decisions, managing professional boundaries with both patients and families and maintaining work life balance (Swetz, Harrington, & Matsuyuma, Shanafelt, & Lynckholm, 2009). Additionally, pediatric nurses must deal with the emotional responses of families to illness and death, which can lead to an increase in compassion fatigue. End of life situations are particularly difficult for nurses caring for pediatric patients (Berger et al., 2015). Caring for critically ill or terminal children generates grief reactions, stress, increased turnover, a possibility of professional loneliness, and a sense of hopelessness. If these issues are not addressed additional issues can arise (Zadeh, Gamba, Hudson, & Weiner, 2012).

The target population of the proposed study is nurses who work in an academic medical center in an urban area in the Southwestern United States caring for pediatric patients in a variety of inpatient and outpatient pediatric units, areas, and clinics. The goal is to describe the level of compassion fatigue and compassion satisfaction these nurses are experiencing and determine whether units with higher levels of patient satisfaction scores as measured by the Press Ganey global score for nurse sensitive indicators are characterized aggregated compassion fatigue scores that are lower or compassion satisfaction scores that are higher. After the levels and prevalence of compassion fatigue and compassion satisfaction are determined, the next step would be to develop interventions designed to improve or support compassion satisfaction and decrease compassion fatigue. The development of interventions is not within the scope of the current study.

Professional Quality of Life

Professional quality of life comprises the feelings a person has about the work they do. This includes both the positive and negative aspects of one's work and together, the balance of the positive and negative aspects of the work, determines the professional quality of life (Stamm, 2010). In caring and human services professions, these positive and negative aspects of work can be summarized in terms of compassion satisfaction and compassion fatigue. There is evidence that suggests that programs designed to maximize compassion satisfaction and reduce the risks of developing compassion fatigue are helpful to staff and improve professional quality of life. Prior to developing programs to improve compassion satisfaction, decrease compassion fatigue, and improve professional quality of life, the level of compassion fatigue should be determined to provide a baseline measurement to help determine the effectiveness of the program. This study proposes to determine the level of compassion satisfaction and compassion fatigue among pediatric nurses in different areas of care. Additionally, the data will be analyzed to determine if there are differences in levels of compassion fatigue and compassion satisfaction among nurses with distinct demographic characteristics. For instance, do nurses working on different types of units show significantly different levels of compassion satisfaction or fatigue? Are there differences in compassion satisfaction or fatigue by categories of race, ethnicity, income, or degree type? For continuous variables such as age and years of various kinds of nursing experience, are there significant associations with compassion satisfaction or fatigue?

Compassion Satisfaction

Compassion satisfaction is defined as the pleasure that is achieved from work and being able to do a good job. In caregivers, those with compassion satisfaction feel it is a

pleasure to work with and help others. Individuals with high levels of compassion satisfaction feel positive about their work, their colleagues and their ability to make a difference both in their job, and society in general (Stamm 2010). Nurses typically choose their profession to help others and obtain satisfaction from their job by helping others. This leads to nurses feeling successful, energized and happy with their work and feeling they can continue to make a difference (Stamm).

Compassion satisfaction is also inversely related to compassion fatigue (Young, Derr, Cicchillo, & Bressler, 2011). Compassion satisfaction allows nurses to connect with their patients and their families despite the long term prognosis or the outlook of the current situation and allows meaningful interactions. In a study conducted by Yoder (2010), nurses who reported using a variety of coping strategies showed higher compassion satisfaction scores than nurses who utilized fewer coping strategies.

Berger, Polivka, Smoot, and Owens (2015) reported that 71.5% of the pediatric nurses in a tertiary care pediatric teaching hospital showed moderate to high levels of compassion satisfaction. Fewer than 30% of respondents had low levels of CS or high levels of BO or STS. Nurses with six to ten years of experience showed significantly lower levels of compassion satisfaction than nurses with more than 20 years of experience; however all groups by experience level had mean scores for CS in the average range (Berger et al.)

Hinderer et al. (2014) studied 128 nurses caring for adults in a trauma ICU setting in an urban area of the Eastern United States. Nurses with lower education levels, who were older, who had a larger number of support systems and who used exercise and meditation to relieve their stress had higher levels of compassion satisfaction. Nurses with a higher level of education showed lower levels of compassion satisfaction. In addition, nurses who self-

reported weaker co-worker relationships had lower compassion satisfaction (Hinderer, et al., 2014).

In a study of 153 registered nurses, medical assistants and radiological technicians in a hospital and clinics in a cancer center, those staff who worked on inpatient units had a higher percentage of at risk (i.e., low) compassion satisfaction scores (26% vs. 9%, $p = .008$) but no significant difference in burnout or compassion fatigue scores. (Potter et al., 2013). A study conducted with 273 RNs in a tertiary medical center in Western Australia found that compassion satisfaction had a protective relationship with burnout, but not with secondary traumatic stress. Controlling for age, gender, depressive symptoms, and anxiety, trait negative affect was strongly associated with burnout and moderately associated with secondary traumatic stress; compassion satisfaction attenuated the association of trait negative affect with burnout but not secondary traumatic stress (Craigie et al., 2015).

Compassion satisfaction has been shown to be variable in different settings, and among nurses with different demographic characteristics. This study will measure the level of compassion satisfaction in nurses with differing demographic characteristics, caring for pediatric patients in a variety of settings in an academic medical center in the Southwestern United States.

Compassion Fatigue

Compassion fatigue as defined and researched by Stamm (2010), is broken into two separate components, burnout and secondary traumatic stress. Compassion fatigue is a descriptive term rather than a diagnostic term and is the negative aspects of helping, or the difficult things that are related to work as helpers and caregivers (Stamm). Figley (1995) suggested that compassion fatigue encompassed stress-related feeling and behaviors arising

in caregivers from vicarious experience of extreme suffering in others (e.g., patients, families), “for example the stress resulting from helping or wanting to help a traumatized or suffering person” (p. 7). Compassion fatigue is an adverse effect of providing complex care and underlies occupational stress in helping professions (Sabo, 2011). Nurses working in any specialty may experience compassion fatigue as they provide empathetic care to meet the often overwhelming needs of their patients (Berger et al., 2015; Flemister, 2006; Hooper et al., 2010; Hunsaker et al., 2015; Lombardo & Eyre, 2011; Peate, 2014). Compassion fatigue has been shown to decrease job satisfaction, emotional and physical health and also has an impact in the workplace, potentially decreasing efficiency and employee satisfaction or increasing turnover (Flemister; Peate; Reagan, 2014). Compassion fatigue can be costly both personally and professionally for nurses; it can also have adverse financial consequences for institutions (Lombardo & Eyre).

Compassion fatigue was first identified in a clinical opinion article by Joinson (1992), and subsequently. Compassion fatigue affects individuals in caregiving professions, and nurses are particularly susceptible to it, possibly because of personality characteristics that commonly motivate individuals to choose nursing as a profession (e.g., dedication, responsibility, subordinating personal needs to the needs of others) (Boyle, 2011; Joinson, 1992). The external situations that are associated with compassion fatigue are unavoidable in many nursing settings. It may be difficult recognize compassion fatigue without a heightened awareness of its signs and symptoms. Compassion fatigue can be emotionally devastating to the person experiencing it and those around them (Joinson).

There are three core issues related to the development of compassion fatigue. First, while caregivers perform concrete tasks, the fundamental work they perform is giving of

themselves, which is physically and emotionally demanding. If caregivers do not find ways to rejuvenate or renew themselves, they are potentially headed for problems with compassion fatigue. Secondly, the needs of patients are immense and nurses and caregivers have a tendency to feel they always have a little more to give, but there are times, they just cannot help. Finally, caregivers fill numerous roles that are psychologically trying and are conflicting. For instance, moving from patient care to delegation, to planning, to an administrative task and going back and forth between these and other multiple roles expends a lot of physical and emotional energy (Joinson).

There are also other elements that contribute to the development of compassion fatigue such as relationships with colleagues, especially if the relationships at work are strained or negative. At times, nurses may feel like they are working two full-time jobs, giving of themselves at work and then coming home and having to give even more. In the professional setting, nurses may be rewarded (or reward themselves) for putting the needs of others before their own. Nursing is a profession and a calling that requires caring and giving. The demands of nursing predispose nurses to be at risk for compassion fatigue. Almost every nurse will experience at least some features of compassion fatigue in their nursing career and many will experience it multiple times over their career (Joinson). However, informants in one qualitative study felt that the term compassion fatigue had a negative connotation and were concerned that if they stated they had compassion fatigue, they might be jeopardizing their job (Sheppard, 2015).

Caring for patients who are at the end of life, in pain, or suffering may impact the psychological well being of nurses (Sabo, 2011). Sansó et al. (2015) found that self-care and self-awareness helped professionals in palliative care cope with the death and dying of

patients. Those who were able to manage and maintain their emotional balance had lower levels of compassion fatigue and burnout and increased levels of compassion satisfaction (Sansó et al.). Wellness interventions and training in coping with death and dying have some potential to assist health care professionals improve their self-care practices, awareness, and coping skills (Zadeh, Gamba, Hudson, & Weiner, 2012) and enhance self-awareness (Sansó et al.), but data are lacking on efficacy of specific interventions. Results of a longitudinal single group pilot study ($N = 13$) showed that participation in a resilience program was associated with decreases in compassion fatigue over a 6 month interval in oncology nurses practicing in an outpatient setting (Potter et al., 2013). However, without a control group, self-selection bias and expectancies cannot be ruled out.

Several studies have demonstrated that the age of the nurse, the level of education and the years of experience contribute to the risk of compassion fatigue. Some studies have found that nurses with 11-20 years of experience had the highest percentage of compassion fatigue scores (Potter et al., 2015), while others have found that compassion fatigue is highest among young nurses (Burtson & Stichler, 2010). Nurses who were age 18 to 29 had significantly lower levels of compassion satisfaction and higher levels of burnout and secondary traumatic stress than those over the age of 40 (Berger et al., 2015; Burtson & Stichler). Another study showed there were no differences in the level of compassion satisfaction related to differences in age (Branch & Klinkenberg, 2015). Some studies have found there are no differences in the level of education (Berger et al.; Branch & Klinkenberg) while other studies have shown that nurses with advanced degrees had the highest level of burnout scores (Potter et al., 2013).

There are several studies that show higher levels of compassion fatigue among oncology nurses compared with other specialties (Barnard, Street, & Love, 2006; Hooper et al., 2010; Medland, Howard-Ruben, & Whitaker, 2004; Potter et al., 2010; Sabo, 2011). Higher levels of burnout and compassion fatigue and lower levels of compassion satisfaction have been reported among nurses engaged in trauma, intensive care, or emergency care compared with nurses working general or specialty medical-surgical units (Hinderer et al., 2014; Hooper et al., 2010). However, at least one study of emergency nurses found mainly low to moderate levels of compassion fatigue and moderate to high levels of compassion satisfaction (Hunsaker et al., 2015).

While there is conflicting information among different studies regarding the level of compassion fatigue in nurses who work in different environments, are in different age groups, have different levels of experience and different levels of education, some of these differences may be associated with the setting of the study and the demographics of the population the nurse cares for. This study will examine pediatric nurses in inpatient and outpatient settings at an Academic Medical Center located in an urban Southwestern area and will examine demographic characteristics of the nurses caring for patients in a variety of pediatric settings to determine the level of compassion fatigue and then determine if there are differences in patient satisfaction between units who have differing levels of compassion fatigue.

Burnout

Stamm (2010) described burnout as feelings of hopelessness and increasing difficulty dealing with work or doing a job effectively. The onset of these feelings is generally gradual and caregivers feel they can no longer make a difference. Burnout tends to develop gradually

over time, whereas compassion fatigue may have a more abrupt onset with few, if any, warning signs (Hunsaker, Chen, Maughan, & Heaston, 2015). The development of burnout can also be associated with a non-supportive environment and/or a high workload, including high acuity and overcrowding (Hunsaker, Chen, Maughan, & Heaston; Profit et al., 2014; Stamm; Yoder, 2010), whereas compassion fatigue is more specifically associated with repeated or extreme exposure to suffering and depletion of the caregiver's empathic capacity (Hunsaker et al., 2015; Melvin, 2015; Sabo, 2011).

Studies have shown that burnout is associated with decreased job performance and commitment. Burnout is predictive of stress-related health problems and decreased career satisfaction (Alacacioglu, Yavuzsen, Dinoz, Oztop, & Yimaz, 2009; Amin, Vankar, Nimbalkar, & Phatak, 2014; Gosseries, et al., 2012; Hunsaker et al., 2015; Lorenz, & Guiradello, 2014). Additionally, nurses who are experiencing burnout may express unhappiness, disconnectedness or depersonalization, and insensitivity to their work environment while showing signs of exhaustion, being overwhelmed, and feeling out of touch with the person they want to be (Hunsaker et al.). High performance work systems may buffer the effects of stress and burnout (Bartram, Casimir, Djurkovic, Leggett, & Stanton, 2012). These better work environments have been empirically linked to increased job satisfaction, lower inpatient mortality and failure to rescue rates, less nursing burnout, and increased patient satisfaction (Kutney-Lee & McHugh, 2009).

Often the impetus for burnout stems from conflict in the work setting which leads to conflicts and disagreements among co-workers and managers, dissatisfaction with pay, or inadequate managerial or administrative support (Hunsaker et al., 2015). As burnout progresses, the nurse is likely to withdraw (Boyle, 2011). Burnout can affect absenteeism,

morale, staff retention, patient satisfaction and patient safety (Burtson, Stichler, 2010; Li, Guan, Chang, & Zhang; Lorenz, & Guiradello, 2104; Portnoy, 2011; Potter, 2010; Profit et al., 2014; Vahey, Aiken, Sloane, Clarke, & Vargus, 2004). Nurses who work shifts that are ten hours or longer are two and a half times more likely to experience burnout and job dissatisfaction; both the intention to leave and the levels of burnout increase incrementally as shift length increases (Stimpfel, Sloane, & Aiken, 2012).

Nurses who frequently have to deal with death or other negative situations tend to develop emotional exhaustion and feelings of negativity and cynicism if they do not develop emotional resources to deal with the demands of their work (Li, Guan, Chang, & Zhang, 2014). In a qualitative study conducted by Bruce, Miller, and Zimmerman (2015) intensive care unit team members (physicians, nurses, ancillary staff) expressed distress in relation to care situations in which treatments were viewed as futile, when disclosure of anticipated benefits and risks was perceived as inadequate, or when there were substantial disagreements about goals of treatment. Nurses tended to focus on the humanistic characteristics of the care they were providing and communication issues within the team. Repeated incidences of disagreements among the care team led to frustration among these nurses. As patient prognosis worsened, nurses also were more emotionally invested in the suffering of patients and families, whereas physicians tended toward emotional detachment.

In a large study conducted with 2073 health professionals working in 44 NBICU units, Profit et al (2014), found nurses working in these units have an especially difficult time balancing personal and work life. There was a high prevalence of burnout among these professionals, particularly RNs, Neonatal Nurse Practitioners, and Respiratory Therapists. The rate of burnout was reported at 26%. Similar results were found in a study with ICU

nurses in an academic medical center; the rate of burnout was high, and both the environment of care and the staffing of the unit had a significant impact on job satisfaction and burnout (Young, Derr, Cicchillo, & Bressler, 2011). The frequent use of life saving or life prolonging equipment in the ICU setting potentially contributes to stress and burnout, particularly if it is viewed as nonbeneficial to the patient (Bruce et al., 2015; Profit et al., Young et al.).

Rudman and Gustavsson (2011) conducted a prospective, longitudinal study with 1153 new graduate RNs in Sweden. They found that new, inexperienced nurses were at higher risk of developing emotional exhaustion and burnout in an unsupportive work environment. One third of the nurses in the study reported exceptionally high levels of burnout in the first three years after they graduated. This change in burnout level was followed by an increase of depressive symptoms and increased the chance of leaving or planning to leave their job.

In a study of 676 RNs with BSNs in Spain, there was a relatively high prevalence of burnout. However, nurses who were working in the field of maternal and child health showed lower levels of burnout than nurses working in other fields (Cañadas-de la Fuente, et al., 2015).

Hinderer et al. (2014) conducted an observational, cross-sectional study with nurses who provided direct care to trauma patients ($N = 128$). Burnout was associated positively with years in current position, percentage of hours in direct patient care average hours per shift, and twelve versus eight-hour shifts. Burnout was negatively associated with social support and quality of relationships with co-workers. In a study with 1846 trauma RNs in Taiwan, age was negatively correlated with burnout. Nurses who were classified as Generation Y experienced burnout more frequently than nurses from other generational

cohorts (Lee, Yen, Fetzer, & Chien, 2014; Xie, Wang, & Chen, 2010). It is conceivable that older nurses had more experience that helped them cope with difficult situations to decrease the risk of burnout (Xie et al.).

This study will utilize a descriptive design to determine whether age, years on current unit, years as an RN and other factors influence burnout scores. Additionally, the study will describe differences between units in the level of burnout of the nursing staff.

Secondary Traumatic Stress

The second component of the compassion fatigue scale is secondary traumatic stress, which is somewhat rare, but does occur among individuals who have experienced an extremely stressful or traumatic event or events (Stamm, 2010). The exposure to these events are work related and the negative effects are fear, sleep difficulties, intrusive images, or actively avoiding reminders of other's traumatic events (Stamm). The symptoms of secondary traumatic stress occur suddenly and are generally associated with a particular difficulty such as caring for a specific patient and having a difficult time with work-life balance. Because images of the precursor event are intrusive, the individual avoids situations that are reminiscent of the event, is fearful of forgetting important things, and has an inability to keep private life and work life separate (Stamm).

Secondary traumatic stress is similar in character to vicarious trauma (Stamm, 2010). The most distinctive factors of secondary traumatic stress that differ from burnout are fear and avoidance (Melvin, 2015; Stamm, 2010; Young et al., 2011); by contrast, burnout is characterized more by emotional exhaustion, depersonalization, and feeling ineffective at work (Hinderer et al., 2014; Hooper et al., 2010; Stamm, 2010). The fear associated with secondary traumatic stress has a very powerful effect on the person experiencing it, including

feelings of being overwhelmed by the emotional demands of work (Stamm, 2010). If burnout and secondary traumatic stress are both present, personal and work life can be very difficult.

Individuals who work in a highly stressful setting are at a particularly high risk of secondary traumatic stress and burnout (Li, Early, Mahrer, Klaristenfeld, & Gold, 2014; Rees, Breen, Cusack, Heaney, 2015). For example, nurses who worked in an intensive care setting caring for highly complex, critically ill patients had a higher incidence of traumatic stress than nurses who worked in general medical surgical units (Hinderer et al., 2014). Emergency department nurses are frequently exposed to work related traumatic events, the most difficult of these being the death or injury to children and adolescents. In a study conducted in Belgium, over one third of the 248 nurses who participated in the study had sub-clinical levels of mood disturbance and physical symptoms. Approximately eight percent had clinically concerning symptoms of PTSD. Nurses who had social support from colleagues and supervisors had lower levels of PTSD symptoms. The frequency and type of exposure to traumatic events, female gender, professional seniority and the more years of experience on the job were predictors of higher levels of PTSD symptoms. Nurses who coped by employing avoidance strategies had more physical complaints along with disengagement, wishful thinking, and suppression of intrusive thoughts. These along with a lack of social support were significant predictors of occupational stress, which can lead to PTSD (Adriaenssens, de Gucht, & Maes, 2011).

Impact of Work Environment on Compassion Satisfaction and Compassion Fatigue

High levels of work related stress, burnout, job dissatisfaction and poor health are common within the nursing profession (Khamisa, Oldenberg, Peltzer, & Ilic, 2015; Khamisa, Peltzer, & Oldenberg, 2013). The impact of the work environment on both compassion

satisfaction and compassion fatigue is related to nurse engagement or disengagement and also affects the nurse's intention to remain in or leave a position or the profession (Boyle, 2011; Kowalski et al, 2010; Lee, Yen, Felzer, & Chien, 2014; Trepanier, Fernet, & Austin, 2015). Van Bogaert et al. (2014) found that work engagement directly influences both the nurse's perspective of the work environment as well as job outcomes and quality of care.

Other work environment factors which contribute to burnout and compassion fatigue include assignments to care for higher acuity or greater numbers of patients, multiple deaths in a relatively short span, long work hours and rotating shifts, staff shortages, the perceived lack of support from management, and a lack of resources needed to perform the job well (Branch, & Klinkenberg, 2015; Khamisa, Oldenberg, Peltzer, & Ilic, 2015; Kushner, & Ruffin, 2014; Li, Guan, Chang, & Zhang, 2014). Nurses who had higher levels of burnout also reported poorer relationships with their co-workers (Hinderer et al., 2014). Of concern, burnout seems to be contagious among nurses (Murray, 2014). Work environment factors potentially affect both emotional and personal health (Branch, & Klinkenberg; Khamisa, Oldenberg, Peltzer, & Ilic; Kushner, & Ruffin). With repeated exposure to negative work environment factors, nurses gradually withdraw which can lead to burnout and compassion fatigue. When this occurs, many nurses put an ever-increasing effort into patient care trying to offset their feelings of burnout. This ultimately leads to issues with work-life balance, which then perpetuates the feelings of burnout and compassion fatigue (Boyle). When this occurs, it is not uncommon for sick leave usage to increase and the effectiveness and efficiency of the nurse to decrease and intent to leave one's job increases. Burnout is one of the most commonly cited reasons for leaving a position (Cañadas-de la Fuente et al., 2015; Kushner, & Ruffin).

Low job satisfaction is positively correlated with both stress and burnout (Gauthier, Meyer, Greffe, & Gold, 2015; Vargas, Cañadas, Aguayo, Fernandez, & de la Fuente, 2014). Finding ways to reduce work related environmental stress and burnout could have a significant impact on patient care, as well as patient and staff satisfaction. It is important for employers to address these issues so nurses get the support and assistance they need to decrease their stress. A more positive and supportive work environment can enhance job satisfaction, productivity, and retention (Gosseries et al., 2012; Kushner & Ruffin, 2014, Hinderer et al., 2014; McHugh, Kutney-Lee, Cimiotti, Sloane, & Aiken, 2011; Murray, 2014; Wang, Liu, & Wang, 2015). Interventions potentially can assist in decreasing burnout, increasing resilience and decreasing the symptoms associated with anxiety, depression, burnout and secondary traumatic stress (Kenny & Hull, 2008; Mealer et al., 2014).

Patient Satisfaction

Overview

It is well accepted that patient satisfaction is a key component of patient outcomes as well as a key factor in pay for performance metrics for hospitals (Morris, et al., 2013). Part of Medicare's Value Based Purchasing Program includes a patient satisfaction survey. The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) measures patient's satisfaction with their hospital care and part of the hospital's reimbursement is based on these scores. Hospitals that score lower than their peer hospitals lose part of their reimbursement until the hospital's scores improve (American Sentinel University, 2012).

Measuring patient satisfaction and evaluating the data can identify opportunities to improve the quality of nursing and medical care (Beattie, Murphy, Atherton, & Lauda, 2015). The nursing care provided during a patient's hospital stay is a key determinant of the

patient's overall satisfaction with their hospital stay (Boyle, 2011; Johansson, Oleni, & Fridlund, 2002; Khan, Hassan, Anwar, Babar, & Babar, 2007; Kutney-Lee, et al., 2009; Press Ganey, 2013). A good nurse-patient relationship includes elements of mutual understanding, trust, honesty, and respect. Regardless of the aesthetics, location, and organization of the hospital, if nursing care is of poor or mediocre quality, patient satisfaction scores will be lower than in hospitals where nursing quality of care is reported as being good or excellent (Johansson, et al.; Rutherford, 2014).

The quality and quantity of communication with families is a key indicator of overall patient satisfaction with the hospital stay. Patients who reported that their nurse paid attention to their needs and responded to those needs while showing empathy reported a higher level of satisfaction with their stay (Forsberg, Vikman, Walivaara, & Engstrom, 2015; American Sentinel University, 2012; Johansson, et al.; Khan, et al.; Lam, et al., 2015; Morris, Jahangir, & Sethi, 2013; Rutherford, 2014; Wolf, 2015). Patients who are satisfied with their care are more likely to adhere to their plan of care than patients who are dissatisfied with their care (Johansson, Oleni, & Fridlund, 2002).

In a four state study conducted with over 95,000 nurses by McHugh et al. (2011), in hospitals where there were a high number of nurses who were burned out and/or dissatisfied with their work environment or job, patient satisfaction was lower. Similarly, patient satisfaction is impacted by compassion fatigue (Potter, et al., 2013; Reagan, 2014; Van Bogaert, et al., 2013). Nurses who are burned out or experiencing compassion fatigue are too emotionally exhausted to provide patient care that makes patient's feel satisfied (Boyle, 2011; Gosseries, et al., 2012; Kutney-Lee, et al.; VanBogaert, et al., 2013; Vargas, Cañadas, Agueyo, Fernandez, & de la Fuente).

Nursing leadership has also been shown to relate to patient satisfaction. In a study conducted with ICU nurses in a large hospital in New York, if nurses had a favorable perception of their nurse manager, an increase in patient satisfaction scores was seen. This work supports that the nurses perception of the work and environment and patient satisfaction are linked (Boev, 2012).

Hospitals receive higher patient satisfaction scores if the nurse practice environment is perceived as positive by the nurses and patient-to-nurse ratios are considered to be favorable (Kutney-Lee, et al., 2009; Boyle, 2011). Patients reported being less satisfied with their care in hospitals where a higher proportion of nurses reported their most recently-worked shift was 13 hours or more compared with 11 hours or less. In addition, as shift length increased, so did measures of nurse burnout and job dissatisfaction and also the intention to leave that employer within a year's time (Stimpfel, Sloane, & Aiken, 2011).

Nurses play a key role in ensuring that patients are satisfied with their care and have positive health outcomes. Burnout and compassion fatigue can lead to a decrease in patient satisfaction and patient outcomes. This study seeks to determine the level of burnout among nurses in an academic medical center in the Southwestern United States and describe whether there are differences in patient satisfaction scores on units where burnout and compassion fatigue are higher.

Nurse Sensitive Indicators

Nurse sensitive indicators are those elements of patient satisfaction and patient care that are related to the care nurses provide (Albanese et al., 2010). Since 2004, much progress has been made in reporting nurse sensitive indicators at a hospital level. These indicators are used with increasing frequency to measure nursing quality of care and performance

measurement in a hospital setting. These elements include: (a) patient satisfaction with management of pain; (b) wait time to answer call bell; (c) overall satisfaction with nursing care, as well as others (Heslop, & Lu, 2014). Using nurse sensitive indicators to benchmark unit and hospital performance helps identify potential problems and possible solutions to those problems. Monitoring of nurse sensitive indicators also assists in setting goals that are data driven to help staff recognize progress toward goals and successful implementation of measures that improve care (Storer Brown, Donaldson, Burnes Bolton, & Aydin, 2010). In this study, nurse sensitive indicators will be analyzed by type of unit (e.g., inpatient units, critical care units, specialty clinics). Analysis will also include the comparison of compassion satisfaction and compassion fatigue scores to nurse sensitive indicator patient satisfaction scores.

The Effect of Nursing Satisfaction on Patient Satisfaction

Compassionate nursing care was the most prominent factor in the HCAPHS survey for nurse sensitive indicators and the patient's intent to return to the organization for further care and to recommend the organization to others (Burtson & Stichler, 2010). Studies have found there is a relationship between the overall caring a nurse shows toward a patient and the patient's satisfaction. Adding to this, there is a relationship between nursing job satisfaction and patient satisfaction in both inpatient and outpatient settings (Burstson, & Stichler; McHugh et al., 2011; Stimpfel et al., 2012). Patient satisfaction is higher when nurses perceive a more supportive and positive work environment, collaborate with physicians, and have more favorable staffing relationships (American Sentinel University, 2012; Kutney-Lee, et al., 2009). By the same token, poor nursing work environments and

staffing levels were associated with a decrease in both patient satisfaction and nursing job satisfaction (Kutney-Lee et al.).

Gaps in the Literature

There are relatively few studies related to compassion satisfaction and compassion fatigue in pediatric nurses (Berger et al., 2015; Branch & Klinkenberg, 2015) and neither focused on the possible relationship of compassion satisfaction or compassion fatigue with patient satisfaction. The study by Branch and Klinkenberg included other non-physician, pediatric health care providers (e.g., social workers, respiratory and physical therapists) in addition to pediatric nurses. Past studies have focused on compassion fatigue and compassion satisfaction in small populations of pediatric nurses, such as pediatric oncology nurses, but these studies did not explore pediatric specialty nurses caring for a variety of patients in different settings, both inpatient and outpatient. Additionally, no studies were found that analyze whether there is a relationship between compassion fatigue and patient satisfaction. While this study is descriptive in nature, the information gained will add to the research encompassing compassion satisfaction and compassion fatigue and will provide new information regarding the effect of compassion fatigue on patient satisfaction. This new information can then be utilized by nurse leaders to explore new methods to support nursing staff to protect their compassion satisfaction and decrease the level of burnout and secondary traumatic stress.

CHAPTER 3: METHODS

In this chapter, the background of the primary investigator and a detailed plan of the study methods related to compassion satisfaction and compassion fatigue and the impact on patient satisfaction are presented. The purpose of this descriptive, quantitative study is to determine differences in the level of compassion fatigue and compassion satisfaction on multiple pediatric nursing units and areas in an academic medical center located in the Southwestern region of the United States. Additional purposes include determining if there are differences in patient satisfaction on units who have higher compassion fatigue scores and whether there are differences in the scores on the compassion satisfaction and compassion fatigue scales based on the demographic characteristics of the sample. The information obtained from this study is an important first step in determining the level of compassion fatigue and compassion satisfaction present. Implications for future research include using this information to design interventions that will assist nurses in decreasing their level of compassion fatigue overall, as well as within the compassion fatigue subscales of burnout and secondary traumatic stress.

Background of Primary Investigator

I started my career in healthcare at age 16 as a nursing assistant in a long-term care facility. I worked in both home healthcare and nursing home settings while attending classes for my Associate Degree in Nursing (ADN). After graduating, I worked as a staff nurse in an acute care setting for four years. I then accepted a leadership position in a long-term care facility. In both acute care and long term care, I witnessed nurses who left their position or the profession all together because they stated they were burned out, felt the workload was

too heavy, or that the work they were doing was not what they envisioned when they attended nursing school.

After working in a long-term care facility for three years, I returned to the acute care setting in a leadership position in Case Management. I have held leadership positions with increasing responsibility in an academic medical center since 2000. These positions are in a variety of settings: outpatient, inpatient, and case management departments. I have been in an Executive leader role since the spring of 2006. As my leadership experience increased, I have become increasingly concerned with the level of support and assistance nurses receive as they experience stressful events, engage in difficult work with their patients, and are constantly faced with the introduction of new technology at the bedside. I am also interested in discovering the level of burnout among nurses who work with pediatric patients and how this impacts their ability to provide care for patients in a manner that influences the level of patient satisfaction on a specific unit. Additionally, are the differences in the level of patient satisfaction between units and do the units or areas with lower levels of patient satisfaction have nurses who are experiencing higher levels of compassion fatigue?

Specific Aims

Compassion fatigue and compassion satisfaction are important issues in nursing. Previous studies have shown that nurses who experience compassion fatigue and burnout are more likely to become ineffective, apathetic, depressed, detached and leave the profession (Boyle, 2011; Hunsaker, Chen, Maughan, & Heaston, 2015). Additionally, high levels of burnout are related to lower patient satisfaction scores (Burtson & Stickler, 2010; Potter, et al., 2010; Vahey, Aiken, Sloane, Clarke, & Vargus, 2004). As the nursing workforce ages, it is imperative that nursing leaders find ways to increase compassion satisfaction and create a

work environment that is supportive and assists nurses in finding a work life balance that will help them maintain their passion for the nursing profession and the patients they care for. To date, research on compassion fatigue and compassion satisfaction in nursing has been conducted primarily with nurses who care for adult patients and in foreign countries. Few studies have focused on pediatric nurses and none that could be located examined multiple pediatric specialties, including both inpatient and outpatient settings. Additionally, there is a lack of research that explores the relationship between compassion fatigue and patient satisfaction. This study included pediatric nurses in a variety of specialties and settings in an academic medical center in the Southwestern United States.

Specific aims of this study were as follows:

1. Describe the extent of compassion fatigue and compassion satisfaction among pediatric nurses on specialty care units.
 - a. Pediatric Intensive Care Unit (PICU)
 - b. Newborn Intensive Care Unit Level II (ICN 3 and ICN 4)
 - c. Newborn Intensive Care Unit Level III (NBICU)
 - d. Pediatric Hematology/Oncology, Renal, and Transplant Inpatient Unit (PSCU)
 - e. General Pediatric Unit (GPU)
 - f. Carrie Tingley Inpatient Unit (CTI)
 - g. Pediatric Hematology/Oncology Outpatient Clinic
 - h. Pediatric Infusion Unit (PIU)
 - i. Pediatric Emergency Department
 - j. Pediatric Specialty Care Clinics

- k. Pediatric Urgent Care Clinics
- l. Pediatric Operating Room
2. Determine if there are differences in the level of compassion fatigue and compassion satisfaction among pediatric nurses based on demographic characteristics:
 - a. Age
 - b. Race/Ethnicity
 1. Race based on United States 2010 Census Bureau categories
 2. Hispanic or Latino
 - c. Gender
 - d. Relationship Status
 - e. Do you have children?
 1. If yes, please select the age group of your child(ren).
 - f. Annual Household Income
 - g. Work Status
 - h. Are you currently in school
 1. Year Expected to Graduate
 - i. Please select all nursing degrees that you have completed
 - j. Number of years in pediatric or neonatal nursing
 - k. Primary unit of practice
 - l. Number of years on primary unit of practice
 - m. Number of years in the current organization
 - n. Total Number of years as an RN

3. Determine whether units that have higher levels of compassion fatigue score lower on nurse sensitive patient satisfaction indicators.

Addressing Aims

Tools

Three data tools were used in this descriptive quantitative study; (1) a researcher designed demographic tool; (2) the ProQOL 5 tool, which measures compassion satisfaction and compassion fatigue; and (3) results from the Press Ganey Patient Satisfaction survey administered to inpatients and outpatients by the hospital/health system. The Press Ganey Patient Satisfaction survey Nurse Sensitive Indicators measures for each of the areas or units were used since the study is looking at the compassion satisfaction and compassion fatigue among nurses and the impact on patient satisfaction. The best measure of how this influences patient satisfaction is to examine indicators that measure satisfaction with nursing. Each of the tools will be described in more detail in the following section.

Demographic/Characteristic questionnaire. The researcher-designed tool is intended to collect basic demographic information about participants. The information was used to describe the sample in terms of demographic and professional practice characteristics.

ProQOL 5. The ProQOL 5 is a 30-item scale designed to measure compassion satisfaction and compassion fatigue. The tool comprises 30 items that make up three 10-item scales: a compassion satisfaction scale (CS) and two scales for dimensions of compassion fatigue: burnout (BO) and secondary traumatic stress (STS). High scores on the CS scale are reflective of engagement with the work environment (Stamm). High scores on the BO or STS scales indicate increased risk for compassion fatigue (Stamm). The ProQOL 5 has been used

with a variety of professionals including firefighters, social workers, police officers, clergy, nurses, physicians and other healthcare workers, as well as others in helping professions. The tool has been used in a variety of settings and multiple countries (Stamm). The tool is self-administered and individuals are instructed to answer the questions based on their current work situation and select the number that most accurately reflects how often they experienced the situations in the question in the past 30 days.

Reliability of the subscales will be discussed in more detail in each sub-section. Construct validity is strong. In 2010, there were over 100 published studies on compassion fatigue, secondary traumatic stress, and vicarious trauma. Nearly half of those studies utilized the ProQOL5 or earlier versions of the ProQOL (Stamm, 2010). Since that time, numerous additional studies have been conducted utilizing this tool. The three scales within the ProQOL5 are designed to measure different constructs; the compassion fatigue scales measure two distinct dimensions of compassion fatigue. According to Stamm, inter-scale correlations show that CS has 2% shared variance with STS and 5% shared variance with BO. The shared variance between the BO and STS scales is 34%. While this shared variance is high, the shared variance is thought to be related to the distress that is common to both burnout and secondary traumatic stress (Stamm).

Compassion satisfaction scale. The compassion satisfaction scale is a 10 item scale composed of the following items: (a) I get satisfaction from being able to help people; (b) I feel invigorated after working with those I help; (c) I like my work as a helper; (d) I am pleased with how I am able to keep up with helping techniques and protocols; (e) my work makes me feel satisfied; (f) I have happy thoughts and feelings about those I help and how I could help them; (g) I believe I can make a difference through my work; (h) I am proud of

what I can do to help; (i) I have thoughts that I am a “success” as a helper; and (j) I am happy that I chose to do this work (Stamm, 2010).

Item scoring is done on a five point Likert scale, with 1 being never and 5 being very often. The Cronbach’s alpha reliability of the compassion satisfaction scale is .88. This is based on the 3000 plus cases in the database referenced by Stamm (2010) from studies that have used this instrument as a measure for compassion satisfaction. In the current study, the Cronbach’s alpha of the compassion satisfaction scale was .85.

Using standardized T-scores (Mean = 50, SD = 10) approximately twenty five percent of the people who have taken the survey score 57 or higher and another 25% score 43 or lower; the corresponding raw score cut points are 42 or higher and 22 or lower. Higher scores indicate higher professional satisfaction. Lower scores indicate one of two things: dissatisfaction or problems on the job, or deriving more pleasure from activities other than work (Stamm, 2010).

Burnout scale. The burnout scale is composed of 10 items: (a) reverse score of I am happy, (b) reverse score of I feel connected to others; (c) I am not as productive at work because I am losing sleep over traumatic experiences of a person I help; (d) I feel trapped by my job as a helper; (e) reverse score of I have beliefs that sustain me; (f) reverse score of I am the person I always wanted to be; (g) I feel worn out because of my work as a helper; (h) I feel overwhelmed because my workload feels endless; (i) I feel “bogged down” by the system; and (j) reverse score of I am a very caring person (Stamm, 2010).

Scoring is done on the same Likert scale as the compassion satisfaction scale. The Cronbach’s alpha reliability of the burnout scale is .75. While this is on the lower end of the

limits suggested by Nunnally (1978), the scale is considered reliable for research purposes. The Cronbach's alpha reliability of the burnout scale in the current study was .78.

Using standardized T-scores, twenty five percent of individuals score 57 or higher on the burnout subscale and another 25% score 43 or less. The corresponding raw score cut points are 42 or higher and 22 or less (Stamm, 2010). Higher scores may indicate feelings of ineffectiveness on the job, but may also be indicative of a bad patch or needing some time off. If the high score persists, individuals may be at risk for burnout or have worries outside the workplace (Stamm, 2010).

Secondary traumatic stress subscale. The Secondary Traumatic Stress Subscale is composed of the following 10 items: (a) I am preoccupied with more than one person that I help; (b) I jump or am startled by unexpected sounds; (c) I find it difficult to separate my personal life from my life as a helper; (d) I think I may have been affected by the traumatic stress of those I help; (e) because of my helping, I have felt "on edge" about various things; (f) I feel depressed because of my traumatic experiences of the people I help; (g) I feel as though I am experiencing the trauma of someone I have helped; (h) I avoid certain activities or situations because they remind me of frightening experiences of the people I help; (i) as a result of my helping, I have intrusive frightening thoughts; and (j) I can't recall important parts of my work with trauma victims (Stamm, 2010).

Scoring is done on a five point Likert scale, with 1 being never and 5 being very often. The Cronbach's alpha reliability of the secondary traumatic stress scale is .81 (Stamm, 2010). This is within the range of acceptable reliability as suggested by Nunnally (1978), thus the scale is acceptable to measure Secondary Traumatic stress for research purposes. In the current study, the Cronbach's alpha reliability was also .81.

Using standardized T-scores, approximately 25% of individuals score 43 or lower and another 25% score 57 or higher. The corresponding raw score cut points are 22 or lower and 42 or higher. Individuals with high scores are encouraged consider what may be frightening or upsetting them at work or if there are other reasons why the score may be elevated. Higher scores do not necessarily indicate a problem; but are an indication that an individual may want to think about how they feel about their work and work environment (Stamm, 2010).

Press Ganey nurse sensitive indicators. Press Ganey Associates, Inc. has relationships with 40% of the hospitals in the United States, including over 10,000 health care facilities to measure, compare, report and improve the quality of patient care. Surveys are sent to patients after discharge from the hospital, or after visits to outpatient clinics, procedures, and other health care settings. Organizations set the threshold for number of surveys sent (Press Ganey, n.d.).

According to Press Ganey, a sample size of seven or greater in a specific unit produces potentially interpretable results (D. Hawkins, personal communication, October 22, 2015). At the study site, surveys are sent to 100% of discharged inpatients (excluding deaths) unless they have had a previous hospitalization within the last 30 days. This eliminates duplicative surveys being sent to patients who have sequential visits for chemotherapy or other treatments, as well as readmissions. There is a limit to the number of surveys the organization sends each certain month. Once this limit is reached, no further surveys are sent. Most months, the organization does not meet this limit until late in the month; however, if it were a particularly busy month, the surveys may only be reflective of the discharges for part of the month (D. Hawkins, personal communication, October 22, 2015).

Nurse sensitive indicators are aspects of patient care and include structure, process, and patient outcome measures. These indicators reflect the patient experience (Press Ganey, n.d.). The specific indicators that will be evaluated as part of this study are outlined below. Results from each of the units were evaluated for the same time frame that the nursing surveys were collected, meaning the reports for each area, unit, or clinic were run using discharge dates that correlate to the same period the nursing survey was open for response.

Inpatient Press Ganey nurse sensitive indicator scale. The global nurse sensitive indicator is comprised of the following items from the patient satisfaction survey: (a) friendliness/courtesy of the nurses; (b) promptness in responding to the call button; (c) nurses' attitude toward your child's requests; (d) amount of attention paid to your child's special or personal needs; (e) how well the nurses kept you informed; (f) skill of the nurses; (g) nurses' sensitivity and responsiveness to pain your child may have experienced in the hospital; (h) nurses' promptness in giving pain medication (if needed); and nurses efforts to educate you about your child's condition and care he/she required (Press Ganey, 2004).

Outpatient Press Ganey nurse sensitive indicator scale. The two items that comprise the global score on the outpatient survey are as follows: (a) friendliness/courtesy of the nurse/assistant; and (b) concern the nurse/assistant showed for your problem (Press Ganey, 2010). While the survey statement says nurse/assistant, the clinics included in this study are primarily staffed by registered nurses and the majority of the specialty nursing care is provided by these nurses. Surveys are sent to a random sample of 10% of patients who are seen in each outpatient setting.

Methods

Purpose

The study is a quantitative descriptive study to examine the levels of compassion satisfaction and compassion fatigue among pediatric nurses in a variety of areas and settings in an academic medical center in the Southwestern United States. Additionally, the study describes the differences in the levels of compassion satisfaction and compassion fatigue across demographic characteristics. The study then examines the impact of compassion fatigue on the nurse sensitive indicators portion of the Press Ganey Patient Satisfaction Survey.

Sample and Setting

The setting for the study was pediatric inpatient units, outpatient clinics and procedural areas in an academic medical center in the Southwestern region of the United States. The sample was nurses who work on the units and areas identified in the Specific Aims section of this chapter. The study targeted all RNs on the units and in the areas previously identified. All RNs, regardless of years of experience and time on unit were approached to complete the survey. Graduate nurses who had not passed the National Council Licensure Exam (NCLEX) were not included in this study. There are approximately 450 RNs who work in the areas selected. This number varies on a weekly basis because of newly hired nurses and nurses who leave the organization. Of these 450 nurses, seventy five percent are full-time, twenty percent work part-time and another five percent work intermittently. For those who work intermittently, the casual pool nurses, work a minimum of one shift per two-week pay period. Participation in the study was voluntary.

A purposive sampling approach was chosen for this study. In this type of sampling, the researcher starts with a purpose in mind and then selects the sample to include the population of interest, excluding people who do not meet the purpose of the study (Chaturvedi, n.d.; Guarte & Barrios, 2006; Teddlie & Yu, 2007). This particular methodology is subject to bias and sampling errors. The potential advantages to this methodology are convenience and lower costs. There are disadvantages to this sampling method. First, the method does not allow the researcher to estimate the extent to which the sample statistics are likely to be representative of the population at large (Guarte & Barrios; Teddlie & Yu). Additionally, the ability to generalize the results of the study may be limited based on the specific population and area where the survey was conducted (Guarte & Barrios). While this method has limitations, the method was chosen since this study sought to examine a specific sub-set of nurses in an academic medical center. Other medical professionals, support staff, as well as nurses working outside of the pediatric units were not invited to participate in this study. The chosen sampling method allowed specific sub-sets of nurses to be invited to participate in the study.

Data Sources

The study had four data sources. The first was the researcher designed demographic collection tool, the second was the quantitative survey questions on the survey tool, the third is the qualitative answers on the questionnaire, and the fourth was the Press Ganey Patient Satisfaction Nurse Sensitive Indicator results. There was one qualitative question in the survey. This question was “Is there anything else you would like to share?”

Data Collection Process

Web-based data collection. Data were collected using an online survey tool. An Internet based data collection method was chosen for a number of reasons. The use of the Internet is rapidly increasing among the general population and the use of Internet based survey tools and interventions are also increasingly common (Liu et al, 2010; Moloney et al, 2009; Vicente and Reis 2010). Internet based tools provide researchers with increased flexibility and the ability to utilize innovative approaches to conduct a survey (Bertot, 2009; Dillman, & Smyth. 2007).

While there are a number of advantages to the use of an Internet based survey, there are also disadvantages. There are inconsistent reports in the literature that suggest the response rate for an Internet based approach may be less than a traditional approach (van Gelder et al, 2010; Vicente, & Reis, 2010). Internet administration may be biased toward a younger, more educated, higher income sample (Liu et al 2010; Klovning et al 2009; Schleyer, & Forrest, 2000; van Gelder et al, 2010); therefore, self-selection bias may limit generalizability (Messer & Dillman, 2011; van Gelder et al, 2010).

Despite the limitations of the internet-based survey strategy, utilizing this strategy can significantly simplify the research process (Oppenheimer et al, 2011). There are also methods to overcome the disadvantages. Offering an incentive to participants can enhance response and completion rates. A drawing for a prize increases the willingness of the participant to complete the survey. Additionally, results of the research may be offered to participants as a thank you or incentive to participate as well (Dillman, Smyth, & Christian, 2009; Messer & Dillman, 2011; Oppenheimer et al). For this survey, the respondents were offered a five dollar gift card to the organization that could be used in the gift shop, cafeteria or at any of

the coffee carts around campus. Additionally, respondents could request a copy of the study results.

The bias toward a younger population utilizing the Internet and responding to the survey was not a huge concern since nurses in the organization use technology and computers in their daily work. They also read and respond to email on a regular basis.

This researcher acknowledged the potential for self-selection bias and strived to combat this by sending out multiple invitations to participate in the survey. Concerns over data security and privacy were addressed by utilizing an anonymous survey and a separate email to receive the gift card and/or request survey results. There was no linkage to the demographic questionnaire or survey when the participant selected emailed the researcher and requested either to receive a gift card or receive survey data on completion of the study. Additionally, by utilizing a commercial survey builder and publishing site, REDCap, data security was enhanced and there was no collection of IP addresses on the survey. When the survey was built, coding was done to ensure that the anonymity of the respondent was maintained.

Recruitment. For this study, nurses who work in the pediatric units, clinics, and procedural areas of the organization were sent an email describing the study with a link that took them to the two survey tools that were filled out by the individual nurse. The study link was open for one month. Emails with a reminder to participate if they had not had the opportunity and thanking them for participating in the study if they had already completed the tool were sent at day 14 and day 25. A total of three emails were sent during the duration of the study, the initial email and two follow-up emails. This number was selected based on the work of Dillman et al. (2007) suggesting that three contacts with participants has shown

to increase response rates. However, it is important to vary the content of the email subject and content for several reasons: (a) the message in different emails may appeal to different people and (b) the emails are less likely to be filtered by the system as spam (Dillman, et al). There is some research that suggests that sending emails early in the morning increases response rates (Dillman, et al). For this study, the time of day was not thought to influence the participation rate since the staff who participated in the study were shift workers so they check their email at various times throughout the day.

Steps in process. Once a nurse self-selected to participate in the online survey, they were directed to an informational page (Appendix A), then the demographic questionnaire (Appendix B), and finally to the ProQOL 5 for completion (Appendix C). A separate consent form was not necessary; however, an informational page about the study was created and was the first page displayed when the link was selected. This page contained information about the study, including the purpose, how long the questionnaire would take to complete, benefits of the study, confidentiality, the ability of the participant to quit at any time, how the study results would be used and contact information for the primary investigator. After the participant read the first page, they were asked to acknowledge that they read the information and then were directed to the demographic questionnaire for completion. At each of the steps, there were complete instructions for the participant. Once the participant completed the survey, they were thanked for completing and submitting their survey, then were invited to email the primary investigator to request a gift card and/or results of the study. Basic information was collected in order for the researcher to contact the individual for delivery of the gift card. Participants were not required to request a gift card or results of the study or

provide any personal information. Information provided was not in any way linked to the demographic questionnaire or the ProQOL.

Data Analysis Approaches

Demographic Information

The demographic information was evaluated and reported utilizing descriptive statistics. Demographic statistics are presented in the data analysis chapter of this paper. The demographic questions were utilized to stratify information to determine whether there were differences in responses of participants based on demographic differences. For instance, nurses with fewer years of experience more likely to experience compassion fatigue? Are nurses with a higher level of education more likely to have high levels of compassion satisfaction?

Quantitative Data

Quantitative data were collected using the Research Electronic Data Capture (REDCap) system. REDCap is a browser based software package designed for clinical and translational research databases. REDCap is a secure, HIPAA compliant, web based application for building and managing databases and online surveys. The application is recommended for collecting and storing data for projects and studies ranging from small projects to longitudinal studies. Respondents can save their responses without completing the survey and come back later to complete the survey. The product allows the researcher to process and report results in a number of different ways (REDCap, n.d.). Currently, the Health Sciences Center, including the hospital and all colleges, has over 700 projects with 1184 users (REDCap). The software solution also has data quality checks, allows files to be exported to other applications, such as SPSS for further statistical analysis, and has a file

repository for storage of study related documents (Finley, 2013). REDCap was chosen because of the enhanced data security and the ability to analyze data within the application as well as export files to SPSS for further data analysis.

The quantitative data on the ProQOL 5 were analyzed utilizing descriptive statistics and where appropriate and groups could be stratified, using t-tests and ANOVA to determine differences between groups. For instance, on units where the compassion fatigue scores were higher is the overall patient satisfaction lower? Quantitative data analysis was done utilizing Statistical Package for the Social Sciences (SPSS).

There was a question at the end of the survey that was open ended and allowed survey participants to enter any further information that they wished to share with the researcher. The responses of this question were reviewed and analyzed for themes.

Power Analysis

An adequate sample size is necessary to provide a sufficient level of statistical power to adequately answer the research questions and identify the relationships between study variables. A power analysis was conducted using the G*Power software program. In evaluating the differences between units, one way ANOVAs with four groups (the grouping of units) can indicate differences with a sample size of 180 with a .25 (medium effect size) with a p value of $<.05$ (Cohen, 1988). If the final sample size is 250 or more, an ANCOVA will be considered. Power for this test with four groups set with a medium effect size and a p value of $<.05$ shows that a sample size of 250 is required (Cohen). Since the sample size was greater than 180, but less than 250, ANOVA tests were performed.

Data Analyses

Data analyses were conducted using SPSS, Version 24 for Mac. Data from REDCap were exported to SPSS. Labels for the variables were created in REDCap as the survey was designed. Data files were examined for missing data analyzed for the extent of the missing data and patterns and to determine if there were any identifiable reasons for incomplete cases. Missing data for demographic variables was handled by using “exclude cases pairwise” so cases were included unless the specific data required for analysis was missing (Pallant, 2016). Scale reliability was evaluated for this sample and compared to previous results (Pallant). Scale reliability for this study was reported earlier in this chapter.

Groupings of Units

After the data were collected, the data were grouped into the following groupings. The determination of groups was based on the unit characteristics that were most similar.

Table 1: Unit Groupings

Group 1	Group 2	Group 3	Group 4
PICU	PSCU	Pediatric Infusion Unit	Pediatric Emergency Department
NBICU Level II	GPU	Pediatric OR	Pediatric Urgent Care
NBICU Level III	CTI		Pediatric Specialty Clinics

Press Ganey Nurse Sensitive Indicator Scores

For the purposes of Magnet Recognition, units are required to be at or above the 50th percentile on the nurse sensitive indicators on the patient satisfaction survey. Survey data is to be collected by a reputable company that benchmarks performance between organizations.

In 2014, Press Ganey received approval from ANCC for the content of their patient

satisfaction survey (Tinkam, 2014). For the purpose of this study, aggregate nurse sensitive indicator score by unit were divided into two groups, those units at or above the 50th percentile and those units below the 50th percentile. Scores at are above the 50th percentile are considered good, while scores below the 50th percentile indicate a lower level of patient satisfaction with nursing specific indicators. See Appendix E for Press Ganey Patient Satisfaction Survey Questions.

Statistical Tests

Prior to analysis of continuous variables estimates of central tendency and dispersion, skewness and kurtosis, and graphical assessment of distributions (e.g., boxplots, normal Q-Q plots) were evaluated using SPSS. With the exception of variables related to years of experience, which were positively skewed, other continuous variables were consistent with assumptions of a normal distribution. In particular, the three ProQOL 5 scales were reasonably symmetrical (e.g., means \approx medians) with very few outliers (<2% of cases) and no extreme outliers. Since the sample size was over 200, parametric statistical analyses were used; correlations involving experience were also assessed nonparametrically, with only trivial differences between Pearson product-moment and Spearman rank correlations.

Specific aim number one. Specific aim number one, describe the extent of compassion fatigue and compassion satisfaction among pediatric nurses on specialty care units, was answered using results from the ProQOL 5 survey. Predetermined cut scores were used based on the raw scores on the ProQOL 5 tool. These cut scores indicate whether there is a low, average or moderate, or high level of compassion satisfaction or compassion fatigue (Stamm, 2010).

Specific aim number two. Specific aim number two, determine if there are differences in the level of compassion fatigue and compassion satisfaction among pediatric nurses based on demographic characteristics, was answered using the ProQOL 5 survey and the researcher designed demographic and characteristic tool and running Pearson product-moment correlations for continuous variables (e.g., age) and independent (two-sample) t-tests or one-way ANOVA for differences in mean questionnaire scores by levels of categorical variables.

One-way analysis between groups (ANOVA) were conducted to determine the differences between the groups on the variables of relationship status and work status.

Specific aim number three. Specific aim number three, determine whether units that have higher levels of compassion fatigue, based on the compassion fatigue subscales, score lower on nurse sensitive patient satisfaction indicators was answered using the ProQOL 5 tool and the results of the Press Ganey Patient Satisfaction Nurse Sensitive Indicator scores. Results of the Nurse Sensitive Indicator scores were split as either above or below the 50th percentile and that was used as the independent variable for independent (two-sample) t-tests of each of the ProQOL 5 scales. In addition, because the nurse sensitive indicators constituting the satisfaction rating for inpatient units differ from those for outpatient units, an independent t-test was also run according to whether the unit groupings were from inpatient or outpatient units.

Human Subjects Protection

Subjects were recruited by using a de-identified email list provided by the Human Resources Department. All data was collected anonymously through REDCap. Only the primary investigator and the co-investigator had access to the

data, which was password protected in REDCap. There were no identifiers linking the subject to their reported data. REDCap is a HIPAA compliant platform for collecting and storing data. The risk to subjects was minimal since the survey was anonymous. The study applied for and was granted exempt status by the University of New Mexico Human Research Review Committee of the Human Research Protections Office.

Strengths and Limitations

Data were collected anonymously using a secure, HIPAA compliant web platform that allowed data to be quality checked and exported to SPSS for further analysis. A limitation to this study is that it is a self-selection study and the individuals who chose to participate may not be fully representative of the sampling frame. Additionally, the population of pediatric and neonatal nurses in the organization may not be reflective of other pediatric and neonatal nurses in other organizations in the area, region, or nationally so results may not be generalizable. Census and staffing issues within units could not be anticipated or controlled for in the current study and may have influenced individual responses. In addition, anonymous survey administration and cross-sectional data limited the analysis of compassion satisfaction and compassion fatigue in relation to patient satisfaction.

This research has important implications for nurse leaders. First, determining the level of compassion fatigue within units can help understand what may be driving burnout and also help identify if there is an influence on the patient satisfaction. Once these results are examined, leaders can determine if there are areas where interventions and support for staff are needed. Further research could determine what interventions decrease burnout,

secondary traumatic stress and compassion fatigue. Additionally, do interventions improve scores on these items and does the patient satisfaction on these units improve as well?

Compassion satisfaction, compassion fatigue, and patient satisfaction are all important issues in healthcare. While there is an abundance of literature regarding compassion satisfaction and compassion fatigue, many of the studies were conducted with nurses who work with adult patients or were conducted internationally. Additionally, no literature regarding the impact of compassion fatigue on patient satisfaction could be located. This study determined the level of compassion satisfaction and compassion fatigue and the impact on patient satisfaction in pediatric nurses working in a variety of inpatient and outpatient settings. The results of this study can be used to determine if interventions to combat compassion fatigue are necessary to assist nurses. Actual results of this study are presented in Chapter 4.

CHAPTER 4: DATA ANALYSIS

Chapter four will discuss the study results including the recruitment of the sample, demographic characteristics of the sample, descriptive statistics, and analyses of the specific aims of the study. All analyses were completed using IBM SPSS Version 24.0 for Mac. Data analyses include whether there are differences the levels of compassion satisfaction and the compassion fatigue subscales based on demographic and other characteristics. Additionally, the qualitative comments will be evaluated and discussed. Finally, the impact of compassion satisfaction and the compassion fatigue subscales on patient satisfaction will be analyzed and discussed.

The study's purpose was to determine the extent of compassion satisfaction and compassion fatigue, as measured by the subscales of burnout and secondary traumatic stress, of pediatric nurses in inpatient and outpatient settings at a large academic medical center in the Southwestern United States. A second purpose was to determine whether there were differences in the patient satisfaction scores based on the levels of compassion satisfaction and the compassion fatigue subscales by group.

Recruitment of the Sample

The survey was opened on September 13, 2016. Invitations were sent to 450 RNs who worked in the targeted units (See Appendix D for email text). The email address list was obtained from the Human Resources Department of the organization and was simply a list of email addresses of all RNs who worked in the targeted areas at the time of the study. Seven of the invitations bounced back; six indicating that the person no longer worked in the organization and one indicated that the potential participant was on leave. The second invitation to participate was sent 14 days after the initial invitation (9/27/2016) to the same

450 recipients. There were six invitations that bounced back. These were the same six invitations that bounced back during the initial launch of the survey. The final invitation was sent on day 25 (October 8, 2016). When the final invitation was sent, there were 11 bounce backs: six were the same as the previous two email invitation requests; one recipient was on leave; and four no longer worked for the organization. Because the survey was anonymous, it is unknown whether any of the five new bounce-backs were from individuals who had completed the survey previously.

Over the course of the 30 days the survey was open, 233 responses were returned out of 450 that had been received, a 51.7% response rate. Subtracting the 6 that were returned on all three occasions the survey was sent out, the effective response rate was slightly higher ($233/444 = 52.5\%$).

Demographic and Characteristics of Entire Sample

The demographic characteristics of the total sample are presented in Table 2. The nurses who participated in the study were primarily female, white and were between 22 and 73 years of age (median 35 years; quartiles 29, 47 years). Eighty-nine respondents (39%) were of Hispanic or Latino ethnicity. The majority of nurses had at least a Bachelor of Science in Nursing degree (BSN), worked full-time, were married, had children in the home, and had a family income between \$50,000 and \$99,999. Years of experience in the unit, organization, pediatric or neonatal specialty care, and nursing are presented in Table 3. In all four experience categories the distributions were strongly positively skewed.

Table 2: Demographic Characteristics

Attribute	Nurses	
	M	SD
Age	38.26	11.34
	n	%
Gender		
Male	7	3.1%
Female	221	96.9%
Race		
White	193	87.7%
Black	5	2.3%
Asian or Pacific Islander	8	3.6%
American Indian or Alaskan Native	2	0.9%
Other	12	5.5%
Education		
Diploma	3	1.3%
ADN	60	26.7%
BSN	141	62.7%
MSN	21	9.3%
Ethnicity		
Hispanic or Latino	89	39.4%
Not Hispanic or Latino	137	60.6%
Relationship Status		
Married	139	60.7%
Single, Never Married	36	15.7%
Not Married, in a committed relationship	30	13.1%
Divorced	21	9.2%
Separated	2	0.9%
Widowed	1	0.4%
Children in the Home		
Yes	129	57.3%
No	96	42.7%
Income		
Under \$25,000	0	0%
\$25,000-\$34,999	0	0%
\$35,000-\$49,999	4	1.8%
\$50,000-\$74,999	69	30.9%
\$75,000-\$99,999	45	20.2%
\$100,000-\$124,999	48	21.5%
\$125,000-\$149,999	29	13.0%
Over \$150,000	28	12.6%
Work Status		
Full-Time	189	82.9%
Part-time 20-35 hours a week	30	13.2%
Part-time, less than 20 hours a week	0	0%
Casual Pool	9	3.9%

Table 3: Experience (years)

Years in	n	Mean	SD	Median	Quartiles	
					25 th	75 th
Current Unit	222	6.9	7.22	4.75	1.50	9.00
Organization	222	9.5	8.44	7.00	3.00	13.00
Pediatric / Neonatal Specialty	217	10.3	9.75	7.00	3.00	14.00
Nursing	224	11.7	10.61	8.00	4.00	17.38

Responses by Unit and Contribution to Sample

The response rate by unit and the contribution to the total sample is shown in Table 4. None of the respondents indicated they worked in the Pediatric Hematology/Oncology clinic. According to the unit director for this area, there were two reasons for this. Many of the nurses who work in this clinic are employed by the Department of Pediatrics (School of Medicine), not the hospital nursing service. Therefore, they would not have been included in the nursing service database received from the hospital's Human Resources Department. The second reason was that any hospital nursing service nurses who work in that clinic work in other specialty clinics as well, so it is likely they selected Pediatric Specialty Care Clinic rather than the Pediatric Hematology/Oncology Clinic (R. Levi, personal communication, December 20, 2016). Eleven respondents did not identify a specific unit.

Table 4: Responses by Unit

Unit	n = 450		n = 233	
	Number of Surveys Sent	Number of Surveys Returned	Percentage Returned by Unit	Percentage Contributed to Overall Sample
Pediatric Hematology/Oncology Outpatient Clinic	0	0	0	0%
Pediatric Infusion Unit (PIU)	11	8	72.7%	3.4%
Pediatric Specialty Care Clinics	22	10	45.5%	4.3%
Pediatric ED	30	11	36.7%	4.7%
PSCU	38	15	39.5%	6.4%
Carrie Tingley Inpatient Unit	30	15	50%	6.4%
Pediatric Urgent Care Clinic	24	18	75%	7.7%
Pediatric OR/PACU	28	18	64.2%	7.7%
PICU	53	22	41.5%	9.4%
GPU	53	26	49.1%	11.2%
NBICU Level II (ICN 3/4)	62	33	53.2%	14.2%
NBICU Level III (NBICU)	99	46	46.5%	19.7%
Did not indicate unit	N/A	11	N/A	4.7%

The breakdown by grouped units for respondents (n = 222) and surveys sent out (N = 450) is shown in Table 5. There was no significant difference by group between the percentages of surveys returned and the percentages of surveys sent out, χ^2 (n = 222, df = 3) = 2.79, p = .425.

Table 5: Responses grouped by like units as identified in Chapter 3

Group	Units	n	Total Respondents	Percentage of Sample	Surveys Sent Out	Percentage of Surveys Sent Out
1	PICU	22	101	45.5%	214	47.5%
	NBICU Level II	33				
	NBICU Level III	46				
2	PSCU	15	56	25.2%	121	26.9%
	GPU	26				
	CTI	15				
3	Pediatric Infusion Unit	8	26	11.7%	39	8.7%
	Pediatric OR	18				
4	Pediatric ED	11	39	17.6%	76	16.9%
	Pediatric Urgent Care	18				
	Pediatric Specialty	10				

Compassion Satisfaction and Compassion Fatigue

Raw scores were calculated for the entire sample each of the scales on the ProQOL 5: compassion satisfaction (CS), and the subscales of burnout (BO) and secondary traumatic stress (STS) that, together, represent compassion fatigue. These were compared with standardized T-scores. The results of these comparisons (Table 6) show that using the raw score cut-points recommended by Stamm (2010) for classifying scores as low, average, or high on each scale was equivalent to the same classification using the T-score cut-points recommended by Stamm. In consultation with my committee, I chose to use raw scores for analyzing ProQOL scores for purposes of answering the research questions.

Table 6: Summary statistics for raw scores and T-scores for CS, BO, and STS scales

	Mean	SD	Cronbach Alpha	Min	Max	Quartiles		
						25th	50th	75th
CS	41.2	5.26	.845	26	50	38.0	41.0	45.0
CS T-score	50.0	10.00		21	67	43.9	49.6	57.2
BO Burnout	20.9	4.91	.776	10	37	17.0	21.0	24.0
BO T-score	50.0	10.00		28	83	42.2	50.39	56.4
STS	20.8	5.38	.806	11	36	17.00	20.0	24.0
STS T-score	50.0	10.00		32	78	42.9	48.49	55.9

CS Compassion Satisfaction; BO Burnout; STS Secondary Traumatic Stress

Pearson product-moment among the three ProQOL scales are shown in Table 7. These correspond to shared variances (r^2) of 47.5% between CS and BO, 8.1% between CS and STS, and 37.2% between BO and STS. These are substantially higher than shared variances summarized by Stamm (2010) from previous ProQOL studies, which were 5%, 2%, and 34%, respectively.

Table 7: Correlations among ProQOL scales (n = 231)

	CS	BO
CS—Compassion Satisfaction	—	
BO--Burnout	-.689**	—
STS—Secondary Traumatic Stress	-.284**	.610**

** $p < .001$

Specific Aim Number One

In order to answer the first specific aim, describe the extent of compassion fatigue and compassion satisfaction among pediatric nurses on specialty care units,

The Professional Quality of Life scale (ProQOL) 5 was used. The ProQOL 5 is a 30-item instrument with separate scales designed to measure compassion satisfaction (CS) and two dimensions of compassion fatigue: burnout (BO) and secondary traumatic stress (STS) (See Appendix C). On each scale, subjects rate how often they experienced each item during the last 30 days. Items are rated on a scale of 1 to 5 with 1 symbolizing “never” and 5 symbolizing “very often”.

For purposes of this study, raw scores were used for analyses related to the specific aims because Stamm (2010) recommended using the raw scores for research. On each of the three ProQOL scales a raw score of 22 or less represents a low level of CS, BO, or STS. For the CS and BO scales, raw scores between 23 and 41 represent average levels and raw scores of 42 or more indicate high levels of either construct. For STS, a raw score between 22 and 42 represents an average level and a raw score of 43 or more a high level (Stamm, 2010).

To determine whether there were any differences in the three ProQOL 5 scales according to the 4 groups of clinical units, one-way between groups analysis of variance (ANOVA) was conducted (Table 8).

Table 8: One Way ANOVA

		Sum of Squares	df	Mean Square	F	p =
Compassion Satisfaction	Between Groups	256.700	3	85.57	3.27	0.02
	Within Groups	5447.545	208	26.19		
	Total	5704.245	211			
Burnout	Between Groups	87.113	3	29.04	1.24	0.30
	Within Groups	4884.939	208	23.49		
	Total	4972.052	211			
Secondary Traumatic Stress	Between Groups	251.077	3	83.69	3.01	0.03
	Within Groups	5789.470	208	27.83		
	Total	6040.547	211			

There was an overall statistically significant difference in mean CS scores between the four groups of clinical units, $F(3, 208) = 3.27, p = .02$ (Table 8), but the effect size for the overall difference in means was small (eta squared = .045; Cohen, 1988). Post-hoc pairwise comparisons between groups using Bonferroni correction identified only the difference in mean scores between Group 3 and Group 4 as statistically significant, with group three showing a slightly higher level of CS (Table 9). There were no significant differences in group means for the BO scale (Table 8). There was an overall statistically significant difference in mean STS scores between the four groups, $F(3, 208) = 3.01, p = .03$ (Table 8) but the effect size for the overall difference in means was small (eta squared = .042). Post-hoc pairwise comparisons between groups using Bonferroni correction identified only the difference in mean scores between Group 1 and Group 4 as statistically significant, with Group 4 showing a slightly higher level of STS (Table 9).

Table 9: ProQOL 5 summary statistics and confidence intervals by group

	Group	N	Mean	SD	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Compassion Satisfaction	1	101	41.1	4.7	40.2	42.1	30	50
	2	56	41.4	5.8	39.8	42.9	27	50
	3	26	43.6*	4.0	42.0	45.2	36	50
	4	29	39.3*	5.9	37.1	41.6	26	49
	Total	212	41.3	5.2	40.6	42.0	26	50
Burnout	1	101	20.7	4.6	19.8	21.6	12	34
	2	56	21.1	5.3	19.7	22.5	10	33
	3	26	19.7	4.5	17.9	21.5	11	28
	4	29	22.1	5.2	20.2	24.1	11	37
	Total	212	20.9	4.9	20.2	21.5	10	37
Secondary Traumatic Stress	1	101	20.0†	4.8	19.0	20.9	13	36
	2	56	21.5	5.6	20.0	23.0	11	36
	3	26	20.2	5.5	18.0	22.5	11	31
	4	29	23.0†	6.1	20.7	25.4	13	34
	Total	212	20.8	5.4	20.1	21.6	11	36

Group 1: PICU; NBICU, Level II; NBICU Level III

Group 2: PSCU, GPU, CTI

Group 3: Pediatric Infusion Unit; Pediatric OR

Group 4: Pediatric ED, Pediatric Urgent Care, Pediatric Specialty Clinics

* $p = .013$ † $p = .039$

None of the four groups had a mean score the low range for CS or in the high range for BO or STS (Table 9). Indeed, no participant had a CS score in the low range or a BO or STS score in the high range (Table 9). The mean scores for CS were high (44) for Group 3 and at the high end of the average range (39 to 41) for the other three groups. All four groups had mean scores for BO in the low range (19 to 22). Groups 1, 2, and 3 had low mean scores for STS (19 to 21); Group 4 had a mean STS score just above the cut point between low and average (23).

Specific Aim Number Two

In order to answer specific aim number two, determine if there are differences in the level of compassion fatigue and compassion satisfaction among pediatric nurses based on demographic characteristics, the ProQOL 5 and the researcher designed demographic characteristic tools were used. The characteristics evaluated in relation to the demographic characteristic tool were as follows: (a) age; (b) race/ethnicity; (c) gender; (d) marital status; (e) do you have children; (f) nursing degrees completed; (g) inpatient versus outpatient practice setting; (h) primary unit of practice; (i) number of years on primary unit of practice; (j) number of years in pediatric or neonatal nursing; and (k) number of years in the current organization; and (l) number of years in nursing.

None of the three ProQOL scales (CS, BO, STS) was significantly correlated with age or with any of the experience-related variables, (i.e., years on the unit, in the organization, in a pediatric or neonatal specialty area, or in nursing).

Independent (two-sample) t-tests were conducted to compare the scores on the ProQOL subscales based on race (White vs. Other), ethnicity, gender, presence or absence of children in the home. None of these two-sample comparisons demonstrated a significant difference in any of the ProQOL scales.

Data on nursing degrees were recoded to represent highest nursing degree. One-way ANOVA by highest nursing degree did not demonstrate any significant differences in CS, BO, or STS scales.

A one-way between groups ANOVA was conducted to explore the differences between groups on the ProQOL 5 by relationship status (married, divorced, single, not

married but in committed relationship). There was no significant difference in mean scores for CS, BO, or STS between those groups.

A one-way between groups analysis of variance was conducted to explore the differences between groups on the ProQOL 5 for the variable of work status. There was no significant difference between the groups: (a) full-time, more than 36 hours per week; (b) part-time, between 20 and 35 hours per week; and (c) casual pool on the compassion satisfaction scale or on the s burnout and secondary traumatic stress scales.

A one-way between groups analysis of variance was conducted to explore the differences between income categories on the three ProQOL 5 scales. Because only 4 cases had a gross household income < \$50,000, they were combined into the next highest income category (\$50,000—\$74,999). Accordingly, for these ANOVAs, the income categories were unequal in size: < \$75,000 ($n = 73$), \$75,000—\$99,999 ($n = 45$), \$100,000—\$124,999 ($n = 48$), \$125,000—\$149,999 ($n = 29$), and \geq \$150,000 ($n = 28$). There were no significant differences in mean CS or BO scores by income level. For STS, the homogeneity of variances assumption was not satisfied and , therefore, Welch's adjusted F-ratio was used, $F(4, 89.73) = 2.71, p = .035, \text{eta-squared} = .042$. Games-Howell post hoc tests showed a significant difference in mean STS scores between participants with income in the \$75,000—\$99,999 range (mean = 22.6, SD = 5.89; $n = 45$) and those with income of \$150,000 or higher (mean = 18.9, SD = 4.25; $n = 28$), mean difference 3.79 points, 95% CI for difference 0.46 to 7.12 points, $p = .018$. However, all 5 income categories in this analysis had mean STS scores < 23 (i.e., all group means were in the low range for STS).

Specific Aim Number Three

In order to answer specific aim number three, scores on the ProQOL 5 scales were compared using Press Ganey Patient Satisfaction survey data. The time period over which Press Ganey data were obtained was between September 13 and October 13, 2016, which was the same time period that the ProQOL 5 survey and demographic characteristic questionnaire were open to subjects.

A total of 150 patient satisfaction surveys returned for the clinical units sampled for this study. Groups one and two were inpatient units and groups three and four were outpatient units. The survey is different for inpatient and outpatient services. The sampling approach also differs between inpatient and outpatient units. For inpatient services, all discharged patients are mailed a survey from the unit that discharged them. Since most patients are not discharged from a critical care unit, the volume of surveys both sent out and received from critical care units is lower than for the general units. This is reflective in the returned survey numbers for group one, which is much lower than for group two. For outpatient services, the volume of patients is much higher; therefore surveys are sent to a ten percent random sample of patients seen in outpatient clinics. All survey returns are anonymous.

The items on the Press Ganey Patient Satisfaction surveys that were of interest for this study were the nurse sensitive indicators. There are several items that comprise the standard overall patient satisfaction nurse sensitive indicator scores chosen for the purposes of this study.

For inpatient units, the items that make up the nurse sensitive patient satisfaction indicators are (a) friendliness/courtesy of the nurses; (b) promptness in responding to the call

button; (c) nurses' attitude toward your child's requests; (d) amount of attention paid to your child's special or personal needs; (e) how well the nurses kept you informed; (f) skill of the nurses; (g) nurses' sensitivity and responsiveness to pain your child may have experienced in the hospital; (h) nurses' promptness in giving pain medication (if needed); and (i) nurses efforts to educate you about your child's condition and care he/she required (Press Ganey, 2004). Patients or their family member are requested to select their answer based on a five point Likert scale with one being very poor and five being very good.

The outpatient nurse sensitive patient satisfaction indicators were based two items that comprised the global score: (a) friendliness/courtesy of the nurse/assistant; and (b) concern the nurse/assistant showed for your problem (Press Ganey, 2010). While the survey statement says nurse/assistant, the clinics included in this study are primarily staffed by registered nurses and the majority of the specialty nursing care is provided by these nurses.

The breakdown of responses are shown in Table 10. The percentile rankings are based on comparisons to like units or outpatient clinics from across the nation that use the Press Ganey Patient Satisfaction tool to collect patient satisfaction information from their patients. The breakout of the above or below the 50th percentile of the patient satisfaction survey was chosen as an indicator based on Magnet Hospital requirements that nurse sensitive patient satisfaction indicators be at or above the 50th percentile to obtain Magnet Recognition status at the hospital level (ANCC, 2014). The actual Press Ganey Patient Satisfaction Survey Questions are shown in Appendix E.

Table 10: Patient Satisfaction Survey

Group	Number Returned	Mean	SD	Percentile Ranking	Above or Below 50 th Percentile
1	11	72.9	32	1	Below
2	29	90.8	20.6	51	Above
3	52	91.4	16.1	20	Below
4	58	88.2	19.9	7	Below

For purposes of analysis, the four groups were aggregated into two groups according to whether they were: inpatient or outpatient units (i.e., Groups 1 and 2 [n = 157] vs. Groups 3 and 4 [n = 55]) and whether they were above or below the 50th percentile of their respective Press Ganey satisfaction survey nurse sensitive indicators results (i.e., Group 2 [n = 56] vs. Groups 1, 3, and 4 [n = 156]). Using independent samples t-tests, there were no significant differences in mean CS, BO, or STS scores based on inpatient vs. outpatient units or based on a median split for Press-Ganey percentile scores. None of the mean differences for any of those t-tests exceeded 1.2 points on any of the three ProQOL 5 scales. For both sets of t-tests (i.e., inpatient vs. outpatient and above vs. below median patient satisfaction), all group means were in the low range for BO and STS and at the upper end of the average range for CS.

Qualitative Results

On the survey, there was one question that was open ended. That question was. “Is there any additional information you would like to share?” Forty-nine of the respondents (21%) entered a comment in the text box provided for the question. The comments were hand transcribed and the following themes were identified. Sixteen of the responses were no, no

thank you, N/A, or nothing. This left thirty-four responses to analyze and determine themes (See Appendix F for full listing of responses with unit nurse works on).

The first step in this analysis was to group responses by unit to see if there were any themes identified by unit. Responses by unit are listed below.

PICU

- I feel there should be a difference between physical and emotional fatigue here.
- I get tired from time to time, and frustrated by certain situations, but overall I am happy and proud to be an RN.

There were no themes identified specific to this unit.

NBICU Level II (ICN 3/4)

- I work in intensive care but rarely see traumatic victims. My heart goes out to these victims and saddens me but I am always able to complete my job with compassion.
- I enjoy the work I do, but would appreciate it more if the younger nurses would have more respect for the more experienced nurses and if they would realize that it's not all about them, but that we all work together as a team 24/7 to accomplish a common goal--- to make the patient better and return to their lives as productive citizens.

There were no themes identified as specific to this unit.

NBICU Level III

- I have been a nurse 32 years and still enjoy being at the bedside. I find the politics of the hospital setting frustrating and feel nursing has become a business and has lost its personal touch.
- These negative feelings are worsened when there are staffing shortages.

- I do believe that I am "numb" to the sound of the monitors alarming which, in my opinion, is very dangerous in my field. I also feel somewhat "numb" to my patient's. I do not believe this is how I present myself to my patient's or my patient's families, but something I do to protect myself....not sure if that is good or bad.
- Where my answers are yes to traumatic events there is only one event I refer to, although have experienced many more traumatic experiences.
- I biggest frustration as a healthcare team member, is my department/employers lack of ability to take care of those that have been working for them for a long time.
- I enjoy my work as a nurse but am irritated by all the extraneous (sp) duties we are asked to perform; i.e. CAP especially. It seems as if we are getting away from nursing in the form of patient care.

The themes identified in this group relate primarily to work environment issues such as inadequate recognition for long-term service, asking nurses to do additional work outside of bedside nursing to participate in the Clinical Advancement Program (CAP), hospital politics, and reported staffing shortages. These workforce environment issues may lead to low job satisfaction, increased absenteeism, decreased morale, and problems with staff retention (Gauthier, Meyer, Greffe, & Gould, 2015; Vargas, Cañadas, Aguayo, Fernandez, & de la Fuente, 2014). Nurses in this unit were grouped with three other intensive care units (Group 1). However, there was no evidence in results on the ProQOL 5 scales that Group 1 had significantly lower CS or higher BO or STS scores compared with any other group (Table 8).

PSCU

- I am a caregiver of family members as well. I am unsure if the answers related to questions of burnout and being overwhelmed would be answered the same way if I wasn't a caregiver outside of work.
- For the most part, the patient and families make the job enjoyable. There are times when the job gets overwhelming because of trauma, social situations, abuse and bad diagnosis. But this is not a constant.

There were no themes identified as specific to this unit.

GPU

- Nursing is an amazing profession but one that requires self-care in order to be effective.
- I feel undervalued as an UNMH employee. I am enthusiastic about caregiving, but am "bogged down" in an organization that is in the middle of a financial semi-crisis. I am expected to do more with less every year. The stress and exhaustion of that fact contributes to overall fatigue and melancholy.
- Not enough nursing staff. Demands keep increasing and nothing is done to decrease the workload.
- Overall, I feel the patient acuity and workload expectations have increased which does not allow me the necessary time needed for compassion and care with my patients. This has been a change over the last 3-5years.
- The nurse to patient ratio is sometimes very exhausting. The patients are too sick to have so many with one nurse. Ratios are not as they should be.

The themes in this unit were very similar to the themes identified in the Neonatal Intensive Care Unit, Level III. This unit was grouped in group two. There were no significant differences in mean CS, BO, or STS scores between Group 2 and any of the other groups (Table 8).

Carrie Tingley Inpatient

- We are constantly working short and down RNs as well as Techs. It is making work very hard, stressful, and exhausting. Feeling burnt out.
- It seems like the unit has been short staffed with RNs and this makes it very busy and hard to keep up with pt cares (sic). But other than sometimes being very stressful I love my job!

Again, the themes identified here are similar to the themes identified in the NBICU, Level III and the General Pediatric Unit. This unit was grouped in group two which is the same group as the General Pediatric Unit.

Pediatric Infusion Unit

- Yes. I am a Christian and have called to be a nurse since I was a child. I do believe God is ultimately in control of all things and has a higher purpose that we do not understand. It is my job to do the best I can and then let go and let God make the final decision.
- More nursing experience = less perseveration/uncontrolled worry about traumatic events, but occasionally events can still trigger early morning awakenings to toss and turn and worry!
- I love caring for pediatric patients and their families. I enjoy my job, and the other peds nurses that I work with.

There were no themes identified as specific to this unit.

Pediatric Operating Room/PACU

- I thoroughly love my job and all aspects of my profession.
- As a floor nurse I had more satisfaction in my work. I felt like I made a difference. I work in Pre-Op now and love the kids still and do make a difference in their experience. But truly floor nursing was the most satisfying.
- The OR really needs to have practice drills for code situations. We currently have none.
- I also work PRN at a Pediatric Urgent Care at another facility

There were no themes identified as specific to this unit.

Pediatric Emergency Department

- I love my job but I stay awake at night feeling like the things I see might happy to my children and family.

Since there was only one comment, there were no identifiable themes in this unit.

Pediatric Urgent Care

- People frequently ask "how can you do what you do?" yes, it can trying, and sad, but it is also so rewarding to help them. Caring for the families can be just as rewarding as caring for the patient. If I can make a parent smile or laugh I have supported them and assisted them through what can be a dark time in their life.
- If I could afford a vacation I would go decompress on a beach.
- After working in many high stress areas I feel my answers would be different for every area.

There were no themes identified as specific to this unit.

Pediatric Specialty Care Clinic

- Experience has been the best teacher in terms of learning to separate work and life, and to remain detached in a healthy way from the challenges faced with certain patient situations, while still remaining compassionate and providing thorough care.
- I enjoy that my career allows for me to make a positive impact on my patients.

There were no themes identified as specific to this unit.

No Designation of Work Area

- I do not work with trauma type patients.

Since there was only one comment, there were no identified themes for the person who did not indicate where they worked.

Once the analysis by unit was complete, the comments were examined using the following thematic categories: compassion satisfaction, compassion fatigue, and work environment factors. There were several comments that did not fit within those categories; these were categorized as generic comments, suggestions, and mixed. The mixed categories had elements of more than one category.

Compassion Satisfaction

Compassion satisfaction is the pleasure that one receives from their work and the feeling they have done a good job. Nurses acquire compassion satisfaction by caring for others and feeling successful, energized and happy. People who get a lot of satisfaction from their job also tend to successfully utilize coping strategies, including self-care to increase their satisfaction and improve work/life balance (Sanso et al, 2015; Zadeh, Gamba, Hudson, & Weiner, 2012). There were nine subjects who entered comments that would fall in this category.

These comments are as follows:

- I thoroughly love my job and all aspects of my profession.
- Nursing is an amazing profession but one that requires self-care in order to be effective.
- I work in intensive care but rarely see traumatic victims. My heart goes out to these victims and saddens me but I am always able to complete my job with compassion.
- As a floor nurse I had more satisfaction in my work. I felt like I made a difference. I work in Pre-Op now and love the kids still and do make a difference in their experience. But truly floor nursing was the most satisfying.
- People frequently ask “how you can you do what you do?” yes, it can be trying, and sad but it is also so rewarding to help them. Caring for the families can be just as rewarding as caring for the patient. If I can make a parent smile or laugh I have supported them and assisted them through what can be a dark time in their life.
- Yes- I am a Christian and have called to be a nurse since I was a child. I do believe that God is ultimately in control of all things and has a higher purpose that we do not understand. It is my job to do the best I can and then let go and let God make the final decision.
- I enjoy that my career allows for me to make a positive impact on my patients.
- Experience has been the best teacher in terms on learning to separate work and life, and to remain detached in a healthy way from the challenges faced with certain patient situations, while still remaining compassionate and providing thorough care.
- I love caring for pediatric patients and their families. I enjoy my job and the other peds nurses I work with.

Compassion Fatigue

Compassion fatigue is the physical and spiritual exhaustion from both witnessing and absorbing the trauma and suffering of others. Compassion fatigue decreases job satisfaction and impairs emotional and physical health. Compassion fatigue has an impact on the work environment, and decreases efficiency, employee satisfaction, and increases turnover (Flemister, 2006; Peate, 2014; Reagan, 2014). Additionally, the burnout associated with compassion fatigue increases absenteeism and turnover, decreases morale and patient satisfaction and affects patient safety (Kowalski et al, 2010; Lee, Yen, Felzer, & Chien, 2014). Caregivers need to rejuvenate and renew themselves or they can find themselves having issues with compassion fatigue. Compassion fatigue also affects relationships with colleagues. Burnout can stem from conflict in the workplace, which leads disagreements among co-workers, managers and dissatisfaction with pay and complaints of an inadequate work environment (Boyle, 2011). Six comments that were reflective of compassion fatigue are as follows:

- I love my job but I stay away at night feeling like the things I see might happen to my children and family.
- I do believe that I am “numb” to the sounds of monitors alarming which, in my opinion, is very dangerous in my field. I also feel somewhat “numb” to my patients. I do not believe this is how I present myself to my patient’s or my patient’s families, but something I do to protect myself....not sure if that is good or bad.
- For the most part, the patient and families make the job enjoyable. There are times when the job gets overwhelming because of trauma, social situations, abuse and bad diagnosis. But this is not a constant.

- Where my answers are yes to traumatic events there is only one event I refer to, although have experienced many more traumatic experiences.
- I am a caregiver of family members as well. I am unsure if the answers related to burnout and feeling overwhelmed would be answered the same way if I wasn't a caregiver outside of work.

Work Environment Factors

Work environment factors that contribute to compassion fatigue or one of the subscales, burnout and secondary traumatic stress include higher patient acuity, more patients to care for, multiple deaths, long hours and shift work, staff shortages, poor relationships with co-workers, work life balance issues, and low job satisfaction (Boyle, 2011; Coetzee & Klopper, 2010; Lombardo & Eyre, 2011). There were four comments related to work place environmental factors:

- The nurse to patient ratio is sometimes very exhausting. The patients are too sick to have so many with one nurse. Ratios are not as they should be.
- It seems like the unit has been very short staffed with RNs and this makes it very busy and hard to keep up with pt cares (sic). But other than sometimes being very stressful I love my job.
- I enjoy my work as a nurse but am irritated by all the extraneous (sp) duties we are asked to perform; i.e. CAP especially. It seems as if we are getting away from nursing in the way of patient care.
- 1 biggest frustration as a healthcare team member, is my department/employers lack of ability to take care of those that have been working for them for a long time.

Generic Comments

There were three generic comments made by survey participants. Those comments did not fit into one of the other identified categories and were not similar enough to create a new category. These comments are as follows:

- I do not work with trauma type patients.
- I also work PRN at a Pediatric Urgent Care at another facility.
- After working in many high stress areas I feel my answers would be different for every area.

Suggestions

Two participants made suggestions in the comment section of the survey. The two comments are as follows:

- The OR really needs to have practice drills for code situations. We currently have none.
- I feel there should be a difference between physical and emotional fatigue here.

Mixed

There were three comments that were determined to be mixed in nature. These comments may indicate compassion fatigue with a need for self-care. The three comments are:

- If I could afford a vacation I would go decompress on the beach.
- I get tired from time to time, and frustrated by certain situations, but overall I am happy and proud to be a nurse.

- More nursing experience = less perseveration/uncontrolled worry about traumatic events, but occasionally events can still trigger early morning awakenings to toss and turn and worry!

CHAPTER 5: DISCUSSION OF THE FINDINGS

Chapter Five will discuss the findings of the study. These findings include the extent of compassion satisfaction and the compassion fatigue, based on the subscales burnout and secondary traumatic stress among pediatric nurses. Additionally, the level of compassion satisfaction and the levels on the compassion fatigue subscales based on demographic and other characteristics will be explored. The impact of compassion satisfaction and the compassion fatigue subscales on patient satisfaction will also be discussed. Finally, a discussion of the qualitative findings will be presented. After the findings are discussed, limitations, implications for practice and recommendations for further research will be explored.

The purpose of this study was to describe the level of compassion fatigue and compassion satisfaction among pediatric nurses who work at a large academic medical center in an urban area in the Southwestern United States. The nurses who participated in the study work in a large Level I trauma center that has many pediatric specialties not found in other parts of the state. The outpatient clinics care for chronic, high acuity patients and because of the level of care and specialty needs these patients have, they are classified as inpatient RNs. Additionally, the center serves as a regional referral center from surrounding states.

The specific aims of the study are listed below:

1. Describe the extent of compassion fatigue and compassion satisfaction among pediatric nurses on specialty care units.
2. Determine if there are differences in the level of compassion fatigue and compassion satisfaction among pediatric nurses based on demographic characteristics.

3. Determine whether units that have higher levels of compassion fatigue score lower on nurse sensitive patient satisfaction indicators.

Discussion of Specific Aims

Extent of Compassion Satisfaction and Compassion Fatigue Among Pediatric Nurses

The compassion satisfaction scale was analyzed using cut points that were identified by the initial developer of the tool. In this study, raw scores were used since they provide a continuous variable and are more robust for research purposes (Stamm, 2010). There are few studies that compared groups of pediatric nurses based on specialty to determine the level of compassion satisfaction. A study conducted at three-hospital sites in South Carolina found that registered nurses who worked on adult oncology units had a statistically significant higher level of compassion satisfaction compared with nurses who worked with adult patients in the emergency department, nephrology unit, and medical surgical ICU, whereas there were no significant differences between units in either the burnout or secondary traumatic stress subscales of the ProQOL (version IV) (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010).

In previous studies of pediatric nurses in a five-hospital system that included a university-affiliated children's hospital (Berger et al., 2015) or pediatric nurses and other providers in a regional children's hospital (e.g., social workers, physical, occupational, and respiratory therapists (Branch & Klinkenberg, 2015), researchers found approximately 27% to 30% of respondents scored low on the ProQOL 5 CS scale or high on the BO or STS scale. In both studies, significant differences were found in all three scales by unit type. In addition, Berger et al. found significantly lower levels of CS and higher levels of BO and STS among younger compared with older nurses (<40 vs. \geq 40 years of age). They also found significant differences by race, years of nursing experience. In the present study, no respondents scored

in low range on the CS scale or in high range on either the BO or STS scale, and there were no significant differences in any of the scales based on unit type, years of nursing experience, or age (at cut points of 30, 40, or 50 years). Inconsistent results across observational studies illustrate challenges in attempting to generalize findings from a single hospital or hospital system.

Amin, Vankar, Nimbalker, and Phatak (2015) conducted a study across nine neonatal intensive care units (NICU) in Gujarat, India using the ProQOL 5 to determine the profession quality of life among neonatal nurses (N = 129). Results from this study showed 18.6% of nurses reported a low CS score; 76.8% reported moderate to high scores for burnout; and 76.7% reported moderate to high levels of STS. The concerns with using this study as a comparator to the current study are that the study was not conducted in the United States and there is a large variation in the patient to nurse ratio among the hospitals that were included in the study. The lowest ratios were 3:1 and the highest were 25:1 (Amin et al.). Differences in ratios may make an impact on the results of the ProQOL 5. The study did not report differences by hospital so it is impossible to tell if the results would be different for nurses who care for different numbers of patients.

There were no studies comparing multiple pediatric units/specialties across inpatient and non-emergency outpatient settings. Therefore, the results of this study are exploratory in nature.

There are differences in Version IV and Version 5 of the ProQOL, so when evaluating studies that used a previous version the ProQOL, the reader is cautioned that the Likert scale scores have changed from Version IV, where the scale had six choices for response, with 0 being never and 5 being very often to Version 5 where the scale has five

choices, with 1 being never and 5 being very often. These changes were not reflected in the ProQOL 5 “Table For Determining PROQOL T- Score From Raw Scores”. The table reflects raw scores of below 10 on both the BO and STS scales with corresponding T scores (Stamm, 2010). In the ProQOL 5, the lowest score a person can have on either of these scales is 10 if they answer all of the scale questions.

The raw scores on the compassion satisfaction scale are described in terms of low, moderate or average, and high level of compassion satisfaction. In this study, there were four groups whose scores were analyzed. Groups one (PICU, NBICU Level II and NBICU Level III), two (PSCU, GPU, and CTI), and four (Pediatric ED, Pediatric Urgent Care, and Pediatric Specialty Clinic) had average levels of compassion satisfaction, while group three (Pediatric Infusion Unit and Pediatric OR) showed a high level of compassion satisfaction. The only pairwise statistically significant difference was between Group three and group four, but the difference was small and possibly not clinically meaningful. Notably, no group scored low on the compassion satisfaction scale, nor did the lowest group mean scores come anywhere close to approaching a low level of compassion satisfaction, so it is unlikely that the difference was clinically or administratively meaningful.

The two dimensions of compassion fatigue, burnout and secondary traumatic stress, were also evaluated for each of the groups. There were no statistically significant differences between the group means on the burnout scale. All group scores showed a low level of burnout. There were statistically significant differences in means for secondary traumatic stress between the groups. Post-hoc analyses using a Bonferroni correction showed that there was a statistically significant difference between Group One and Group Four with group four showing a higher level of secondary traumatic stress. But Group Four was only slightly

above the cut point between low and average, whereas Group One was slightly below that cut point, so the difference may not be clinically or administratively meaningful.

Level of Compassion Fatigue and Compassion Satisfaction Based on Demographics

Compassion satisfaction and compassion fatigue, using the two compassion fatigue subscales, burnout and secondary traumatic stress were evaluated based on demographic and practice characteristics. There were no statistically different differences in the demographic categories with the exception of income. In the income category, there was one statistically significant result in the income range for the STS subscale. However, participants in all income ranges that scored low on the STS subscale so this may not be clinically or administratively meaningful.

The ProQOL databank has 1289 cases of data from individuals who have taken the ProQOL 5 and have shared their data. Data have been analyzed based on the following demographic categories (a) gender; (b) age; (c) white versus non-white; (d) income groups; (e) years with current employer; and (f) years in field. There were no statistically significant differences based on gender, age, income groups, years with current employer and years in field (Stamm, 2010). These databank results are consistent with the results found in this study. There are no statistically significant differences in the compassion satisfaction scale or the compassion fatigue subscales of burnout and secondary traumatic stress based on the demographic characteristics listed above. The databank results did show statistically significant differences in the compassion fatigue subscales, burnout and secondary traumatic stress between whites and non-whites with whites reporting less burnout and secondary traumatic stress (Stamm). This study did not show these differences based on race or

ethnicity. A limitation of the ProQOL 5 databank is that there is no indication of the profession of the subjects.

Impact of Compassion Satisfaction and Compassion Fatigue on Patient Satisfaction

In the current study, there was no significant relationship between any of the ProQOL 5 scales and patient satisfaction based on the nurse sensitive patient satisfaction scores from the Press Ganey Patient Satisfaction survey. However, because the data were cross-sectional and from a single hospital system, the negative result is in need of replication in a larger sample of nurses from more heterogeneous facilities and units.

There is literature that discusses nursing satisfaction in relation to patient satisfaction. In one study, Burtson and Stichler (2010) found that compassionate nursing care was the most important component of nurse sensitive indicators and the patient's intent to return to the organization for further care and to recommend the organization to others. Additional studies have found there is a relationship between the overall caring a nurse shows toward a patient and the patient's satisfaction. There is also a relationship between nursing job satisfaction and patient satisfaction in both inpatient and outpatient settings (Burston, & Stichler; McHugh, Kutney-Lee, Cimiotti, Sloane, & Aiken, 2011; Stimpfel, Sloane, & Aiken, 2012). Patient satisfaction is higher when nurses perceive the work environment as more supportive and positive, collaborate with physicians, and have positive relationships with co-workers (American Sentinel University, 2012; Kutney-Lee, et al., 2009).

While these studies show a relationship between satisfied nurses and satisfied patients, the current study was looking for the relationship between compassion satisfaction and patient satisfaction. Perhaps using the compassion satisfaction and compassion fatigue scale was not sensitive enough to pick up these relationships. Additionally, looking at patient

satisfaction results for a longer period of time may have shown different results since the numbers of returned surveys was small for most groups.

Discussion of Qualitative Open Ended Question

The comments to the open-ended question, “is there anything else you would like to share,?” resulted in forty-nine responses (21%). Sixteen of the responses were no, no thank you, N/A, or nothing. After removing these responses, there were thirty-four responses to analyze and determine themes (See Appendix F for full listing of responses with unit nurse works on).

The identified themes fell into six categories: (a) compassion satisfaction, (b) compassion fatigue, (c) work environment factors, (d) generic comments, (e) suggestions, and (f) mixed comments. The information from these themes can be used to make improvements in the work environment, which in turn may help increase compassion satisfaction and decrease burnout and secondary traumatic stress scores. The comments that fell under the work environment factors will be shared with the organization so they understand there are areas they can work on that could improve the level of compassion satisfaction and compassion fatigue among their nurses.

Limitations

There were several limitations of the study. The study was done in one academic medical center. Expanding the study beyond one center, in another region, or in a different type of health care setting may yield different results.

The design of this study was a descriptive quantitative study that required subjects to answer an online questionnaire. This type of survey administration often has a lower return rate than other modes of administration (Nulty, 2008). However, for this study, the return rate

was 52.5%, which is considered a good response rate for an email survey. Average response rate for email studies was found to be 33% (Nulty). Face to face administration is known to produce higher results; however, for this study, it was determined that an electronic survey with an email request for participation was the most effective method and it also assured anonymity of responses. This decision was made because the survey was administered to nurses who worked in an academic medical center that has nurses working 24 hours a day, seven days a week and trying to reach every eligible nurse face to face would have proven extremely difficult, time consuming, and expensive. To increase the response rate and address this limitation, repeat reminders to complete the survey were sent on days 14 and 25 and the wording of the email reminders varied from the initial e-mail. This is consistent with the suggestions to increase survey responses (Dillman, 2007; Dillman, Smyth, & Christian, 2009; Nulty). In addition, I offered to provide a \$5 gift card and/or results of the study to those who requested either or both at the time they submitted the survey. Eighty-five of the participants requested and received a gift card and 16 participants requested results of the study. Once the researcher has completed her dissertation, results will be released to those who requested study results.

There was also a single open-ended question. While that question yielded some responses, in some cases responses were uninformative (e.g., “No, thank you”) or lacked context. Conducting individual or focus group interviews might have been more informative in terms of yielding richer, qualitative thematic information.

The study had a self-selection bias so those who responded to the survey may not be representative of even the entire sampling frame, let alone any larger population. For example, none of the respondents scored in a low range for CS and none scored in a high

range for either BO or STS. The extent to which the corresponding score ranges did or did not characterize non-respondents is unknown.

There is a potential bias toward younger people using the Internet and responding to email surveys (Dillman, 2007). For this study, that was not a major concern because the organization routinely utilizes electronic communication, electronic medical records and other technology in daily operations. In fact, the ages of respondents ranged from 22 to 73 years of age (43 years) and the interquartile range was 28 to 47 years so effects of any age-related bias in this study are not likely to be very strong.

During the time the survey was conducted, there was no way to control for circumstances on the units or areas where the nurses worked. For instance, the census on the unit, the velocity of admissions and discharges, sick calls, how many nurses were out on approved Family and Medical Leave Act (FMLA) leave, deaths on the unit, turnover, and other environmental work factors that may have influenced the responses. Additionally, there was no way to control for the personal factors in a nurse's life that may have contributed to the responses on the ProQOL 5. However, those are general limitations of much, perhaps most, survey research involving professional nurses.

Implications for Practice

The implications for practice are to give nurse leaders a better picture of the levels of compassion satisfaction and compassion fatigue among their nurses. Bearing the possibility of self-selection bias in mind, the results are potentially reassuring about levels of compassion satisfaction and compassion fatigue among pediatric and neonatal nurses who participated. On the whole, the sample was experienced: at least 75% of respondents had at least 2 years' experience on their current unit and at least 4 years' experience in nursing, and

at least 50% had at least 5 and 8.5 years' experience, respectively. However there was no significant association between any of the ProQOL 5 scales and any of the experience-related variables.

Even so, some of the open-ended responses indicated some concerns about the work environment. Improved work environments have been linked to increased job satisfaction, lower patient mortality, lower failure to rescue rates, lower nursing burnout, and increased patient satisfaction (Kutney-Lee & McHugh, 2009). Burnout is known to affect absenteeism, morale, staff retention, patient satisfaction and patient safety (Burtson, Stichler, 2010; Li, Guan, Chang, & Zhang; Lorenz, & Guiradello, 2104; Portnoy, 2011; Potter, 2010; Profit et al., 2014; Vahey, Aiken, Sloane, Clarke, & Vargus, 2004). It is important that nurse leaders look for ways to promote a healthy work environment.

Designing jobs that allow for work-life balance may also enhance compassion satisfaction and reduce compassion fatigue. Changes such as decreasing shift length, decreasing weekend work and offering flexible schedules are some of the interventions that may help a nurse achieve work-life balance. Additionally, giving nurses choice and control over their schedules, and providing child care and maternity and paternity leave are benefits that not only influence the employee positively, but also demonstrate to nurses that we are committed to assisting them in achieving a work-life balance (Munir, Nielson, Garde, Albertsen, & Carneiro, 2012).

Another factor that is highly likely to influence work-life balance is management support. Managers who lead using transformational leadership principles indirectly impact the perceptions of work-life balance (Munir, Nielson, Garde, Albertsen, & Carneiro, 2012). Nurse leaders need to develop their skill set to include characteristics of transformational

leadership to assist nursing staff in achieving work-life balance and joy in their work. The critical skills for nurse leaders are effective communication, being an inspirational leader, being trustworthy, and promoting teamwork (Smith, 2011). Transformational leaders are motivational and sensitive and are able to effectively convey the mission and vision of the organization and encourage pride in work. Effective transformational leaders encourage their staff intellectually and encourage the use of evidence-based practice (Smith). Nurse leaders play a role in ensuring a healthy work environment, encouraging work-life balance, and assisting nurses in identifying issues and concerns with burnout and secondary traumatic stress and finding evidence based interventions to improve compassion satisfaction among our staff.

Recommendations for Further Research

Replication of this study in other academic medical centers and comparing the results to other hospital settings, such as for-profit, not-for-profit, critical access, long-term acute care, and rehabilitation hospitals may shed light on unique differences in each setting and allow nurse researchers to tailor programs to assist nurses in achieving compassion satisfaction in their jobs and decreasing the sub-scales of compassion fatigue, burnout and secondary traumatic stress.

Further research should be done on the levels of compassion satisfaction and compassion fatigue among nurses in all fields, paying attention to differences in the type of nursing, setting where a nurse practices and area of the United States where the nurse practices.

Research that correlates the level of compassion satisfaction and the compassion fatigue subscales, burnout and secondary traumatic stress, to the level of nurse satisfaction on

specific units and within specific areas of practice would help nurse researchers and leaders determine areas where more focus, time and energy should be spent in ensuring that the work environment supports the nurse and promotes patient satisfaction (Burtson, Stichler, 2010; Li, Guan, Chang, & Zhang; Lorenz, & Guiradello, 2104; Portnoy, 2011; Potter, 2010; Profit et al., 2014; Vahey, Aiken, Sloane, Clarke, & Vargus, 2004 .

Additionally, using the ProQOL 5 as a pre and post-intervention measure may be helpful as nurse researchers and nurse leaders test programs and interventions in an effort to discover interventions that help decrease burnout and secondary traumatic stress. Literature suggests that giving nurses opportunities for training and wellness interventions improves their self-care practices, awareness, and coping skills, and improves job performance (Sanso, et al; Zadeh, Gamba, Hudson, & Weiner, 2012). Results of a pilot study showed that a resilience program could decrease the level of compassion fatigue in oncology nurses who practiced in an outpatient setting (Potter et al., 2013). Prior to testing these interventions, the ProQOL 5 tool could be administered to determine the level of compassion satisfaction and compassion fatigue a nurse was experiencing. At a designated time after the interventions are completed, the ProQOL 5 could be administered again and pre and post intervention scores compared to determine if the interventions helped to decrease burnout and secondary traumatic stress and increase compassion satisfaction.

This study contributes to the current body of literature related to compassion satisfaction and compassion fatigue by extending what pediatric and neonatal nurses know across specialties and inpatient and outpatient environments. This study also provides a pediatric counter voice to many of the adult studies that show that nurses in ICU settings experience higher levels of burnout and secondary traumatic stress (Hinderer, et al., 2014;

Hopper, et al., 2010). Understanding the differences and looking for interventions that may improve compassion satisfaction and compassion fatigue scores may prove worthwhile in looking for ways to help nursing staff and reduce burnout and turnover.

While the study did not show a relationship between the levels of compassion satisfaction and compassion fatigue and patient satisfaction, it is worth more exploration in a larger setting and across a longer period of time using a longitudinal design. Additionally, looking at the relationship of nurse satisfaction and compassion fatigue and compassion satisfaction could also be useful.

Conclusion

This purpose of this study was to describe the extent of compassion fatigue and compassion satisfaction among pediatric nurses at a large academic medical center situated in an urban area in the Southwestern United States using a descriptive design with a convenience sample. This study also determined the relationship between compassion satisfaction, compassion fatigue, and patient satisfaction. All groups had low mean scores on the burnout subscale with no significant differences among groups. There were small, statistically significant differences between groups in both compassion satisfaction and secondary traumatic stress, but the clinical or administrative importance of those differences is hard to gauge. The group that included the Pediatric Emergency Department, Pediatric Urgent Care and Pediatric Specialty clinic nurses had slightly lower mean levels of compassion satisfaction and slightly higher levels of secondary traumatic stress compared with the other three groups, and for both of those variables, the difference between this group and one of the other groups was statistically significant after adjusting for multiple comparisons. These findings suggest that more work may need to be done with pediatric

nurses in those types of units to ensure that they are finding ways to decrease the level of secondary traumatic stress and improve compassion satisfaction. Given that nurses in these areas see patients with trauma, physical abuse, and who come in very sick, this finding is not surprising.

No statistically significant results were found related to the impact of compassion satisfaction and compassion fatigue on patient satisfaction. While this was a surprising finding, it is worth doing more exploration on this concept on a wider level and over a longer period of time than the thirty days the survey was open. Finding ways to assist nurses to increase their compassion satisfaction and decrease their compassion fatigue may assist in improving patient and nurse satisfaction and reduce burnout, turnover, use of sick leave, workplace injuries and other negative aspects of caregiving and work environment that are reflected in the literature.

REFERENCES

- Adriaenssens, J., de Gucht, V., & Maes, S. (2012). The impact of traumatic events on emergency room nurses: Findings from a questionnaire survey. *International Journal of Nursing Studies*, 49, 1411-1422. doi:10.1016/j.ijnurstu.2012.07.003
- Alacacioglu, A., Yavuzsen, T., Dinoz, M., Oztop, I., & Yimaz, U. (2009). Burnout in nurses and physicians at an oncology department. *Psycho-Oncology*, 18, 543-548. doi: 10.1002/pon.1432
- Albanese, M. P., Evans, D. A., Schantz, C. A., Bowen, M., Moffa, J. S., Piesieski, P., & Polamann, R. C. (2010). Engaging clinical nurses in quality and performance improvement activities. *Nursing Administration Quarterly*, 34(3), 226-245. doi: 10.1097/NAQ.0b013e181e702ca.
- American Nurses Credentialing Center (ANCC). (2014). *2014 Magnet Application Manual*. Silver Springs, MD: ANCC Publications.
- American Sentinel University. (2012). *Effective nurse communication key to patient satisfaction in healthcare*. Retrieved from <http://www.americansentinel.edu/about-american-sentinel-university/newsroom/effective-nurse-communication-key-to-patient-satisfaction-in-health-care-system-2>
- Amin, A. A., Vankar, J. R., Nimbalker, S. M., & Phatak, A. J. (2014). Perceived stress and professional quality of life in neonatal intensive care unit nurses in Gujarat, India. *Indian Journal of Pediatrics*, 82(11), 1001-1005. doi:10.1007/s12098-015-1794-3
- Barnard, D., Street, A., & Love, A. W. (2006). Relationship between stressors, work supports, and burnout among cancer nurses. *Cancer Nursing*, 29(4), 338-345.

- Bartram, T., Casimir, G., Djurkovic, N., Leggat, S. G., & Stanton, P. (2012). Do perceived high performance work systems influence the relationship between emotional labour, burnout, and intention to leave? A study of Australian nurses. *Journal of Advanced Nursing*, 68(7), 1567-1578. doi: 10.1111/j.1365-2648.2012.05968.x
- Beatie, M., Murphy, D. J., Atherton, I., & Lauder, W. (2015). Instruments to measure patient experience of healthcare quality in hospitals: A systematic review. *Systematic Reviews*, 4, 97,11-24. doi:10.1186/s13643-015-0089D
- Berger, J., Polivka, B., Smoot, E. A., & Owens, H. (2015). Compassion fatigue in pediatric nurses. *Journal of Pediatric Nursing*, 30(6), e11-e17. doi:10.1016/j.pedn.2015.02.005
- Bertot, J. C. (2009). Web-based surveys: Not your basic survey anymore. *The Library Quarterly*, 79(1), 119-124. doi:10.1086/593960
- Boev, C. (2012). The relationship between nurses' perception of work environment and patient satisfaction in adult critical care. *Journal of Nursing Scholarship*, 44(4). 368-375. doi: 10.1111/j.1547-5069.2012.01466.x
- Boyle, D. A. (2011). Countering compassion fatigue: A requisite nursing agenda. *Online Journal of Issues in Nursing*, 16(1). doi:10.3912/OJIN.Vol16No01man02
- Branch, C., & Klinkenberg, D. (2015). Compassion fatigue among pediatric healthcare providers. *MCN. The American Journal of Maternal Child Nursing*, 40(3), 160–166. doi:10.1097/NMC.000000000000013
- Bruce, C. R., Miller, S. M., & Zimmerman, J. L. (2015). A qualitative study exploring moral distress in the ICU team: The importance of unit functionality and intrateam dynamics. *Critical Care Medicine*, 43, 823-831. doi:10.1097/CCM.0000000000000822

- Burtson, P., & Stichler, J. F. (2010). Nursing work environment and nurse caring: relationship among motivational factors. *Journal of Advanced Nursing*, 66(8), 1819-1831. doi:10.1111/j.1365-2648.2010.05336.x
- Cañadas-de la Fuente, G. A., Vargas, C., San Luis, C., Garcia, I., Cañadas, G. R., & de la Fuente, E. I. (2015). Risk factors and prevalence of burnout syndrome in the nursing profession. *International Journal of Nursing Studies*, 52, 240-249. doi:10.1016/j.nurstu.2014.07.001
- Chaturvedi, K. (n.d.). *Sampling Methods* [PowerPoint Slides]. Retrieved from www.pitt.edu/~super7/43011-44001/43911.ppt
- Chizawshy, L. L. K., Estabrooks, C. A., & Sales, A. E. (2011). The feasibility of web-based surveys as a data collection tool: A process evaluation. *Applied Nursing Research*, 24, 37-44. doi:10.1016/j.apnr.2009.03.006
- Coetzee, S. K., & Klopper, H. C. (2010). Compassion fatigue within nursing practice: A concept analysis. *Nursing and Health Sciences*, 12, 235-242. doi:10.1111/j.1442-2018.2010.00526.x
- Cohen, J. W. (1988). *Statistical power analysis for the behavioral sciences*. (2nd Ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Collins-McNeil, J., Sharpe, D., & Benbow, D. (2012). Aging workforce: Retaining valuable nurses. *Nursing Management*, 43(3), 50-54. doi:10.1097/01.NUMA.0000412228.68794.fa

- Craige, M., Osserian-Moisson, R. O., Aoun, S., Brown, J., Hemsworth, D., Francis, K., . . .
Rees, C. (2016). The influence of trait-negative affect and compassion satisfaction on
compassion fatigue in Australian nurses. *Psychological Trauma, 8* (1), 88-97.
doi:10.1111/jpnm.12160
- Daisy Award Foundation. (n.d.). *Daisy Award frequently asked questions*. Retrieved from
<https://www.daisyfoundation.org/faq>
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed mode
surveys: The tailored design method* (3rd ed.). Hoboken, NJ: John Wiley and Sons.
- Dillman, D. A., & Smyth, J. D., (2007). Design effects in the transition to web-based
surveys. *American Journal of Preventative Medicine, 32*(5S), S90-S96.
doi:10.1016.j.amepre.2007.03.008
- Figley, C. R. (1995). Compassion fatigue: Toward a new understanding of the costs of
caring. In B. H. Stamm (Ed.). *Secondary traumatic stress: Self-care issues for
clinicians, researchers, & educators* (pp. 3-28). Lutherville, MD: Sidran Press.
- Flarity, K., Gentry, J. E., & Mesnikoff, N. (2013). The effectiveness of an educational
program on preventing and treating compassion fatigue in emergency nurses.
Advanced Emergency Nursing Journal, 35(3), 247-258.
doi:10.1092/TME.0b013e31829b726f
- Flemister, B. (2006). Be aware of compassion fatigue. *Journal of Wound, Ostomy, and
Continence Nurses, 33*(5), 465-466. doi:10083-02_WJ3305-quest.qxd
- Forsberg, A., Vikman, I., Walivaara, B. M. & Engstrom, A. (2015). Patients' perceptions of
quality of care during the perioperative procedure. *Journal of PeriAnesthesia
Nursing, 30*(4), 280-289. doi:10.1016/j.jopan.2014.05.012

- Gauthier, T., Meyer, R. M. L., Grefe, D., Gold, J. I. (2015). An on-the-job mindfulness-based intervention for pediatric ICU nurses: A pilot. *Journal of Pediatric Nursing*, 30, 402-409. doi:10.1016/j.pedn.2014.10.005
- Gosseries, O, Demertzi, A., Ledoux, D., Bruno, M.A., Vanhauzenhuyse, A., Thibaut, A., Laureys, S., & Schnakers, C. (2012). Burnout in healthcare workers managing chronic patients with disorders of consciousness. *Brain Injury*, 26(12), 1493-1499. doi:10.3109/02699052.2012.695426
- Guarte, J. M. & Barrios, E. B. (2006) Estimation under purposive sampling. *Communications in Statistics - Simulation and Computation*, 35(2), 277-284. doi:10.1080/03610910600591610
- Health Resources and Services Administration. (2010). *The Registered Nurse population: Findings from the 2008 National Sample Survey of Registered Nurses*. Washington, DC: United States Department of Health and Human Services. Retrieved from <https://bhwh.hrsa.gov/sites/default/files/bhw/nchwa/rnsurveyfinal.pdf>
- Heslop, L., & Lu, S. (2014). Nurse-sensitive indicators: A concept analysis. *Journal of Advanced Nursing*, 70(11), 2469-2482. doi:10.1111/jan.12503
- Hinderer, K., VonReuden, K. T., Friedmann, E., McQuillan, K. A., Gilmore, R., Kramer, B., & Murray, M. (2014). Burnout, compassion fatigue, compassion satisfaction, and secondary traumatic stress in trauma nurses. *Journal of Trauma Nursing*, 21(4), 160-169. doi:10.1097/JTN.000000000000015

- Hooper, C., Craig, J., Janvrin, D. R., Wetsel, M. A., & Reimels, E. (2010). Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected specialties. *Journal of Emergency Nursing, 36*(5), 420-427. doi:10.1016/j.jen.2009.11.027
- Hunsaker, S., Chen, H. C., Maughan, D., & Heaston, S. (2015). Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *Journal of Nursing Scholarship, 47*(2), 186–194. doi:10.1111/jnu.12122
- Johansson, P., Oleni, M., Fridlund, B. (2002). Patient satisfaction with nursing care in the context of health care: A literature study. *Scandinavian Journal of Caring Science, 16*, 337-344. doi:10.1046/j.1471-6712.2002.00094.x
- Joinson, C. (1992). Coping with compassion fatigue. *Nursing*92,22(4), 114-121.
http://journals.lww.com/nursing/Citation/1992/04000/COPING_WITH_COMPASSION_FATIGUE_.35.aspx
- Kenny, D. J., & Hull, M. S. (2008). Critical care nurses' experiences caring for the casualties of war evacuated from the front line: Lessons learned and needs identified. *Critical Care Nursing Clinics of North America, 20*, 41-49. doi:10.1016/j.ccell.2007.10.013
- Khan, M. H., Hassan, R., Anwar, S., Babar, T. S., Babar, K. S. (2007). Patient satisfaction with nursing care. *Rawal Medical Journal, 32*(1), 27-29. Retrieved from http://www.academia.edu/549942/Patient_satisfaction_with_nursing
- Khamisa, N., Oldenberg, B., Peltzer, K., & Ilic, D. (2015). Work related stress, burnout, job satisfaction, and general health of nurses. *International Journal of Environmental research and Public Health, 12*, 652-666. doi:10.3390/ijerph120100652

- Khamisa, N., Peltzer, K. & Oldenberg, B. (2013). Burnout in relation to specific contributing factors and health outcomes among nurses: A systematic review. *International Journal of Environmental Research and Public Health*, 10, 2214-2240.
doi:10.3390/ij43ph10062214
- Klovning, A., Sandvik, H., Hunnskaar, S. (2009). Web-based survey attracted age-biased sample with more severe illness than paper-based survey. *Journal of Clinical Epidemiology*, 62, 1068-1074. doi:10.1016/j.jclinepi.2008.10.015
- Kowalsiki, C., Ommen, O., Driller, E., Ernstmann, N., Wirtz, M. A., Kohler, T., & Pfaff, H. (2010). Burnout in nurses- the relationship between social capital in hospitals and emotional exhaustion. *Journal of Clinical Nursing*, 19, 1654-1663.
doi:10.1111.j.1365-2702.2009.02989.x
- Kushner, J., & Ruffin, T. (2015). Empowering a healthy practice environment. *The Nursing Clinics of North America*, 50(1), 167–183. doi:10.1016/j.cnur.2014.10.013
- Kutney-Lee, A., Sloane, D. M., Cimiotti, J. P., Flynn, L., Felber Neff, D., & Aiken, L. H. (2009). Nursing: A key to patient satisfaction. *Health Affairs*, 28(4), w669-677.
doi:10.1377/hlthaff.28.4.w669
- Lagan, B. M., Sinclair, M., & Kernohan, W. G. (2010). Internet use in pregnancy informs women's decision making: A web-based survey. *Birth*, 37(2), 106-115.
doi:10.1111/j.1523-536X.2010.00390.x
- Lam, S. M., So, H. M., Fok, S. K., Li, S. C., Ng, C. P., Lui, W. K., Heyland, D. K., & Yan, W. W. (2015). Intensive care unit family satisfaction survey. *Hong Kong Journal of Medicine*, 5(21), 1-9. doi:10.12809/hkmj144385

- Lee, K., Yen, M., Fetzer, S., & Chien, T. W. (2014). Predictors of burnout among nurses in Taiwan. *Community Mental Health Journal*, *51*(6), pp. 733-737. doi:10.1007/s10597-014-9818-4
- Li, A., Early, S. F., Mahrer, N. E., Klaristenfeld, J. L., & Gold, J. I. (2014). Group cohesion and organizational commitment: Protective factors for nurse residents' job satisfaction, compassion fatigue, and burnout. *Journal of Professional Nursing*, *30*(1), 89-99. doi: 10.1016/j.profnurs.2013.04.004.
- Li, X., Guan, L., Chang, H., & Zhang, B. (2014). Core self-evaluation and burnout among nurses: The mediating role of coping styles. *PLOS ONE*, *9*(12), e115799. doi: 10.1371/journal.pone.0115799
- Liu, H., Cella, D., Gershon, R., Shen, J., Morales, L. S., Riley, W., & Hays, R. D. (2010). Representatives of the patient-reported outcomes measurement information system internet panel. *Journal of Clinical Epidemiology*, *63*, 1169-1178. doi:10.1016/j.jclinepi.2009.11.021
- Lombardo, B., & Eyre, C. (2011). Compassion fatigue: A nurse's primer. *The Online Journal of Issues in Nursing*, *16*(1), Manuscript 3. doi:10.3912/OJIN.Vol16No01Man03
- Lorenz, V. R., & Guiradello, E. B. (2014). The environment of professional practice and burnout issues in primary healthcare. *Revista Latino-Americana de Engermagem*, *22*(6), 926-933. doi:10.1590/0104-1169.0011.2497
- Massachusetts Nurses Association. (2015, December 23). Nurses #1 Again in honesty, ethics; Top Gallup Polling Ranking in 15 of 16 years. *PR Newswire*. Retrieved from <http://www.massnurses.org/news-and-events/archive/2015/p/openItem/9774>

- McHugh, M. D., Kutney-Lee, A., Cimiotti, J. P., Sloane, D. M., & Aiken, L. H. (2011). Nurses widespread job dissatisfaction, burnout, and frustration with health benefits signal problems for patient care. *Health Affairs, 30*(2), 202-210.
doi:10.1377/hlthaff.2010.0100
- McHugh, M. D., & Ma, C. (2014). Wage, work environment, and staffing: Effects on nurse outcomes. *Policy, Politics, & Nursing Practice, 15*(3-4), 72-80. doi: 10.1177/152715441456868
- Meadors, P., & Lamson, A. (2008). Compassion fatigue and secondary traumatization: Provider self care on intensive care units for children. *Journal of Pediatric Health Care, 22*(1), 24-34. doi:10.1016/j.pedhc.2007.01.006
- Mealer, M., Conrad, D., Evans, J., Jooste, K., Solyntjes, J., Rothbaum, B., Moss, M. (2014). Feasibility and acceptability of a resilience training program for intensive care unit nurses. *American Journal of Critical Care, 23*(6), e97-e105.
doi:10.4037/ajcc2014747
- Medland, J., Howard-Ruben, J., & Whitaker, E. (2004). Fostering psychosocial wellness in oncology nurses: Addressing burnout and social support in the workplace. *Oncology Nursing Forum, 31*(1), 47-54. doi:10.1188/04.ONF.47-54
- Melvin, C. S. (2015). Historical review in understanding burnout, professional compassion fatigue, and secondary traumatic stress disorder from a hospice and palliative nursing perspective. *Journal of Hospice & Palliative Nursing, 17*(1), 66-72.
doi:10.1097/NJH.0000000000000126

- Messer, B. J., Dillman, D. A. (2011). Surveying the general public over the internet using address-based sampling and mail contact procedures. *Public Opinion Quarterly*, 75(3), 429-457. doi:10.1093/poq/nfr021
- Moloney, M. F., Aycock, D. M., Cotsonis, G. A., Myerburg, S., Farino, C., & Lentz, M. (2009). An internet-based migraine headache diary: Issues in internet-based research. *Headache*, 49, 673-686. doi: 10.1111/j.1526-4610.2009.01399.x
- Morris, B. J., Jahangir, A. A., & Sethi, M. K. (2013). Patient satisfaction: An emerging health policy issue. *AAOS Now*. Retrieved from <http://www.aaos.org/AAOSNow/2013/Jun/advocacy/advocacy5/>
- National Child Traumatic Stress Network, Secondary Traumatic Stress Committee. (2011). *Secondary traumatic stress: A fact sheet for child-serving professionals*. Los Angeles, CA, and Durham, NC: Author. Retrieved from http://www.nctsn.org/sites/default/files/assets/pdfs/secondary_traumatic_stress.pdf
- Munir, F., Nielson, K., Garde, A. H., Albertsen, K., & Carneiro, I. G. (2012). Mediating the effects of work-life conflict between transformational leadership and health-care workers' job satisfaction and psychological well-being. *Nursing Management*, 20(4), 512-521. doi:10.1111/j.1365-2834.2011.01308.x
- Naylor, M. D., Volpe, E. M., Lustig, A., Kelley, H. J., Melichar, L., & Pauly, M. V. (2013). Linkages between nursing and the quality of care in a 2 year comparison. *Medical Care*, 51(4), S6-14. doi:10.1097/MLR.0b013e3182849fb4
- Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: What can be done? *Assessment and Evaluation*, 33(3), 301-314. doi: 10.1080/02602930701293231

- Nunnally, J. C. (1978). Assessment of Reliability. In *Psychometric Theory*. (2nd ed.). p. 245-246. New York: McGraw-Hill.
- Oppenheimer, A. J., Pannucci, C. J., Kasten, S. J., Haase, S. C. (2011). Survey says” a primer on web-based survey design and distribution. *Plastic and Reconstructive Surgery*, 128(1), 299-304. doi:10.1097/PRS.0b013c3182174413
- Pallant, J. (2016). *SPSS Survival Manual: A Step by Step Guide to Analysis Using IBM SPSS* (6th Ed.). New York, NY: Open Press Publishing.
- Patrician, P. A., Loan, L., McCarthy, M., Brosch, L. R., & Davey, K. S. (2010). Towards evidenced-based management: Creating an informative database of nursing-sensitive indicators. *Journal of Nursing Scholarship*, 42(4), 356-366. doi:10.1111/j.1547-5069.2010.364.x
- Peate, I. (2014). The weekend effect and compassion fatigue. *British Journal of Nursing*, 23(20), 1059. doi:10.12968/bjon.2014.23.20.1059
- Portnoy, D. (2011). Burnout and compassion fatigue: Watch for the signs. *Health Progress*, 92(4), 46-50. Retrieved from <https://www.chausa.org/publications/health-progress/article/july-august-2011/burnout-and-compassion-fatigue-watch-for-the-signs>
- Potter, P., Deshields, T., Berger, J. A. Clarke, M., Olsen, S., & Chen, L. (2013). Evaluation of a compassion fatigue resiliency program for oncology nurses. *Oncology Nursing Forum*, 40(2), 180-187. doi:10.1188/13.ONE.180-187.

- Potter, P., Deshields, T., Divanbeigi, J., Berger, J., Cipriano, D., Norris, L., & Olsen, S. (2010). Compassion fatigue and burnout: Prevalence among oncology nurses. *Clinical Journal of Oncology Nursing, 14*(5), E56-62. doi: 10.1188/10.CJON.E56-E62
- Press Ganey. (n.d.). *Nursing special report: The influence of nurse work environment on patient, payment and nurse outcomes in acute settings*. Retrieved from healthcare.pressganey.com/2015-Nursing-SR_Influence_Work_Environment
- Press Ganey Associates. (2016). *NDNQI Nurse Satisfaction Survey Results*. Retrieved from pressganey.org
- Press Ganey. (2004). *UNM Children's Hospital Inpatient Survey*. Retrieved from www.pressganey.org
- Press Ganey. (2010). *UNM Carrie Tingley Hospital Outpatient Survey*. Retrieved from www.pressganey.org
- Press Ganey (2013). *Every voice matters: The bottom line on employee and physician engagement*. Retrieved from www.pressganey.org
- Presson, A. P., Zhang, C., Abtahi, A. M., Kean, J., Hung, M., & Tyser, A. R. (2017). Psychometric properties of the Press Ganey® Outpatient Medical Practice Survey. *Health and quality of life outcomes, 15*(1), 32. doi:10.1186/s12955-017-0610-3
- Profit, J., Sharek, P. J., Amspoker, A. B., Kowalkowski, M. A., Nisbet, C. C., Thomas, E. J., Chadwick, W. A., & Sexton, J. B. (2014). Burnout in the NICU setting and its relation to safety culture. *Quality and Safety BMJ, 23*, 806-813. doi:10.1136/bmjqs-20142014.002831

- ProQOL.org. (n.d.). *How the ProQOL is Used in Research*. Retrieved from proqol.org/Research.html
- Reagan, D. (2014). Is our compassion being hijacked? *Beginnings: American Holistic Nurses Association*, 34(4), 10-11. Retrieved from web.a.ebscohost.com.libproxy.unm.edu
- REDCap. (n.d.). *Software*. Retrieved from <http://www.project-redcap.org/software.php>
- Rees, C. S., Breen, L. J., Cusack, L., & Hegney, D. (2015). Understanding individual resilience in the workplace: the international collaboration of workforce resilience model. *Frontiers in Psychology*, 6, 73. doi:10.3389/fpsyg.2015.00073
- Rudman, A., Gustavsson, J. P. (2011). Early-career burnout among new graduate nurses: A prospective observational study of intra-individual change trajectories. *International Journal of Nursing Studies*, 48, 292-306. doi:10.1016/j.ijnurstu.2010.07.012
- Rutherford, M. M. (2014). The value of trust to nursing. *Nursing Economics*, 32(6), 283-289.
- Sabo, B. (2011). Reflecting on the concept of compassion fatigue. *Online Journal of Issues in Nursing*, 16(1) Manuscript 1. doi:10.3912/OJIN.Vol16No01Man01
- Sansó, N., Galiana, L., Oliver, A., Pascual, A., Sinclair, S., & Benito, E. (2015). Palliative care professionals' inner life: Exploring the relationships among awareness, self-care, and compassion satisfaction and fatigue, burnout, and coping with death. *Journal of Pain and Symptom Management*, 50(2), 200-207. doi:10.1016/j.jpainsymman.2015.02.013

- Schleyer, T. K., & Forrest, J. L. (2000). Methods for the design and administration of web-based surveys. *Journal of the American Informatics Association*, 7(4), 416-425.
Retrieved from <http://jamia.bmj.com/content/7/4/416.full.pdf+html?sid=300f4da6-18d4-4636-8059-d3d2976490e5>
- Sheppard, K. (2015). Compassion fatigue among registered nurses: connecting theory and research. *Applied Nursing Research: ANR*, 28(1), 57-59.
doi:10.1016/j.apnr.2014.10.007
- Smith, M. A. (2011). Are you a transformational leader? *Nursing Management*, 42(9), 44-50.
doi: 10.1097/01.NUMA.0000403279.04379.6a
- Stamm, B. H. (2010). *The concise ProQOL manual* (2nd ed.). Pocatello, ID. Retrieved from http://www.proqol.org/uploads/ProQOL_Concise_2ndED_12-2010.pdf
- Stimpfel, A. W., Sloane, D. M., Aiken, L. H. (2012). The longer the hospital shift, the higher levels of burnout. *Health Affairs*, 31(11), 2501-2509. doi:10.1377/hlaff.2011.1377
- Storer Brown, D., Donaldson, N., Burnes Bolton, L. Aydin, C. E. (2010). Nursing-sensitive benchmarks for hospitals to gauge high-reliability performance. *Journal for Healthcare Quality*, 32(6), 9-17. doi:10.1111/j.1945-1474.2010.00083x
- Swetz, K. M., Harrington, S. E., Matsuyuma, R. K., Shanafelt, T. D., & Lynckholm, L. J. (2009). Strategies for avoiding burnout in hospice and palliative medicine: Peer advice for physicians on achieving longevity and fulfillment. *Journal of Palliative Medicine*, 12(9), 773-777. doi:10.1089/jpm.2009.0050
- Teddle, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. *Journal of Mixed Methods Research*, 1(1), 77-100. doi:10.1177/2345678906292430

- Trepanier, S. G., Fernet, C., & Austin, S. (2015). A longitudinal investigation of workplace bullying, basic need satisfaction, and employee functioning. *Journal of Occupational Health Psychology, 20*(1), 105-116. doi:10.1037a0037726
- United States Census Bureau. (2010). *Quick Facts: Albuquerque, New Mexico*. Retrieved from <http://www.census.gov/quickfacts/table/RHI825215/3502000>
- University of New Mexico Hospitals. (n.d.). *I Care employee recognition awards*. Retrieved from <https://unmh.edu/employeerecognition/ICAREAwards>
- Vahey, D. C., Aiken, L. H., Sloane, D. M., Clarke, S. P., & Vargas, D. (2004). Nurse burnout and patient satisfaction. *Medical Care, 42*(2), 1157-1166. doi:10.1097/01.mlr.000109126.503985a
- van Gelder, M. M., Bretveld, & Roeleveld, N. (2010). Web-based questionnaires: The future in epidemiology? (2010). *American Journal of Epidemiology, 172*(11), 1292-1298. doi:10.1093/aje.kwq291
- Vincente, P., & Reis, E. (2010). Using questionnaire design to fight nonresponse bias in web surveys. *Social Science Computer Review, 28*, 251-267. doi:10.1177/0894439309340751
- Van Bogaert, P., Kowalski, C., Weeks, S. M., Van heusden, D., & Clarke, S. P. (2013). The relationship between nurse practice environment, nurse work characteristics, burnout and job outcome and quality of nursing care: A cross-sectional study. *International Journal of Nursing Studies, 50*, 1667-1677. doi:10.1016/j.ijnurstu.2013.05.010

- Van Bogaert, P., Timmermans, O., Weeks, S. M., Van heusden, D., Wouters, K., & Franck, E. (2013). Nursing unit teams matter: Impact of unit-level nurse practice environment, nurse work characteristics, and burnout on nurse reported adverse outcomes, and quality of care, and patient adverse events- A cross-sectional survey. *International Journal of Nursing Studies, 51*, 1123-1134.
doi:10.1016/j.ijnurstu.2013.12.009
- Van Bogaert, P., Van heusden, D., Timmermans, O., & Franck, E. (2014). Nurse work engagement impacts job outcome and nurse-assessed quality of care: Model testing with nurse practice environment and nurse work characteristics as predictors. *Frontiers in Psychology, 5*(1261), 452-461. doi:10.3389/psyg.2014.01261
- Vargas, C., Cañadas, G. A., Aguayo, R., Fernandez, R., de la Fuente, E. I. (2014). Which occupational risk factors are associated with burnout in nursing? A meta-analytic study. *International Journal of Clinical and Health Psychology, 14*, 28-38.
doi:10.1016/S1697-2600(14)70034-1
- Walker, D. (2013). The internet as a medium for health service research. Part 1. *Nurse Researcher, 20*(4), 18-21.
- Wang, S., Liu, Y., Wang, L. (2015). Nurse burnout: Personal and environmental factors as predictors. *International Journal of Nursing Practice, 21*, 78-86.
doi:10.1111/ijn.12216
- Wolf, J. A. (2015). *State of patient experience 2015: A global perspective on the patient experience movement*. Retrieved from www.theberylinstitute.org

- Wyrick, D. L., & Bond, L. (2011). Reducing sensitive survey response bias in research on adolescents: A comparison of web-based and paper-and-pencil administration. *American Journal of Health Promotion, 25*(5), 349-352. doi:10.4278/njhp.080611-ARB-90
- Xie, Z., Wang, A., & Chen, B. (2011). Nurse burnout and its association with occupational stress in a cross-sectional study in Shanghai. *Journal of Advanced Nursing, 67*(7), 1537-1546. doi:10.1111/j.1365-2648.2010.05576.x
- Yoder, E. A. (2010). Compassion fatigue in nurses. *Applied Nursing Research, 23*, 191-197. doi:10.1016/j.apnr.2008.09.003
- Young, J. L., Derr, D. M., Cicchillo, V.J., & Bressler, S. (2011). Compassion satisfaction, burnout, and secondary traumatic stress in heart and vascular nurses. *Critical Care Nurses Quarterly, 34*(3), 227-234. doi:10.1097/CNQ.0b013e3182c67d5
- Zadah, S., Gamba, N., Hudson, C., & Wiener, L. (2012). Taking care of care providers: A wellness program for pediatric nurses. *Journal of Pediatric Oncology Nursing, 29*(5), 294-299. doi:10.1177/04345-4212451793
- Zander, M., Hutton, A., & King, L. (2010). Coping and resilience factors in pediatric oncology nurses. *Journal of Pediatric Oncology Nursing, 27*(2), 94-108. doi:10.1177/1043454209350154

APPENDICES

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Appendix A

Informational Page

An Investigation about the Level of Compassion Satisfaction, Compassion Fatigue Among Pediatric Nurses and the Impact on Patient Satisfaction

Purpose of the Study:

This study is about Compassion Satisfaction and Compassion Fatigue among Pediatric Nurses and the impact on Patient Satisfaction and is being conducted by Maribeth Thornton, RN, PhD(c), from the University of New Mexico, College of Nursing in Albuquerque, New Mexico as part of her PhD studies. This study is being done under the direction of Dr. Marie L. Lobo, PhD, RN, FAAN. The purpose of this study is to examine the level of compassion satisfaction and compassion fatigue from the perspective of pediatric nurses and study how compassion fatigue affects Patient Satisfaction. Information will be collected through an Internet survey with Registered Nurses (RNs) in inpatient, outpatient, and procedural areas.

What will be done?

You will complete a survey that will take between 15 and 20 minutes. The survey includes questions about you from a demographic perspective and also a Professional Quality of Life tool called the ProQOL 5. You will be asked questions that require a simple yes/no, a check box response or selecting a number between 1 and 5 to indicate the level you are experiencing the statement on the questionnaire. There are three sections to the survey: the informational page that you are reading now, demographic questions, and a ProQOL questionnaire. At the end of the ProQOL questionnaire, there is a link that you can select to receive a \$5 gift card that can be used in the gift shop, cafeteria or any of the coffee carts. You can also request a copy of the results of the survey once the survey has been completed and the data analyzed. These links are completely separate from the data collection survey. Data cannot be linked to your name.

Benefits of the Study:

You will be contributing to the knowledge of compassion satisfaction and compassion fatigue among pediatric nurses and the effect on patient satisfaction. If you select the link to receive the \$5 gift card, you will be contacted to receive the card. If requested, you will also be provided with the results of the study. Data collection in this study is expected to last for one month. Statistical analysis and completion of the study report is expected to take an additional three months. Once the statistical analysis and study report is complete, you will receive the results of the study, if requested.

Risks or Discomforts:

There are no identified risks or discomforts anticipated from participating in this study. If you do not feel comfortable with a question, you can skip that question or withdraw from the study. If you quit at any time before you finish the questionnaire, your answers will NOT be recorded as part of the study.

Decision to quit at any time:

Participation in this study is completely voluntary. You can stop answering questions at any time. If you wish to quit, simply close the questionnaire and do not click the “submit” button at the end of the survey and your answers will not be recorded. If you click the submit button, you will be directed to a link to receive a \$5 gift card. If you choose not to receive the gift card, simply close out of the survey.

How the findings will be used:

The results of the study will be used to help us understand the level of compassion satisfaction and compassion fatigue among pediatric nurses and how compassion fatigue influences patient satisfaction. The results from this study will be presented as part of the researcher’s dissertation. Results may also be presented in professional journals, at conferences and other educational activities. Individual data will not be released.

Contact information:

If you have questions about this study, please contact Maribeth Thornton, MSN, MBA, RN, NE-BC, CCM at mthornton@salud.unm.edu or Marie L. Lobo, PhD, RN, FAAN at mlobo@salud.unm.edu

By beginning the survey, you acknowledge that you have read the information. By clicking continue you agree to participate in the survey. You are free to stop answering questions at any time or withdraw your participation in the survey without penalty.

Confidentiality:

Your responses will be kept completely confidential. We will not know your IP address when you respond to the survey. We ask you NOT put your name in the questionnaire. We will ask you to include your contact information via a separate link if you choose to receive a \$5 gift card. However, your name and contact information will not be stored with any data from your survey questionnaires. Only the researchers will see your individual responses. After we finish data collection, analysis and the report write up, we will send you a copy of the results if you request them. The survey will be open for one month and completion of the analysis and reporting is expected to take an additional three months.

Thank you for participating in this important research. If you wish to continue, click here to access the survey. By continuing to the survey, you acknowledge you have read the informational sheet and choose to participate in this study.

Link was added so subjects could request a gift card.

Appendix B

Demographic Questionnaire

The actual survey will be designed on REDCap using appropriate drop down, radio button and yes/no selections based on the question.

Age at last birthday (Text Box)

Are you Hispanic or Latino? (A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.)

- No, not Hispanic or Latino
- Yes, Hispanic or Latino

What is your race? (Modeled after the 2010 US Census Bureau data collection categories)

- White
- Black, African American, or Negro
- American Indian/Alaskan Native
- Asian Indian
- Chinese
- Filipino
- Other Asian
- Japanese
- Korean
- Vietnamese
- Native Hawaiian
- Other, please specify (text box for response will pop up if selected)

What is your gender?

- Male
- Female

Are you currently?

- Married
- Separated
- Divorced
- Widowed
- Single, Never Married
- Not married, in a committed relationship

Do you have children living in your home?

Yes/No response

If you have children in the home, please fill out the table below.

Age	Gender	Health Status (Excellent, Good, Fair, Poor)

What is your current household annual income (before taxes):

Under \$25,000

\$25,000-\$34,999

\$35,000-\$49,999

\$50,000-\$74,999

\$75,000-\$99,999

\$100,000-\$124,999

\$125,000-\$149,999

Over \$150,000

Do you currently work?

Full-time, 36 or more hours per week

Part-time, between 20 and 35 hours per week

Part-time, less than 20 hours per week

Casual Pool

Are you currently in school?

Yes

No

If yes, what degree are you working toward?

BSN

MSN

Nurse Practitioner

DNP

PhD

Other

If you are currently in school, what year do you expect to finish your current program? (Text box for response)

Please select all nursing degrees that you have completed:

- Diploma
- ADN
- BSN
- MSN
- NP without MSN
- NP with MSN
- DNP
- PhD

How many years have you been in a pediatric or neonatal specialty?

What unit do you work on? Categories with drop down or checklist

- Pediatric Intensive Care Unit (PICU)
- Newborn Intensive Care Unit Level II (ICN 3 and ICN 4)
- Newborn Intensive Care Unit Level III (NBICU)
- Pediatric Hematology/Oncology, Renal, and Transplant Inpatient Unit (PSCU)
- General Pediatric Unit (GPU)
- Carrie Tingley Inpatient Unit (CTI)
- Pediatric Hematology/Oncology Outpatient Clinic
- Pediatric Infusion Unit (PIU)
- Pediatric Emergency Department
- Pediatric Specialty Care Clinics
- Pediatric Urgent Care Clinics
- Pediatric Operating Room

How long have you worked in your current unit? (Text Box)

How long have you worked in the current organization? (Text Box)

How many years have you practiced nursing? (Text Box)

Is there any other information you would like to share? (Text Box for free text response).

Please click this link to register to receive your \$5 gift card. If you choose to receive the \$5 gift card, no information that you provide will be matched to your demographic or survey responses. Your responses to the demographic and survey questionnaire are anonymous.

Link will be placed here once developed.

Thank you for your help in this important study.

Appendix C

Professional Quality of Life Scale (ProQOL)

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

When you *[help]* people you have direct contact with their lives. As you may have found, your compassion for those you *[help]* can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a *[helper]*. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

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

- _____ 1. I am happy.
- _____ 2. I am preoccupied with more than one person I *[help]*.
- _____ 3. I get satisfaction from being able to *[help]* people.
- _____ 4. I feel connected to others.
- _____ 5. I jump or am startled by unexpected sounds.
- _____ 6. I feel invigorated after working with those I *[help]*.
- _____ 7. I find it difficult to separate my personal life from my life as a *[helper]*.
- _____ 8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I *[help]*.
- _____ 9. I think that I might have been affected by the traumatic stress of those I *[help]*.
- _____ 10. I feel trapped by my job as a *[helper]*.
- _____ 11. Because of my *[helping]*, I have felt "on edge" about various things.
- _____ 12. I like my work as a *[helper]*.
- _____ 13. I feel depressed because of the traumatic experiences of the people I *[help]*.
- _____ 14. I feel as though I am experiencing the trauma of someone I have *[helped]*.
- _____ 15. I have beliefs that sustain me.
- _____ 16. I am pleased with how I am able to keep up with *[helping]* techniques and protocols.
- _____ 17. I am the person I always wanted to be.
- _____ 18. My work makes me feel satisfied.
- _____ 19. I feel worn out because of my work as a *[helper]*.
- _____ 20. I have happy thoughts and feelings about those I *[help]* and how I could help them.

- _____ 21. I feel overwhelmed because my case [work] load seems endless.
- _____ 22. I believe I can make a difference through my work.
- _____ 23. I avoid certain activities or situations because they remind me of frightening experiences of the people I [help].
- _____ 24. I am proud of what I can do to [help].
- _____ 25. As a result of my [helping], I have intrusive, frightening thoughts.
- _____ 26. I feel "bogged down" by the system.
- _____ 27. I have thoughts that I am a "success" as a [helper].
- _____ 28. I can't recall important parts of my work with trauma victims.
- _____ 29. I am a very caring person.
- _____ 30. I am happy that I chose to do this work.

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Appendix D

Email Invitations for Participation

Initial Email Invitation

TO:
FROM: Maribeth Thornton
RE: Request for Participation in a PhD Research Study
DATE:

Dear _____

You have been invited to participate in a study about compassion satisfaction and compassion fatigue among pediatric nurses. Taking the survey should take between 15 and 20 minutes. The information from this study will be used to determine the level of compassion satisfaction and compassion fatigue among nurses in the pediatric areas at the University of New Mexico Hospitals. Your responses will be completely anonymous. At the completion of the survey, you will be invited to click on a link to receive a \$5 gift card that can be used at the Gift Shop or Coffee Cart as a token of appreciation. The research is being conducted as partial fulfillment of requirements for a PhD in nursing. Please click the link below to begin the survey. Thank you in advance for your participation in this important survey.

Second Email Request for Participation

TO:
FROM: Maribeth Thornton
RE: Request for Participation in a PhD Research Study
DATE:

If you have already had completed this study, thank you for your help. If you have not yet had the opportunity to complete the survey, please consider participating in this study about Compassion Satisfaction and Compassion Fatigue among Pediatric Nurses. The survey should take between 15 and 20 minutes to complete. The information from this study will be used to determine the level of compassion satisfaction and compassion fatigue among nurses in the pediatric areas at the University of New Mexico Hospitals. Your responses will be completely anonymous. At the completion of the survey, you will be invited to click on a link to receive a \$5 gift card that can be used at the Gift Shop or Coffee Cart as a token of appreciation. The research is being conducted as partial fulfillment of requirements for a PhD in nursing. Please click the link below to begin the survey. Thank you in advance for your participation in this important survey.

Final Email Request for Participation

TO:

FROM: Maribeth Thornton

RE: Participation in a Study about Compassion Satisfaction and Compassion Fatigue

DATE:

Dear _____

Thank you if you have been part of this study. The results of this research will give me and the organization important information about the level of Compassion Satisfaction and Compassion Fatigue among Pediatric Nurses. If you have not had the opportunity to participate, please consider completing the survey. Completion of the survey should take between 15 and 20 minutes. The study will be open until 0001 on _____. As a reminder, the information from this study will be used to determine the level of compassion satisfaction and compassion fatigue among nurses in the pediatric areas at the University of New Mexico Hospitals. Your responses will be completely anonymous. At the completion of the survey, you will be invited to click on a link to receive a \$5 gift card that can be used at the Gift Shop or Coffee Cart as a token of appreciation. The research is being conducted as partial fulfillment of requirements for a PhD in nursing. Please click the link below to begin the survey. Thank you in advance for your participation in this important survey.

Appendix E

Press Ganey Nurse Sensitive Indicators

Inpatient Survey

D. NURSES	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5
1. Friendliness/courtesy of the nurses					
2. Promptness in responding to the call button					
3. Nurses' attitude toward your child's requests					
4. Amount of attention paid to your child's special or personal needs					
5. How well the nurses kept you informed					
6. Skill of the nurses					
7. Nurses' sensitivity and responsiveness to pain your child may have experienced while in the hospital					
8. Nurses promptness in giving pain medicine (if needed)					
9. Nurses efforts to educate you about your child's condition and care he/she required					

Comments (describe good or bad experience): _____

Outpatient Survey

NURSE/ASSISTANT	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5
1. Friendliness/courtesy of the nurse/assistant					
2. Concern the nurse/assistant showed for your problem					

Comments (describe good or bad experience): _____

No index entries found.

Appendix F

Comments From Survey

(grammar and spelling as comment was written)

1. ICN 3/4- I work in intensive care but rarely see traumatic victims. My heart goes out to these victims and saddens me but I am always able to complete my job with compassion.
2. PSCU-I am a caregiver of family members as well. I am unsure if the answers related to questions of burnout and being overwhelmed would be answered the same way if I wasn't a caregiver outside of work.
3. GPU-Nursing is an amazing profession but one that requires self care in order to be effective.
4. Pediatric Urgent Care-People frequently ask "how can you do what you do?" yes, it can trying, and sad, but it is also so rewarding to help them. Caring for the families can be just as rewarding as caring for the patient. If I can make a parent smile or laugh I have supported them and assisted them through what can be a dark time in their life.
5. PICU-N/A
6. NBICU-N/A
7. Peds OR/PACU-I thoroughly love my job and all aspects of my profession.
8. Peds OR/PACU-As a floor nurse I had more satisfaction in my work. I felt like I made a difference. I work in Pre-Op now and love the kids still and do make a difference in their experience. But truly floor nursing was the most satisfying.
9. Peds Urgent Care-If I could afford a vacation I would go decompress on a beach.
10. Peds Urgent Care-No
11. Peds Urgent Care-None at this time
12. NBICU-no thank you
13. ICN 3/4-I enjoy the work I do, but would appreciate it more if the younger nurses would have more respect for the more experienced nurses and if they would realize that its not all about them, but that we all work together as a team 24/7 to accomplish a common goal--- to make the patient better and return to their lives as productive citizens.
14. GPU- I feel undervalued as an UNMH employee. I am enthusiastic about caregiving, but am "bogged down" in an organization that is in the middle of a financial semi-crisis. I am expected to do more with less every year. The stress and exhaustion of that fact contributes to overall fatigue and melancholy.
15. GPU- Not enough nursing staff. Demands keep increasing and nothing is done to decrease the workload.
16. NBICU-No
17. PICU-I feel there should be a difference between physical and emotional fatigue here.
18. NBICU-I have been a nurse 32 years and still enjoy being at the bedside. I find the politics of the hospital setting frustrating and feel nursing has become a business and has lost its personal touch.

19. NBICU-These negative feelings are worsened when there are staffing shortages
20. NBICU-I do believe that I am "numb" to the sound of the monitors alarming which, in my opinion, is very dangerous in my field. I also feel somewhat "numb" to my patient's. I do not believe this is how I present myself to my patient's or my patient's families, but something I do to protect myself....not sure if that is good or bad.
21. PSCU-For the most part, the patient and families make the job enjoyable. There are times when the job gets overwhelming because of trauma, social situations, abuse and bad diagnosis. But this is not a constant.
22. NBICU-No
23. ICN 3/4-N/A
24. NBICU-No
25. NBICU-Where my answers are yes to traumatic events there is only one event I refer to, although have experienced many more traumatic experiences.
26. GPU-Overall, I feel the patient acuity and workload expectations have increased which does not allow me the necessary time needed for compassion and care with my patients. This has been a change over the last 3-5years.
27. Pediatric Urgent Care-After working in many high stress areas I feel my answers would be different for every area.
28. Peds OR/PACU-The OR really needs to have practice drills for code situations. We currently have none.
29. No designation of work area-I do not work with trauma type patients.
30. Pediatric Specialty Care Clinic-Experience has been the best teacher in terms of learning to separate work and life, and to remain detached in a healthy way from the challenges faced with certain patient situations, while still remaining compassionate and providing thorough care.
31. Pediatric Specialty Care Clinic-I enjoy that my career allows for me to make a positive impact on my patients.
32. NBICU-N/A
33. ICN-N/A
34. Pediatric ED-I love my job but I stay awake at night feeling like the things I see might happy to my children and family.
35. PICU-I get tired from time to time, and frustrated by certain situations, but overall I am happy and proud to be an RN.
36. GPU-The nurse to patient ratio is sometimes very exhausting. The patients are too sick to have so many with one nurse. Ratios are not as they should be.
37. NBICU-None at this time
38. GPU-None
39. Carrie Tingley-We are constantly working short and down RNs as well as Techs. It is making work very hard, stressful, and exhausting. Feeling burnt out.
40. Peds OR/PACU-I also work PRN at a Pediatric Urgent Care at another facility.
41. No-PSCU
42. No-Pediatric Urgent Care
43. NBICU-I biggest frustration as a healthcare team member, is my department/employers lack of ability to take care of those that have been working for them for a long time.

44. Pediatric Infusion Unit-Yes. I am a Christian and have called to be a nurse since I was a child. I do believe God is ultimately in control of all things and has a higher purpose that we do not understand. It is my job to do the best I can and then let go and let God make the final decision.
45. Pediatric Infusion Unit-More nursing experience = less perseveration/uncontrolled worry about traumatic events, but occasionally events can still trigger early morning awakenings to toss and turn and worry!
46. NBICU-I enjoy my work as a nurse but am irritated by all the extraneous (sp) duties we are asked to perform; i.e. CAP especially. It seems as if we are getting away from nursing in the form of patient care.
47. Carrie Tingley Inpatient-It seems like the unit has been short staffed with RNs and this makes it very busy and hard to keep up with pt cares (sic). But other then sometimes being very stressful I love my job!
48. Pediatric Infusion Unit-I love caring for pediatric patients and their families. I enjoy my job, and the other peds nurses that I work with.
49. GPU- No