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COMPASSION FATIGUE IN MIDDLE AGED PUBLIC HEALTH NURSES
WORKING ON DISASTER RELIEF TEAMS

By

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ABSTRACT

The nursing shortage is of growing concern to the nation's health care system. The problem and thus the solution are multifaceted. Many solutions exist in alleviating the nursing shortage, one of those solutions is to reduce the incidence of compassion fatigue among nurses. Compassion Fatigue can be a precursor to burnout, a phenomena that may be causing nurses to leave the profession. Compassion fatigue and burnout are a real threat to the nursing profession. During an outbreak of Severe Acute Respiratory Syndrome (SARS) in Toronto Canada in 2003, 5 nurses decided to quit their jobs. They decided to quit after "a month of putting up with long hours under unusually strenuous conditions" (CBC News Online Staff, 2003, p. 1). Strenuous conditions included working 12 hour shifts without the allotted breaks, wearing heavy protective gear that caused the nurses to break out in rashes, and fearing they might contract the potentially fatal disease or bring it home to their families. The purpose of this study was to examine the factor of compassion fatigue, and the role it plays in nurses who provide assistance during natural disasters.

This study chose to examine only female middle aged nurses who provided care to victims of the 2004 Hurricane season in Florida. The rationale for choosing only female middle aged nurses lies in the fact that they comprise the majority of the current nursing population. Variables such as marital status, number of times deployed to assist victims and number of years in public health, were examined for their effect on levels of risk for compassion fatigue.

This study used a subset of data from a pre-existing data set. The original study utilized a retrospective design and had participants complete a survey 3-4 months after they assisted hurricane victims. A total of 500 participants were selected at random by the Department of Health; addresses for those participants were also provided by the Department of Health. Survey packets containing a letter of introduction, letter of consent, stamped return envelope, demographic data sheet and two copies of the Compassion Fatigue Self Test (CFST) were mailed to the 500 participants. Each packet was numerically coded, to keep the participants anonymous, only the original researchers had access to the master list of participants and corresponding codes. Return of the survey served as consent for the study. For the current study only female participants age 40-60 years with complete data were included in the sample. The total number of participants who met the inclusion criteria was 55. Descriptive statistics, factorial ANOVA and simple effects were used to analyze the data.

Findings indicate that the majority of the participants were non-Hispanic white, married and had no children living with them at the time they provided care to victims of the hurricanes. This was the first experience assisting victims of a hurricane for the majority of the sample, and they had also not provided assistance in other types of natural disasters. As a result, the average level of risk for compassion fatigue, both during the hurricanes and 3-4 months after, was low. Of the variables that were examined as possible moderating variables on level of risk for compassion fatigue, only years in public health proved to be significant. Results from analyses on years in public health and compassion fatigue revealed that those with 11-20 years of experience in public health had the greatest rate of change in levels of risk for compassion fatigue experienced during the hurricanes and 3-4 months after. Those who had the most experience in public health did not experience significant levels of risk for compassion fatigue, and they also showed little change from levels experienced during the hurricanes and 3-4 months later. The factors of being middle aged and female seemed to prove beneficial in dealing with compassion stress/fatigue.

CHAPTER 1

INTRODUCTION

The nursing shortage is one of the fastest growing dilemmas that our nation's health care industry faces today. It is projected that over one million new nurses will be needed to meet the demands of healthcare in 2012. The American College of Healthcare Executives reported in October 2004 that 72% of hospitals CEOs were experiencing a nursing shortage at their facility (AACN, 2004). It was also reported by the American Hospital Association that 75% of all hospital job vacancies were for nurses. In a study published by Dr. Linda Aiken in 2001, "more than 40% of nurses working in hospitals reported being dissatisfied with their jobs. The study indicates that one out of every three hospital nurses under the age of 30 is planning to leave their current job in the next year" (Aiken, 2001).

The nursing shortage is a multifaceted problem. To find a solution it is necessary to examine every aspect of this problem. Pam Thompson, the executive director of the American Organization for Nurse Executives, was quoted as saying, "if a resolution is to be reached, it will require change at multiple levels—including nursing education, work environment, regulations, laws and financing". Numerous surveys have been conducted regarding nurse job satisfaction, potential improvements, and reasons for leaving the profession. One study conducted with South Carolina nurses revealed that over a time span of two years the nurses' job satisfaction remained the same or declined (Ma, 2003). According to the Health Resources and Services Administration, about 494,000 registered nurses did not utilize their licenses in the year 2003.

In 1992, Carla Joinson, a nurse, published an article that brought to light the concepts of compassion stress/fatigue and burnout as they apply to nurses. Joinson defines compassion fatigue as "a unique form of burnout that affects people in care giving professions" (Joinson, 1992, p. 116). Joinson points out that nurses are very susceptible to compassion fatigue and they need to be aware of it. The four main reasons nurses should be aware of compassion fatigue are "1. Compassion fatigue is emotionally devastating, 2. Caregivers' personalities lend them to it, 3. The outside sources that cause it are unavoidable, and 4. Compassion fatigue is almost impossible to recognize without heightened awareness of it" (Joinson, 1992, 116). Joinson argues that the profession of nursing is vulnerable to compassion fatigue and that all nurses will

certainly experience it at some point in their career (Joinson, 1992). The critical element in preventing compassion stress/fatigue is to know the symptoms. It is almost impossible to recognize the symptoms of compassion stress/fatigue unless you are looking for them as Joinson stated “awareness is key” (Joinson, 1992, p. 119).

The symptoms of compassion stress follow a “classic stress pattern” (Joinson, 1992, p. 119). Someone suffering from compassion stress/fatigue will “forget or lose things, have a shorter attention span, be exhausted, have frequent headaches or stomachaches, will have a low resistance and be sick more often, will exhibit signs of depression, and will often have anger out of proportion to the situation” (Joinson, 1992, p. 119). Awareness of these symptoms is crucial for nurses because as time goes on they tend to ignore the signals their body is giving them through symptoms, often attributing them to other causes. Eventually, ignoring these signs can lead to nurses functioning devoid of emotional fulfillment. Physical illness often accompanies the emotional breakdown (Joinson, 1992). When nurses reach this point of emotional and physical illness they are more susceptible to burnout, which may increase their risk for leaving the profession entirely.

The phenomena of Compassion Stress, Compassion Fatigue and Burnout, create a scale for measuring the degree of stress, one builds upon another in an escalating fashion. Compassion stress resides at the bottom of the scale and is the base upon which the other issues develop. Increasing and unresolved compassion stress leads to compassion fatigue, and it is the accumulation of fatigue that leads to a state of exhaustion - burnout. It is this final degree of burnout that may lead to nurses leaving their profession.

Compassion stress is defined by Dr. Charles Figley as “the cumulative demands of experiencing and helping the suffering” (Figley, 1995, p. 34). Further, he defines Compassion Fatigue as “a state of exhaustion and dysfunction, biologically, physiologically, and emotionally, as a result of prolonged exposure to compassion stress” (Figley, 1995, p. 34). Dr. Figley goes on to define Burnout as “being physically and emotionally fed up with the job as a result of general dissatisfactions as a worker” (Figley, 2005, Overview section.) Additionally, burnout is a “gradual wearing down over time” (Figley, 1995, p.11). The symptoms of burnout include “depression, cynicism, boredom, loss of compassion and discouragement” (Figley, 1995, p.12). Some factors contributing to burnout are: “professional isolation, emotional drain from empathizing, difficult client population, long hours with few resources, unreciprocated giving

and attentiveness and failure to live up to one's own expectations for effecting positive change” (Figley, 1995, p.11). It can be argued that because nurses deal with all of these factors in their profession, they are more susceptible to burnout.

Age is also a significant issue within the nursing shortage. The average age of a nurse working in a hospital is 45 years old. According to the July 2001 report released by the Government Accounting Office, 40% of all registered nurses will be older than age 50 by the year 2010 (GAO, 2001). Thus, nearly half of the nursing population will be in their mid-life stage by the year 2010. Nurses who are middle-aged often face different dilemmas than those of their younger colleagues. They may have become primary care givers for elderly parents, grandchildren, and in some cases, young children of their own. Additionally, they may experience the financial strain of supporting adult children, putting them through college, supporting elderly parents and saving for their own retirement.

An article from the Department of Human and Community Development at the University of California at Davis looked at stress, coping and health at mid-life for both men and women. The authors stated, that for women, “mid-life has been hypothesized to be either a time of emptiness and depression, stemming from the empty nest syndrome or from menopause, or alternatively, a time of frantic overload from juggling the multiple roles of parent and caretaker for elderly parents” (Aldwin & Levenson, p. 2). The authors sought to examine whether or not mid-life was truly a time of crisis for women. They identified the crises that women are thought to go through during this time in their lives, as “the great stress of facing simultaneous demands of caring for both adolescents and frail parents, often while juggling their career demands” (Aldwin & Levenson, p. 8). Female middle aged nurses not only face the task of care giving at work, but at home as well. Care giving can be an “arduous, stressful task leading to burnout” (Aldwin & Levenson, p. 8). Furthermore, it is also common for people in mid-life to experience the loss of a parent, which in itself is a stressful, but normal life event. These additional stresses and strains may put the mid life nursing population at increased risk for compassion stress/ fatigue and burnout, which may contribute to them leaving the profession entirely.

The nursing shortage needs to be addressed, and a solution found, as soon as possible. According to the United States General Accounting Office, “Nurses report unhappiness with a variety of issues including staffing, respect and recognition, and wages” (GAO, 2001). One particular area that affects the profession of nursing and may have led to job dissatisfaction and

burnout is compassion stress/fatigue. Nurses are asked to give of themselves completely through their jobs, emotionally as well as physically. When they are also asked to work mandatory overtime, such as in hurricane disasters, they can experience tremendous amounts of stress. It is the increased stress and compassion fatigue that may lead to job dissatisfaction, burnout, and nurses leaving their profession.

Problem Statement

As a whole, nurses are generally very giving, caring and sensitive individuals who enjoy caring for others (Joinson, 1992). These are the characteristics that draw them to the profession, however, these same characteristics often serve to the nurses' own detriment. As Glenn Ann Martin stated in the article by Carla Joinson, "the abilities that move nurses into their career and make them successful at it are also very costly to them" (Joinson, 1992, p. 118). More often than not, nurses are happy to place the needs of others before their own, and in most cases this is appropriate. In other instances, it is this action that leads to increased levels of compassion stress, compassion fatigue and ultimately burnout. During the 2004 hurricane season in Florida, four consecutive hurricanes hit over various parts of the state in a matter of weeks, leaving many of the residents of the state touched by their devastation. State public health nurses were called in for disaster relief teams. The areas hit by the hurricanes were not adequately prepared for the devastation that these storms would bring. In order to meet the needs of those who suffered loss or injury during the hurricanes, local hospitals had to rely on their employees to go above and beyond the call of duty. Some of these nurses were forced to leave their own parents, children and families in peril to help tend to the needs of others. Many of the local nurses in the disaster areas were asked to "care for their patients knowing the storm had smashed their house, leaving little to return to" (Wood, 2004, p.1). Dr. Charles Figley states that "few trauma/grief workers are properly prepared for working with the suffering and few receive proper attention when experiencing compassion stress" (Figley, 2005, Overview section). Due to the combined stress of personal loss, lack of preparation and repeated exposure to trauma/loss these nurses may have been at an increased risk for compassion stress/fatigue.

Significance of the Problem

This nation already suffers from a nursing shortage. Nurses are leaving the profession faster than they can be replaced. If steps to correct issues, such as staffing, job dissatisfaction, respect and recognition, wages, and burnout are not rectified, the shortage will only increase. Many factors contribute to nurses leaving the profession, but possibly the number one reason is job dissatisfaction. Nurses are asked to work under difficult working conditions, such as: working weekends, nights, holidays, required overtime and taking on unsafe patient loads due to lack of staffing. Working under these conditions places nurses at increased risk for compassion stress/fatigue. Nurses are also at risk for compassion stress/fatigue due to their patient population and the increased demands placed upon them. Joinson (1992) states that “nurses are the most visible hospital presence to patients. They are called on to do more, faster, to take on additional responsibilities and keep up with increasingly sophisticated medical technology” (p. 119). These increased demands may lead to increased risk for compassion stress/fatigue and thus possible burnout and loss of nurses.

These issues extend into the public health division as well. During this past hurricane season in Florida, many nurses were called upon to help those devastated by the hurricanes. Most of these nurses were Florida residents themselves and most, if not all, had already suffered damage to their own homes and lives, and others were preparing to be hit by a hurricane. As a result of increased demands and stress, nurses may have experienced compassion fatigue. Our nurses are asked to deny their own needs and the needs of their families to help others. This only increases the amount of stress these nurses experience and validates the decision of many to leave the profession entirely. The goal of this research is to examine what variables may have contributed to the level of risk for compassion fatigue, if any, experienced by these nurses. Then interventions can be implemented to alleviate these conditions in future disaster situations.

Purpose

The purpose of this study is to identify the levels of risk, if any, for compassion fatigue in nurses who worked during the hurricanes. It focuses on the middle aged nurse who may be vulnerable to compassion stress and fatigue because of life circumstances. The levels of risk for compassion fatigue experienced during the time the nurses worked in hurricane relief will be measured, as well as the levels of risk experienced three to four months after the disasters.

Contributing factors such as demographic variables, living situations, and pre-existing stressors, such as number of children in the household, will also be looked at to see if they contributed to the level of risk, if any, of compassion fatigue experienced by the nurses. Identifying these contributing factors will help relief agencies address the problem of compassion stress/fatigue among health care providers during and following natural disasters. Solutions can then be developed. In doing so they will help to eliminate a source of stress that may arise among nurses who are employed by agencies for disaster relief. If disaster relief agencies can accommodate for some of the potential stressors experienced by nurses when providing relief assistance, they may be able to prevent attrition from the profession, as may have been experienced this past hurricane season.

Research Questions

The following research questions will be addressed by this study:

Research question 1: What was the level of risk, if any, of compassion fatigue the nurses experienced while working during the hurricanes?

Research question 2: What was the level of risk, if any, of compassion fatigue the nurses experienced three to four months after the hurricanes?

Research question 3: If there was a change between the levels of risk for compassion fatigue experienced during the hurricanes and three to four months after, what variables may have moderated that change?

Operational Definitions

For the purpose of this study the following definitions will apply to the terms listed below:

Public Health Nurse- A nurse employed by the Department of Health who worked on a disaster relief team during the 2004 hurricane season

Middle Aged Woman- A woman in the age range of 40-60

Compassion Stress- “The cumulative demands of helping the suffering” (Figley, 1995, p.34)

Compassion Fatigue- A loss or lessening of sympathy for the misfortune of others due to stress and overwhelming demands on self as measured by Figley’s Compassion Fatigue scale.

Burnout- “Physically and emotionally fed up with the job as a result of general dissatisfaction as a worker” (Figley, 2005, Overview section).

Disaster- One or more of the hurricanes that occurred in Florida during the 2004 hurricanes season.

Secondary Traumatic Stress/Stress Disorder- the “natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a significant other- the stress resulting from helping or wanting to help a traumatized or suffering person” (Figley, 1995, p. 7). This term may be used interchangeably with compassion stress and compassion fatigue.

Theoretical Framework

Erik Erickson

Erik Erickson’s theory of Human Development will be utilized for this study to examine the developmental stage of the middle aged woman and how that stage may or may not predispose her to high levels of compassion fatigue. Erickson divides the human life into eight stages. Each stage is classified with an age range and a conflict that occurs during this period in life. The person must conquer this conflict in order to successfully transition to the next stage. If one fails to conquer the conflict outlined by a particular stage they can become stagnate within that stage and not be adequately prepared to handle future stages and conflicts. This inevitably impairs the individual later in life. The stage in question is that of Maturity, the age range for this stage is 25-65 years of age. The crisis for this stage is that of Generative versus Self Absorption and Stagnation. The resolution of this stage comes when the individual can look beyond themselves and develop a deeper level of care and concern for others. Those who do not conquer this stage remain stagnate and self absorbed. The population of nurses utilized in this study all fall within the age range of this developmental stage.

Gail Sheehy

Gail Sheehy expounds upon Erik Erikson’s theory of psychosocial stages, she too believes that life is divided into stages and that each individual stage has its own crisis (Sheehy, 1976). Sheehy attempts to help clients navigate their way through what she calls the passages through the twenties, thirties and forties (Sheehy, 1976). However, Sheehy strives to look at personality changes and developmental rhythms of men and women, versus focusing on one particular goal to accomplish. This focus is particularly useful for this study in that we are looking at a population of middle aged women and attempting to identify whether or not their

stage in life affects their levels of Compassion Fatigue. Sheehy (1976) states that while men are attempting to conquer Erikson's stage by developing the deep sense of care and concern for others, women are looking for replenishment in the second half of their lives, having already spent the first half caring for others. She notes that for women this is a time (middle age) for "cultivating talents left unfinished, permitting ambitions once piggybacked, and becoming aggressive in the service of her own convictions rather than a passive-aggressive party to someone else's" (Sheehy, 1976, p. 415). She identifies the struggle for a woman in midlife is to "transcend dependency through self declaration" (Sheehy, 1976, p. 426). Sheehy describes midlife for women as a time of rebirth, coming out of the shadow of their husbands and old lives as mothers and caregivers. It is a time when they become more self aware, but are still capable of fulfilling their task of generativity, "the empty nest frees mothers to extend their caring into politics, national movements, etc (Sheehy, 1976, p. 408). This theoretical framework leads to the question if middle aged women may be more capable of handling, or less susceptible to Compassion Fatigue, due to their greater capacity for caring.

Charles Figley

Dr. Charles Figley identified a secondary form of traumatic stress, one that was not due to experiencing trauma directly, but indirectly, as in caring for others who have been traumatized or learning of a significant other who has been traumatized. He identified this disorder as "Secondary Traumatic Stress and Stress Disorder" (Figley, 1995, 7). He argued that the concept of Post Traumatic Stress Disorder (PTSD), which had been established and was accounted for in the DSM-IV, did not account for those who experienced similar symptoms to PTSD, even though they had not been directly traumatized (Figley, 1995). Dr. Figley gives credit to Carla Joinson, for her use of the term "Compassion Fatigue" and argues that while secondary traumatic stress and secondary traumatic stress disorder are the "latest and most exact descriptions of what has been observed and labeled over hundreds of years, the most friendly term for this phenomena...is compassion fatigue" (Figley, 1995, p.14). Figley goes on to state that compassion fatigue "is the convergence of primary traumatic stress, secondary traumatic stress and cumulative stress/burnout in the lives of helping professionals and other care providers" (Figley, 1995, p. 16). He also hypothesizes that the level of the caregiver's empathy is what plays a role in the transmission of traumatic stress from individual to caregiver. In his theory

empathy and emotional energy are vital to establishing a therapeutic relationship with the patient (Figley, 1995). He also indicates that there are variables that are predictive/predispose the client to Compassion Fatigue. These include exposure to client, empathetic concern, empathetic ability, prolonged exposure to suffering, traumatic memories and degree of life disruption (Figley, 1995). He defines Compassion Fatigue as: “a state of tension and preoccupation with the individual or cumulative trauma of clients as manifested in one or more ways: re-experiencing the traumatic event, avoiding reminders of traumatic event, persistent arousal, combined with the added effects of cumulative stress/burnout” (Figley, 1995). This concept is vital to this study because nurses and health care professionals may be at high risk for compassion fatigue; thus we are examining levels of risk for compassion fatigue under the traumatic conditions of four hurricanes.

Assumptions

For this study, the following assumptions were made:

1. Nurses that answered and returned the questionnaires were truthful.
2. Nurses adequately understood the questions and answered them appropriately.
3. All data was entered correctly onto the excel spread sheets.

Limitations

The following limitations are recognized:

1. Information from the surveys and questionnaires was self reported.
2. Some surveys were undeliverable, and were mailed back to the primary investigator.
3. Participants were solely from the state of Florida.

Summary

The national nursing shortage poses a great threat to our nation’s healthcare system. While there are numerous variables that account for this shortage, we must start developing plans for addressing and resolving this dilemma. Compassion fatigue, a concept that many nurses are familiar with, is the accumulation of residual compassion stress and may lead to burnout. The increased levels of compassion stress that lead to compassion fatigue and subsequent burnout, may be driving current nurses away from the profession and keeping any new prospects from becoming interested in the profession. This study will look at levels of risk for compassion fatigue, particularly those of middle aged public health nurses who worked on disaster relief

teams during the 2004 hurricane season in Florida. These are women who already have stressors in their life regarding health, finances and family. If the variables that lead to compassion stress/fatigue experienced by nurses can be identified, then solutions to address these factors can be found. We can then adequately support our nurses and disaster relief agencies during future disasters of this magnitude.

CHAPTER 2

REVIEW OF THE LITERATURE

There is not a great deal of research based literature regarding nurses and compassion fatigue. Due to the minimal research on nurses, this literature review focused on other helping professions that may be exposed to high levels of stress and trauma on numerous occasions. Such professions included social workers, police officers, health care employees, clergy and disaster relief workers (e.g. American Red Cross). Research variables such as culture and gender were also examined, specifically for examining effects on secondary traumatic stress or compassion fatigue. Hurricane preparedness and its effects on secondary traumatic stress were also addressed in this review of the literature.

Nurses

The pioneer of identifying compassion fatigue and burnout in nurses was Carla Joinson. She published an article in 1992 that brought to light this concept and how it affected the nursing profession. She identified that nurses were naturally at greater risk for this phenomena due to their inherit caring nature and abilities. She argued that compassion stress/fatigue can be detrimental to the emotional and physical well being of the caregiver or nurse. Stating that the “overpowering, invasive stress can begin to dominate us and interfere with our ability to function” (Joinson, 1992, p. 116). She also stated that the only way to combat compassion stress/fatigue was to be aware of the symptoms and watch for them. She notes that compassion fatigue is not an isolated incident, but an issue that will most likely reoccur during a nurse’s career. Joinson states that in order to prevent compassion fatigue the nurse must “periodically reflect, assess, nurture and renew yourself so you’ll stay emotionally fit” (Joinson, 1992, p. 121).

Social Workers

Social workers are closely related to nurses in the fact that they too deal with traumatic stress from their patients, especially involving psychosocial coping. Social workers, like nurses, are often called to take on high case loads with inadequate resources. In the context of formal care giving, providing therapy to clients who have survived a traumatic event can be particularly stressful (Figley, 1995). Recent studies have examined levels of compassion fatigue and psychological distress in social workers who worked directly with survivors and family members

in New York City following the September 11th terrorist attacks. The researchers sought to examine the predictive reliability and validity of the Compassion Fatigue survey developed by Figley (Figley, 1995). The participants received a mailed questionnaire that included the Compassion Fatigue survey and were asked to fill out the survey and return it only if they had worked directly with traumatized victims. A sample of 600 individuals was selected at random from a membership list from the National Association of Social Workers. The investigators received 274 completed surveys, 236 of those surveys had worked directly with traumatized victims and therefore were included in the study. The sample was predominantly white, female, in a long term relationship, and older; 80% of respondents were 50 years old and older. The majority also had extensive experience, 20 years or more, in professional counseling. The investigators found that exposure to traumatized clients does not, by itself, lead to compassion fatigue (Adams, Boscarino, & Figley, 2004). They also found that demographics such as gender, race/ethnicity, age, marital status and years working in professional counseling, did not play a significant role in predicting compassion fatigue (Adams, Boscarino, & Figley, 2004). Respondents that reported negative life events occurring at the same time as exposure to traumatized victims did report higher levels of distress. The study also sought to examine the validity of the Compassion Fatigue scale. The researchers found that the scale and its subsequent subscales were reliable and valid tools for measuring psychological stress and compassion fatigue.

This analysis is valid for comparison use in the current study due to the similarities between nurses and social workers. Also, the investigation of the Compassion Fatigue scale was important because the same tool was utilized in measuring compassion fatigue in the nurses who worked during the hurricane season.

Clergy

Clergy and other religious leaders are another helping profession that is constantly in contact with those who are suffering, experiencing psychological distress, or victims of trauma. They are often who victims turn to first, relying that their faith will bring them through whatever devastating event has occurred in their life. This was especially true for those who experienced the terrorist attacks of September 11th first hand.

Research has focused on compassion fatigue and burnout among clergy and disaster relief workers after September 11, 2001. The most recent study of compassion fatigue and burnout

hypothesized that these conditions would be pronounced in clergy and other relief workers directly exposed to the physical destruction at ground zero and or the emotional/spiritual suffering of working with the families of the individuals who died in the terrorist attacks (Roberts, Flannelly, Weaver, & Figley, 2003). They further hypothesized that the American Red Cross debriefing would ameliorate the compassion fatigue and burnout.

The study was descriptive/quantitative in nature and consisted of two parts. Surveys were handed out at a conference for clergy and other religious leaders held by the American Red Cross. The conference lasted one day and the packets, which consisted of the survey and instrument, were handed out at the end of the day. Participants were asked to fill out the survey and tool and turn in as they were leaving for the day.

The principle conclusion of this study was that 39.2% of the respondents were at a high to extremely high risk for compassion fatigue, and that age was inversely related to burnout. Religion, workplace proximity to ground zero, and length of time volunteering with a relief agency had no effect on compassion fatigue. The only statistically relevant variable was whether or not someone volunteered with the American Red Cross versus another relief agency. Those that volunteered with the American Red Cross had lower rates of compassion fatigue than those who worked with another agency. This may have been due to the vast experience the American Red Cross has with disaster relief. They may have prepared their volunteers in regards as what to expect from the disaster prior to exposure. They may also have had a greater number of volunteers allowing for breaks and shifts of volunteers to work, rather than exhausting them with over exposure that would lead to compassion fatigue.

Post Traumatic Stress Disorder

While research has been conducted regarding compassion fatigue and helping professions, other emotional and psychological effects have been noted in helping professions as well. Post traumatic stress disorder has also been studied and identified in helping professions and individuals who have experienced very traumatic events. Often times the two disorders can be confused with one another. The following is a more in depth definition of Post Traumatic Stress Disorder and a review of research that has been conducted on the disorder.

The term post traumatic stress disorder or PTSD is often used interchangeably with compassion fatigue, when in truth they are viewed separately. While compassion fatigue and PTSD are separate entities they have similar symptomology. Post traumatic stress disorder is

identified by three categories of symptoms, all of which are also symptoms of compassion fatigue, 1) intrusive thoughts, images and sensations; 2) avoidance of people, places and things which elicit memories of the traumatic experience; and 3) negative arousal in the forms of hyper vigilance, sleep disturbances, irritability and anxiety (Gentry, Baranowsky, & Dunning, 1997). Thus, for the purpose of this literature review, the presence of PTSD will be viewed as vulnerability for also having compassion fatigue.

Health care professionals

Health care professionals, other than nurses, are also exposed to traumatic stress and therefore are at an increased risk for compassion fatigue. This definition includes hospital staff such as aides, laboratory workers, administrators, and janitors.

Trauma experienced by health care workers was investigated after the Omagh bomb exploded on a busy shopping street in Northern Ireland in 1998 (Luce, Firth-Cozens, Midgley, & Burges, 2002). The goal was to use findings as a basis for designing disaster planning for health care workers. Questionnaires were mailed to every staff member employed by the local health service trust, a grand total of 3500 people. A self report post traumatic stress disorder symptom scale was used to assess post traumatic stress disorder symptoms. Thirty five percent of the 3500 health care workers returned their surveys; thirty percent of this group returned surveys that could be utilized; since other surveys were not completely filled out. This study was geared toward health care workers and those in administration who manage health care staff.

The principle conclusion was that health care staff is most certainly more prone to post traumatic stress disorder with traumatic events. The health and well being of the staff needs to be closely monitored for signs and symptoms of post traumatic stress disorder and depression because they are both more likely to experience them and not seek treatment for them. Of note was that the staff involved directly with the medical care, i.e. the doctors, experienced less of these symptoms. The authors hypothesized that this was because these workers were involved in a more practical way and were less emotionally involved. However this finding was not true for nurses compared to doctors. Doctors had relatively low scores, while the nurses had high scores. The authors could not use the practical explanation for the nurses because they were assisting in a practical manner, but still had high scores for PTSD. They did note that the finding warranted further research (Luce, Firth-Cozen, Midgley, & Burges, 2002).

Police officers

Police officers, especially those who are directly involved in criminal work and out in the field, are prone to compassion fatigue as well. They are exposed to tremendous amounts of trauma and stress on a daily basis. Often times they are even involved with families of traumatized victims. Therefore, they are at increased risk for compassion fatigue and burnout.

The authors of one study noted that “patients suffering from post traumatic stress disorder (PTSD) frequently complain about overreacting to sudden, loud, noises (Pole, Neylan, Best, Orr, & Marmar, 2003). So they sought to examine severity of PTSD symptoms in relationship to physiologic and self reported emotional responses to startling sounds. It was hypothesized that, (a) different levels of contextual threat would influence the magnitude of startle response and (b) that PTSD symptom severity would be related to the magnitude of startle response.

This was a qualitative and quantitative study. The participants were all urban police officers and were interviewed individually using scales that met the DSM-IV criteria. Tools developed by the authors themselves were also used to measure emotional response. Police officers were startled with an array of noises under three different levels of threat. The threat being whether or not they could or would be shocked by a finger tip probe at any moment, the levels were that of low, medium and high.

The principle conclusion was that those who exhibited high levels of PTSD symptoms had larger startle responses to the noises under the lowest level of threat, and the lowest level of startle response under the highest level of threat. The authors proposed that the closer the participants were to the threat, the lower their startle response. All of the testing was done in order of threat, always starting with the lowest, so the authors claim that it could have been that the anticipation waned during the testing time period because the participants had become desensitized to the threat.

The authors claim, to their knowledge, that this is the first study to examine physiologic response and PTSD symptoms in police officers. Past studies have focused on combat veterans. Ramifications from the study might include physiologic testing in the aiding of diagnosing PTSD in police officers who might otherwise deny any distress and not seek help when help is warranted.

Firefighters

Firefighters, like police officers are exposed to traumatic events and stress on a daily basis. Their profession rotates around disaster, rescue and tremendous amounts of stress, also leaving them at an increased risk for compassion fatigue.

North et al. examined firefighters who had the unfortunate task of serving as rescue and recovery workers after the 1995 Oklahoma City bombing. The researchers sought to determine levels of functioning, coping and adjustment in these rescue/recovery workers.

This was a qualitative study in which 181 firefighters who worked at the scene of the bombing volunteered to participate in this study. Each of the 181 participants were interviewed individually and assessed with the Diagnostic Interview schedule for DSM-III-R. This schedule asked open-ended questions as well as questions that required a structured response. The schedule provided demographic data, subjective perceptions on job satisfaction, level of functioning and adjustment, as well as coping methods. The majority of participants were male, married and had some college education. The targeted audience was anyone interested in coping, functioning and adjustment of rescue workers, specifically the National Institute of Mental Health, who funded the study.

The principle conclusion of the study was that, overall, the majority of the firefighters did relatively well with little to no effects on level of functioning or adjustment. The few that did actually get diagnosed with post traumatic stress disorder suffered a decreased level of functioning, coping and adjustment, which only further validated their diagnosis of post traumatic stress disorder.

Journalists

Journalists are often sent out into dangerous situations, such as war, to report information. They are sometimes directly involved in violence and trauma depending on their location and timing. They are also responsible for reliving traumatic events, often in graphic detail, in order to report the information to the public. Thusly, they are at an increased risk for compassion fatigue and secondary traumatic stress. Therefore, they are also valid for comparison in this study.

The rate of developing work related post traumatic stress disorder in newspaper journalists has been examined (Pyeovich, Newman & Daleidan, 2003). The authors state that their main purpose was to “estimate rates of PTSD symptoms among journalists and determine

whether cognitive assumptions mediated work-related PTSD following exposure to traumatic events among journalists” (Pyeovich, Newman & Daleidan, 2003).

This was a quantitative study that utilized a volunteer sample of professional newspaper journalists who were invited by email to fill out online survey/surveys. Six assessment tools were used to compile data. Respondents who completed at least seventy-one percent of the material in the surveys were used. The following tools were used: the Journalist Trauma Exposure scale which measured their frequency of exposure to traumatic events, the Stressor survey, which asked the respondents if they had experienced a traumatic or potentially traumatic event, the PCL which is a self report measure of PTSD, the Negative Cognitions about the World, which was supposed to differentiate between people with PTSD and those without it, the Optimism for Future Life events, which measured perceived invulnerability and finally the World Assumptions scale which was a self reporting scale on the perceived benevolence of the world.

The principle conclusion by the authors was that “work related exposure to events involving death or injury, as well as negative cognitive beliefs, were important for understanding PTSD symptoms in journalists” (Pyeovich, Newman and Daleidan, 2003). They also stated that more exposure to work related traumatic events evidenced more negative schemas, indicating that there is an underlying cognitive component for PTSD in journalists and that cognitive therapy interventions for journalists with PTSD may be helpful.

Disaster/Rescue workers

Are volunteer workers, everyday people who volunteer their services in times of disaster and need, at increased risk for compassion fatigue? Since they are not exposed to traumatic events on a daily basis like the rest of the comparison groups, are they therefore at less risk? The following study attempts to answer these questions.

The basis for this study lies in a United Airlines DC-10 that had to crash land after a mid air explosion. Some of the victims were thrown from the aircraft while others died still trapped in their seat. Of the 355 passengers aboard, 112 people died, 59 were seriously injured and 184 survived (Fullerton, Ursano & Wang, 2004).

This was a quantitative study that utilized a group of disaster relief workers who were recently exposed to a disaster, the United Airline plane crash, and compared them to a similar group of disaster relief workers who were not involved in a recent disaster and assessed for

symptoms of acute stress disorder, post traumatic stress disorder, early dissociative symptoms, depression and healthcare utilization. The goal was to identify factors that contribute to and cause acute stress disorder, in an effort to identify them early and better plan for the health care of these individuals (Fullerton, Ursano & Wang, 2004). The target audience for this research was health care workers and providers who work with disaster relief workers. Tools that were used in this study were not identified; the researchers stated that they assessed the subjects using DSM IV criteria for acute stress disorder. They did, however, state they used the Zung Self-Rating Depression scale to assess for depression.

The principle conclusion was that exposed disaster workers, in comparison to those with experience but who were not recently exposed, are at an increased risk for acute stress disorder, post traumatic stress disorder, depression and will seek care for emotional problems at an increased rate. They also indicate that disaster workers with previous disaster experience are six times more likely to develop post traumatic stress disorder (Fullerton, Ursano & Wang, 2004).

As identified by this review of literature, post traumatic stress disorder is an important aspect of compassion fatigue and should be explored in those who experience high levels of trauma, prolonged or repeated exposure to trauma and those with negative cognitive schemas who are also exposed to trauma. Identifying early signs and symptoms of PTSD will help professionals manage and treat those who suffer from the disorder. What is also vital to the treatment and management of PTSD and compassion fatigue is identifying factors and variables that contribute to these disorders.

Variables affecting Compassion Fatigue and Post Traumatic Stress Disorder

Identification

Figley hypothesized that the level of identification with or level of empathy for the traumatized victim that leads to the transference of traumatic stress (Figley, 1995). The following study looks at identification with victims in rescue workers and its effect on PTSD.

The effects of identification in disaster workers who worked with the deceased during recovery of bodies after a naval ship exploded were examined by Ursano, Fullerton and Kao (1999). The hypothesis was that those who work directly with the deceased and particularly those who identified with the deceased are at greater risk for post traumatic stress disorder.

This was a descriptive study of 71 volunteers who had worked in the mortuary following the disaster. Two weeks following the completion of their work these volunteers were contacted

and asked to fill out assessments. Majority were male, married and white. Several tools were used for assessment purposes, one of which is the impact event scale, this scale measured intrusive and avoidant posttraumatic symptoms. The second scale, the SCL-90-R scale, assessed other symptoms such as somatization, obsessive compulsive symptoms, depression and hostility.

The principle conclusion of the study was that identification with the deceased is a risk factor for Post traumatic Stress Disorder and post traumatic symptoms in disaster workers. Those at greatest risk are the ones who identified with the deceased as a friend or family member. Until this study was conducted, identification with the deceased has been inferred to have psychiatric effects on disaster workers; this is the first empirical study to actually document the effects of identification on PTSD and PTSD symptoms.

Culture/gender

The nursing profession is predominately female, and the sample in the current study is entirely female. If nurses are predisposed to compassion fatigue, does it extend past our profession and into our gender? Do cultural influences and gender affect PTSD?

Norris, Perilla, Ibanex and Murphy (2001) examined not only sex differences in symptoms of post traumatic stress disorder (PTSD), but it also considered gender stereotypes among cultures and asked if that played a role in symptoms of PTSD as well. The main purpose of this study was to determine if culture plays a role in sex differences related to PTSD symptoms experienced after two horrific hurricanes in two different countries.

This was a qualitative/quantitative study in which survivors of two different hurricanes, Hurricane Andrew in 1992 in South Florida and Hurricane Paulina in Acapulco Mexico in 1997, were interviewed regarding their post traumatic stress disorder symptoms. The Revised Mississippi scale was used to gage the symptoms and compares scores amongst the cultures. Samples were gathered from both countries; both were from the hardest hit areas and were of similar socioeconomic status. In Miami, a sample of African-Americans and a sample of Anglo-Americans were used; both samples consisted of men and women. In a very hard hit portion of Mexico a sample of men and women were taken as well. All were assessed for symptoms of PTSD using the revised scale. The hypothesis was that Mexico, having a more traditional view of male and female roles, would exhibit stronger effects of sex on PTSD symptoms, and while with the U.S group, African-Americans have a more blended view of roles for men and women and women are viewed more equally, even more so than with the Anglo-Americans who still

tend toward a more traditional role, though not as pronounced as the Mexicans (Norris, Perilla, Ibanez & Murphy, 2001).

The principle conclusion was very much along the lines of what the researchers hypothesized. Among cultures, Mexican women experienced the highest degree of difference of symptoms compared to the Mexican men. African-American men and women had the least amount of difference, and the Anglo-American exhibited a moderate amount of difference between men and women when it came to PTSD symptoms. Regardless of culture, women were more prone than men to symptoms of post traumatic stress disorder (Norris, Perilla, Ibanez & Murphy, 2001).

Hurricane preparedness

Hurricanes can be devastating, and often deadly, storms. Victims experience tremendous amounts of stress from loss of resources, possessions, and loved ones. For the current study we are investigating variables that may be related to increased levels of compassion fatigue and traumatic stress, so prevention intervention can be implemented. Do those who are more prepared experience less stress than those who are not?

Hurricane Georges was a devastating hurricane that destroyed parts of four separate regions on September 21, 1998. The following is a cross-national study that examined distress as related to preparedness and resource loss in a cross national sample who were all hit by Hurricane Georges (Sattler et.al., 2002).

This was a quantitative study in which college students from all areas affected by the hurricanes, U.S Virgin Islands, Puerto Rico, Dominican Republic and the United States mainland. Participants were administered questionnaires to rate their level of distress, loss and preparedness for Hurricanes Georges. The majority of the sample was women, who were not married and had no children. The majority of the sample had also experienced at least one previous disaster, with the exception of the Dominican Republic in which only a quarter of the sample had experienced a disaster. The aim of the study was to identify the factors that caused the most psychological distress so that future efforts can be made to combat those factors and alleviate as much psychological distress as possible (Sattler, et.al., 2002).

The principle conclusion was that resource loss, specifically the basic life essentials; food, water, shelter, caused the most psychological distress. Another important factor to note is that secondary stress as related to the disruption of normal activities caused a significant amount

of distress. The authors identified some positive solutions for alleviating some distress that may help in the future, if instituted. The authors also pointed out that this is the first cross national study looking at different regions that experienced the same disaster (Sattler, et.al., 2002).

This article provided a look at the differing levels of distress and type of loss. One concern of this research was that generalizing the findings are more difficult seeing that the sample consisted of only college students. Factors to consider with this sample were that their level of loss could be considered minimal for the level they are at in their lives. For example, students do not have as much property or responsibilities that accompany being married and having children. So applying their level of devastation to the rest of the population affected by Hurricane Georges is not necessarily valid. The finding could certainly be applied to other college students, but not to the general public. Another facet to consider is the amount of warning, and housing conditions in the regions outside the U.S. These regions may have experienced more devastation due to less strict housing codes, and less advanced warning systems.

In summary, due to the lack of research based literature directly dealing with nurses, this review sought to examine different helping professions who may experience comparable amounts of stress similar to nurses. The concept of post traumatic stress disorder is one that so closely resembles compassion fatigue that it is a valid indicator that those professions who experience traumatic stress and psychological distress in their occupations as well. Culture and gender do in fact influence the rate of PTSD, and should be a consideration when measuring for this effect in different professions and populations. Identification with victims and resource loss are also potential risk factors for PTSD that may be encountered by the population in question, specifically nurses. This review of literature supports the concept that compassion fatigue and post traumatic stress syndrome are real threats to many of our helping professionals and should be remembered when assessing these professionals for psychological distress.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this study was to examine reasons or contributing factors to compassion fatigue amongst middle aged, female, public health nurses who worked during the 2004 hurricane season in Florida. The research design, setting, population, sample, instrumentation and protection of human subjects are discussed in this chapter.

Research Questions

The following research questions pertain to the sample of public health nurses who were surveyed shortly after the 2004 hurricane season in Florida.

Research Question 1: What was the level of risk, if any, for compassion fatigue the nurses may have experienced while working during the hurricanes?

Research Question 2: What was the level of risk, if any, for compassion fatigue the nurses may have experienced three to four months after the hurricanes?

Research Question 3: If there was a change between the levels of risk for compassion fatigue experienced during the hurricanes and three to four months after, what variables may have moderated that change?

Research Design

This study was a non experimental, retrospective survey design utilizing a subset of pre-existing data. The variables in the study have been altered naturally, without manipulation, to examine the correlation between variables. The survey design allowed for a non- threatening collection of data, in that, participants could choose whether or not to participate in the study and could complete the questionnaire in the privacy of their own homes. Due to its non-threatening nature, information from the questionnaires and tools can be considered as close to valid as possible.

Setting

The data for this study were obtained from a pre-existing data set from a previous study examining the same population. The original investigators sent out questionnaires to public health nurses across the entire state of Florida. Both rural and urban counties were included in

the study. The original investigators obtained the names and addresses of the public health nurses from a data base of all employees working for the Florida Department of Health. Packets containing letter of consent, demographic questionnaire, compassion fatigue tools, and stamped return envelope were mailed out to each of the participants.

Sample

The original investigators sent out a total of 500 packets to randomly selected individuals from the master list of nurses provided by the Florida Department of Health. All respondents who returned surveys that were completed and had participated in disaster relief during the 2004 hurricane season were included in the original study. Respondents who were to be included in the current secondary analysis had to meet the following inclusion criteria: 1) female, 2) be in age range of 40-65, 3) public health nurse, and 4) had participated in disaster relief for 2004 hurricane season in Florida.

Instrumentation

The packets containing questionnaires, letter of consent and stamped return envelope were mailed to randomly-selected participants in the original study. The questionnaires inquired about selected demographic data, open ended questions about personal experience and two copies of the Compassion Fatigue Self Test (CFST) developed by Dr. Charles Figley (Figley, 1995). The two copies of the CFST were color coded, one scale asked the participants to think back to how they felt during the weeks they worked during the hurricanes and answer the questions accordingly. The other scale asked them to answer the questions according to how they were feeling currently, which at the time of mailing was approximately three to four months after the last hurricane hit Florida. The CFST is comprised of thirty questions that describe a stressful event or feeling, the participant was asked to rate each question on a scale of how frequently they experienced that event or feeling. The CFST utilizes a Likert scale for scoring, with scores ranging from one, which indicated rarely or never, to ten which indicated very often. The scores from each individual question were summed to give a total score and level of risk for compassion fatigue. The CFST scores ranged from <94 to >173, the interpretation of the scores is as follows: <94 = low risk for Compassion Fatigue, 95-128 = some risk of Compassion Fatigue, 128-172 = moderate risk for Compassion Fatigue, and >173 = high risk for Compassion Fatigue.

The CFST has been utilized numerous times and implemented in the analysis of levels of Compassion Fatigue in various settings. The tool is reliable and valid in its entirety, which is thirty questions, and even when it is sub- divided into smaller scales (Adams, Boscarino, & Figley, 2004). Adams, Boscarino, & Figley utilized the CFST in a study they conducted with social workers and compassion fatigue. In the study they tested the validity of the scale in its entirety, as well as subscales, to analyze psychological distress, secondary trauma and burnout. The researchers found that “the original CFST and the reduced burnout, secondary trauma and Compassion Fatigue short scale predicted psychological distress very well” (Adams, Boscarino, & Figley, 2004, p. 14). They also state that the Compassion Fatigue short scale, with only 13 items, and the subscales for the secondary trauma and burnout have “good reliability, and good concurrent and predictive validity” (Adams, Boscarino, & Figley, 2004, p. 14).

The demographic questionnaire was developed by the original investigators in the original study and inquired about basic demographic information, such as age, sex, race, etc. There was also a section in the demographic questionnaire that allowed for self reported answers to some open ended questions that inquired about spirituality, extent of devastation participants experienced personally from the hurricanes and what their specific duties were during the time they provided assistance to hurricane victims.

Procedure

A retrospective analysis of a subset of data collected by Dr.s Deborah Frank and Sally Karioth was used for this study. Permission to use the data for analysis was obtained from Dr.s Deborah Frank and Sally Karioth. Permission to conduct the analysis was obtained from the Institutional Review Board (IRB) of Florida State University (FSU). The procedure for the original study was as follows: packets comprised of a letter of consent that describes the study and its purpose, along with a questionnaire, two compassion fatigue tools, and a pre addressed/stamped envelope for return of questionnaire and tools were mailed out to the 500 names of participants selected by the Department of Health. The packets were coded to correspond to the individuals on the master list of 500 names. Return of the questionnaire served as the consent. Upon return of the questionnaires the information was coded and entered into an Excel database and secured by a password. Returned questionnaires were kept in a locked file cabinet with the primary investigators having access.

Protection of Human Subjects

Participants in the original study were instructed not to provide any identifying information on their surveys. All packets, prior to being mailed, were numerically coded in accordance with a master list of names from the Florida Department of Health. The primary investigators in the original study were the only people who had access to the master list of names. For the purpose of this secondary analysis, the researcher did not have access to the master list or original data. The subset of data utilized in this study was obtained from Excel spread sheets that were used in the original collection of data. The only identifying information on the Excel spread sheets are the codes that corresponded to the packet that participant received. However, identification of participants from the code was not possible, unless there was access to the master list, which there was not. All original data was stored in the offices of the primary investigators and kept in a locked box for five years.

Data Analysis

The variables in question for the subset of data being utilized were analyzed with the following tests:

1. Descriptive statistics for demographic data.
2. Descriptive statistics to determine levels of risk for compassion fatigue currently and during the actual hurricane season.
3. Factorial ANOVA analysis for examining moderating variables for changes in compassion fatigue.

All tables and charts for the data are included in chapter 4.

Summary

This chapter discussed the research design, setting, sample, instrumentation, procedure, protection of human subjects and data analysis. Descriptive statistics and correlational tests were performed to analyze the subset of data in question. These variables included demographic data, levels of compassion fatigue and relationships between variables and compassion fatigue.

The following chapter discusses in detail the data analysis and statistical tests utilized. This includes all demographic data and correlational analysis of variables utilized in this study.

CHAPTER 4

RESULTS

The purpose of this secondary analysis was to determine if middle aged female nurses, who worked on disaster relief teams during the 2004 hurricane season in Florida, experienced any Compassion Fatigue during the weeks they worked and approximately 4 months after the hurricanes. Variables that may have affected the levels of Compassion Fatigue experienced by the nurses were also examined for any significant correlations. Those variables included the number of times the nurse was deployed to assist victims during the hurricane season (see demographic data sheet, question 13), her marital status (see demographic sheet, question 4), number of children living in her household at the time of the hurricanes (see demographic data sheet, question 6), whether or not the nurse served as a primary care giver for another member of her family (see demographic data sheet, question 7) and how many years she had been a nurse/in public health (see demographic data sheet, questions 8 and 10 respectively). Other variables of interest included whether or not this was the nurse's first experience with assisting victims of a hurricane (see demographic sheet, question 11) as well as if she had previous experience assisting victims of other natural disasters (see demographic sheet, question 12).

Sample

A total of 500 questionnaires were mailed out to participants selected by the Florida Department of Health, which met the inclusion criteria of assisting victims of the 2004 Hurricane season. Of the 500 questionnaires sent out, 120 were returned. Of those 120 questionnaires returned, 100 were female and age 40-60, which were the inclusion criteria for this secondary analysis. Some of the returned questionnaires were not completed, and thus were not used for this analysis. Those that met the inclusion criteria and had complete questionnaires comprised the final sample for this analysis, N=55.

Demographics

All 55 participants utilized in the sample for this secondary analysis were female, and age 40-60, with a mean age of 51 (SD=5.4). The majority of the sample, 95%, identified themselves as non Hispanic white; 4% identified themselves as African American and the remaining 2%

identified themselves as other. Four choices were listed for participants to choose from in regards to marital status; single, married, divorced and other. The majority of the sample, 80%, reported being married; 6 % reported being single, 11% reported being divorced and 4% reported other. The average numbers of years spent as a nurse for the participants was 25 years (SD=9.8). Of the total number of years participants spent as nurses, respondents indicated an average of 10 years in public health (SD=8.3). Participants were asked to indicate their level of nursing practice, and the majority, 93%, were RNs (Registered Nurses), the remaining 7% were ARNPs (Advanced Registered Nurse Practitioners). The number of times deployed indicates how many times each nurse was asked to assist victims on different occasions. The participants reported the following number of times deployed; 42% reported 1 time, 16% reported 2 times, 24% reported 3 times, 15% reported 4 times and 4% reported 5 times; no participants indicated more than 5 times. The average number of weeks that participants spent caring for hurricane victims in the total number of times they were deployed was 2 (SD=2.2). During those weeks participants worked an average of 4 days a week (SD=5.6) and 14 hours a day (SD=6.7). Participants were also asked to indicate how many children were living in their home during the time they assisted hurricane victims, 49% reported 0, 25% reported 1, 22% reported 2 and 4% reported 3. The questionnaire also inquired as to whether or not the nurse was a primary caregiver for someone else during the period of time she assisted hurricane victims, with 25% indicating “yes” and 75% indicating “no”. Participants were also asked to report if this was their first experience assisting hurricane victims; 67% indicated yes and 33% indicated no. When inquiring about their experience, the questionnaire also asked participants to indicate if they had provided care during disasters other than hurricanes; 24% reported they had and 76% reported that they had not. Participants were also asked if they, personally, or members of their family had previous experience with natural disasters, including hurricanes; 69% reported yes and 31% reported no.

Exploratory Variables

A portion of the questionnaire was dedicated to exploring variables that were of interest to the researcher. A direct hypothesis as to their implications for research was not postulated. These variables are descriptive in nature and were not utilized in any analyses. The participants were given 5 statements and asked to rate their level of agreement with those statements on a scale of 1-5. The scale was defined as follows; 1=strongly disagree (SD), 2=disagree (D), 3=somewhat agree (S), 4=agree (A) and strongly agree (SA). The statements the participants

were asked to rate were; working during the hurricane caused me to question or re-examine my spiritual or religious beliefs, working during the hurricane disrupted my personal/family life, working during the hurricane was disruptive to my carrying out my normal job responsibilities, I could have worked more time than I did with the hurricane victims and I would have preferred to work less time than I did. See table 1 for a summary of the results.

Table 1.

Exploratory Variables					
Statement	SD	D	S	A	SA
Working during hurricane caused me to question spiritual/religious beliefs	33%	30%	19%	11%	7%
Working during hurricane disrupted my family/personal life	9%	7%	9%	22%	53%
Working during hurricane was disruptive to my carrying out my normal job responsibilities	7%	16%	20%	20%	36%
I could have worked more time than I did with the hurricane victims	17%	28%	13%	29%	13%
I would have preferred to work less time than I did	25%	27%	13%	15%	20%

Research Question 1

Research question 1 inquired if the participants experienced any compassion fatigue during the weeks they provided assistance to victims of the hurricanes. If they did in fact experience compassion fatigue, what was the level? This data was obtained by having the participants fill out the Compassion Fatigue Self Test (CFST). Due to the fact that the original

study from which this secondary analysis was conducted was retrospective, the participants were asked to think back to how they felt during the weeks they provided care to hurricane victims and fill out the CFST in accordance with those emotions. The total score from the CFST is what determines the level of compassion fatigue. The scores are divided into four categories that indicate level of risk for compassion fatigue, they are; low, some, moderate and high. The average score on the CFST was 73.8 (SD = 41.2), indicating an average risk level of low. Descriptive statistics were used to calculate percentage of risk. See table 2 for summary of results.

Table 2.

Level of risk for Compassion Fatigue during Hurricanes

Level	N	Percent
Low Risk	42	76%
Some Risk	7	13%
Moderate Risk	4	7%
High Risk	2	4%

Research Question 2

Research question 2 inquired as to the level of compassion fatigue, if any that the participants experienced 3-4 months after assisting victims of the hurricane. The participants were asked to fill out another CFST, only this time they were to answer the questions according to the emotions they were feeling currently. The second CFST was total and scored like the first CFST, and indicated the participants' level of risk for compassion fatigue. The average level of risk for this time period was 57.1 (SD = 31.8), indicating an average risk level of low. See Table 3 for a summary of results.

Table 3.
Level of risk for Compassion Fatigue 3-4 months after Hurricane

Level	N	Percent
Low Risk	48	87%
Some Risk	3	6%
Moderate Risk	4	7%
High Risk	0	0%

Research Question 3

Research question 3 sought to examine what variables may have influenced the change in levels of compassion fatigue experienced during the hurricane and levels of compassion fatigue experienced 3-4 months after the hurricane. To examine possible moderating variables that might account for the change between levels of compassion fatigue experienced during the hurricane and those experienced 3-4 months after a factorial ANOVA was conducted. The final model contained one within subject variable (compassion fatigue) and eight between subject variables (marital status, whether or not participant was a primary care giver, if this was participants first experience with hurricanes, if the participant had provided care in other disasters, number of children in home, number of years as a nurse, number of years in public health and number of times deployed) in which all main effects and all two interactions were run. Results from the analysis found only compassion fatigue X years in public health interaction was significant [$F(2,38) = 3.58, p < .05$]. Further inspection of the main effects found none to be significant. See Tables 4 for summary of results.

Table 4.

Summary of Results from Factorial ANOVA

Main and Interaction Effects	F	p-value
Compassion Fatigue (CF)	3.68	.063
Marital Status	.43	.988
Primary Caregiver	1.38	.248
First Hurricane Experience	.02	.888
Care other disasters	.29	.595
Number children	.73	.542
Years in Nursing	.34	.796
Years in Public Health	.29	.754
Times Deployed	.15	.861
CF X Marital Status	.51	.676
CF X Primary Caregiver	1.03	.316
CF X First Hurricane Experience	.41	.525
CF X Care other Disasters	.04	.840
CF X Number of Children	.24	.870
CF X Years in Nursing	1.21	.320
CF X Years in Public Health	3.58	.038*
CF X Times Deployed	.50	.611

To interpret the significant interaction, a series of post hoc comparisons were conducted. In all, a total of 7 post hoc comparisons were conducted. All tests of significant differences were corrected for Type 1 error using Bonferroni correction ($.05/7 = .007$). Two-way interaction contrasts were conducted after examining the means (see figure 1). The first interaction contrast

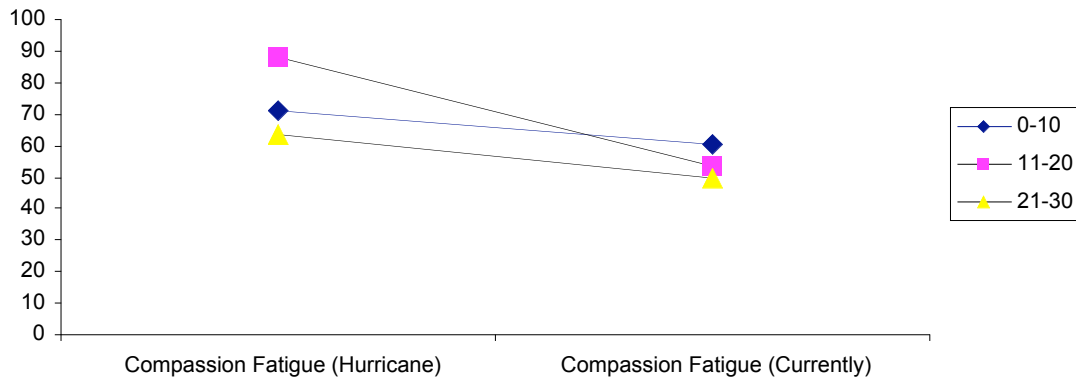


Figure 1.
Rate of Change in Level of Risk for Compassion Fatigue from Hurricanes to Currently

examined if the difference in levels of compassion fatigue from the hurricanes to currently for group 1 was significantly different from the difference in levels of compassion fatigue from the hurricanes to currently for group 2 (difference between slopes for group 1 and group 2). The groups encompassed the years of experience in public health, group 1 had 0-10 years of experience, group 2 had 11-20 years of experience and group 3 had 21-30 years of experience. No participants had more than 30 years of experience in public health. Results from that analysis found that the rate of change in group 2 was significantly different from that of group 1 [$F(1,52) = 8.89, p = .004$]. The same analysis was conducted comparing groups 2 and 3, however the rate of change for this contrast was not found to be significant [$F(1,52) = 3.67, p = .061$].

In addition to the interaction contrasts, five simple effect analyses were conducted. The first 2 examined whether level of compassion fatigue at time of hurricanes and currently were significant among levels of experience in public health. Level of experience in public health was defined by number of years worked in public health. Results from these analyses found no significant difference between levels of experience in public health on compassion fatigue during hurricanes [$F(2,52) = 1.02, p = .37$] or levels of compassion fatigue currently [$F(2,52) = .45, p =$

.64]. The final 3 simple effect analyses examined the difference between levels of compassion fatigue during the hurricanes and currently among each level of public health experience. Results found that the difference between levels of compassion fatigue during the hurricanes and currently was marginally significant for group 1 [$t, (1,34) = 2.84, p = .008$] and a significant difference for group 2 [$t, (1,11) = 4.13, p = .002$], in that levels of compassion fatigue decreased among both groups (see graph). The difference between levels of compassion fatigue for group 3 was not significant [$t, (1,7) = 2.49, p = .042$].

Summary

The final sample for these analyses consisted for 55 non-Hispanic, married, Registered Nurses, the majority of whom had no children living in their home at the time of the hurricanes. The majority of the sample were also not primary caregivers for anyone else during the time they assisted victims of the hurricane. They were deployed only 1 time for an average of 2 weeks, working 4 days a week and 14 hours a day. They had been nurses for an average of 25 years with 10 of those years in public health. For most, this was their first experience assisting hurricane victims and most had not assisted victims in any other type of natural disaster. The majority of the sample experienced only low levels of risk for compassion fatigue, both during the hurricanes and 3-4 months after. Years of experience in public health was the only moderating variable found to be significant in relation to levels of compassion fatigue.

CHAPTER 5

DISCUSSION

The purpose of this analysis was to determine if middle aged female nurses who worked during the 2004 hurricane season were at risk for compassion fatigue during the time they worked and approximately 3-4 months after. If these women were at risk for compassion fatigue, the analysis sought to examine potential moderating variables and if they had a significant effect on level of risk for compassion fatigue. The research design was retrospective in nature and utilized a subset of data from a pre-existing data set. This chapter presents a discussion of the findings, limitations, theoretical framework, review of the literature, assumptions, strengths, implications for nursing practice and recommendations for future research.

Discussion of Findings

Research question 1 specifically addresses the level of risk for compassion fatigue the nurses may have experienced during the hurricanes. It was determined by the analysis that the majority of the participants were at low risk for experiencing compassion fatigue. This finding is in part due to the fact that the majority of the nurses were only deployed once a time period of approximately 2 weeks. In order for the nurses to have been at a higher level of risk for compassion fatigue they would have needed to spend more time assisting victims, according to Figley's theory of compassion fatigue. Compassion fatigue is a buildup of compassion stress over time. These participants were not exposed to compassion stress for an extensive period, and thus why they were not at greater risk for compassion fatigue. For 67% of the participants, this was their first time assisting victims of a hurricane, and 76% had never assisted victims in any other type of natural disaster. These variables also explain the low level of risk for compassion fatigue in that they had no prior buildup of compassion stress from previous experiences. Another factor that ties into the low level of risk for compassion fatigue is that the majority of participants had no children living in their home at the time of the hurricanes and were not primary caregivers to anyone else during that time period. Thus, they were at low levels of risk because they did not have the concurrent buildup of stress from additional life stressors at home.

Research question 2 examined the level of risk for compassion fatigue the nurses may have experienced 3-4 months after assisting hurricane victims. The majority, 87% were at low risk for compassion fatigue 3-4 months after the hurricanes. Those that had experienced higher levels of risk during the hurricanes did show a decrease in level of risk. During the hurricanes 11% were at moderate to high risk for compassion fatigue and 13% were at some risk, 3-4 months after the hurricanes only 7% were at moderate to high risk for compassion fatigue and 6% were at some risk. This may be due to the fact that the stress was removed once they had completed their duty of assisting victims of the hurricanes. So without continuous stress the level of risk decreased for those who were at higher levels of risk during the hurricanes.

Of note are the findings from the exploratory variables that allowed the participants to express their views through rating some descriptive statements. These findings illustrate views not expressed by the results from the analyses. Participants were asked to rate their level of agreement or disagreement with statements that expressed view points as to how working during the hurricane affected their personal as well as professional well being. Findings revealed that 84% of participants felt that working during the hurricane disrupted their family/personal life, 76% felt that working during the hurricane was disruptive to their professional responsibilities, and 48% revealed that they would have preferred to work less time than they did. The last response in particular, supports that while the majority of participants did not reach a high level of risk for compassion fatigue, by their response to that statement they indicate that even with the level of stress they were already experiencing, almost half felt that they could not work more than they did. This suggests a vulnerability for increased levels of compassion fatigue should they have had to work more.

Research question 3 explored what variables may have altered the level of risk for compassion fatigue both during the hurricanes and 3-4 months after. Of all the variables examined, it was only found that years in public health effected the change in levels of risk for compassion fatigue. The change in level of risk for compassion fatigue during the hurricanes and 3-4 months after was dependent on the number of years the nurse worked in public health. Further investigation found that the rate of change in group 2 (11-20 years) was significantly different than that of group 1 (1-10 years). So those with more experience (group 2) in public health decreased their level of risk for compassion fatigue at a greater rate than those with the least amount of experience (group 1). It may be that group 2 had less life stressors than group 1.

They may have been the group without children in their home or primary caregiver responsibilities. It may also be that with more experience they had developed greater coping skills to deal with the compassion stress and were thereby more capable of decreasing their levels of stress, and thus were at lower risk for compassion fatigue. There was not a significant difference in rate of change between groups 2 and 3. This may indicate that the extra years of experience in this case did not seem to have as great an impact as the leap in experience from group 1 to group 2.

The change in level of risk for compassion fatigue during the hurricanes and 3-4 months after within each group was also looked at to see if there was any significance. Those with the least amount of experience, group 1, had only a marginally significant difference in levels of risk for compassion fatigue. There was a significant decrease for group 2 in levels of risk for compassion fatigue during the hurricanes and 3-4 months after. This may have been attributed to aspects of their lives, such as reduced amounts of life stressors and enhanced coping skills. There was not a significant difference in levels of risk for compassion fatigue for group 3, those with the most experience. This group, after so many years in public health, may be desensitized to the stress of assisting the traumatized and therefore does not react with manifestations of compassion stress, like the other groups. By being less affected by the compassion stress they do not achieve a significant level of risk for compassion fatigue. This explains why there would not be a significant change in level of risk between time periods. If they did not achieve a significant level of risk for compassion fatigue during the hurricane, they would not present with one 3-4 months after.

Literature Review

The comprehensive literature review provided in Chapter 2 presented studies that examined all varieties of helping professions and the relationships that PTSD and Compassion Fatigue have on those professions. The studies concluded that PTSD and compassion fatigue are considered real threats to helping professions and should be taken into consideration when assessing the well being of these professionals. These professions are at greater risk because they are repeatedly exposed to traumatic events, and often ignore their own needs in favor of tending to the needs of others. Carla Joinson pointed out that nurses are particularly vulnerable to compassion stress/fatigue due to their inherent caring nature (Joinson, 1992). This research certainly supported the current literature, although possibly not to the extent that it could. While

the majority of nurses in the current study did not exhibit high levels of risk for compassion fatigue, they did experience some. There was also evidence that their levels of risk for compassion fatigue decreased over the time period between the hurricanes and when they filled out the surveys, indicating that they not only were they at some risk for compassion fatigue but they were also recovering. Reasons why this research did not fully support the literature will be discussed in limitations of research.

Limitations of Research

There were several limitations of this study, and of the original study that may have had significant outcomes on the results of the analyses. The retrospective design of this study inhibits the participant from expressing the exact feelings they experienced while working during the hurricanes. They are asked to recall how they felt during an average 2 week time span, 3-4 months ago, accuracy of their recall may be questionable. The sample size, N=55, was much too small to generate accurate and reliable results for this analysis. Part of the reason the sample size was so limited was due to a great deal of incomplete data. Participants seemed to be confused by the two copies of the Compassion Fatigue Self Test, and often failed to complete both. Upon entering the data, it was noted that those who appeared to score higher on the CFST scale, and would thus have had a high risk for compassion fatigue, often failed to complete the second test. Incomplete data was not utilized for this analysis, and therefore results may have been skewed. The survey design may not have been conducive to eliciting information from the participants. Dr. Figley established that avoiding reminders of a traumatic event is one of the symptoms of compassion fatigue. Thus, those who were truly experiencing compassion fatigue would not be inclined to relive their experience by recalling information for a lengthy survey.

Finally, mailing out a survey poses its own limitations; two limitations were incorrect addresses and undeliverable mail. The data from those participants who did not receive their surveys may have altered the results of these analyses as well. In summary, these limitations may have caused the nurses who were at higher risk for compassion fatigue to be under represented in this study.

Theoretical Framework

Three theoretical frameworks were used for this study. Erik Erickson's theory of Human Development and Gail Sheehy's theory of passages were used to examine how midlife may have affected the level of risk for compassion fatigue that the participants experienced. Dr. Charles Figley's theory of secondary traumatic stress, or compassion fatigue, was used to examine why nurses caring for the traumatized may have been at risk for compassion fatigue.

Erik Erickson's theory of Human Development states that life is divided into stages and developmental tasks. The specific developmental stage that pertains to the sample utilized in this study is that of Generativity vs. Stagnation. In this stage the individual must accomplish the task of looking beyond themselves and developing a deeper sense of care and concern for others. If the participants in the study had in fact accomplished this task, that might account for why they were not at higher levels of risk for compassion fatigue, especially those in groups 3. Group 3 exhibited the lowest levels of risk for compassion fatigue and the least amount of change from the two time periods (hurricane vs. 3-4 months after). Those in groups 1 and 2 may not have accomplished that task and were therefore more concerned with self than others, and thus they experienced more stress while caring for victims of the hurricanes.

Gail Sheehy believes that the struggle for women in midlife is to "transcend dependency through self declaration" (Sheehy, 1976, p. 426). She also states that midlife is a time when "the empty nest frees mothers to extend their caring into politics, national movements, etc. (Sheehy, 1976, p. 408). This may explain why the majority of participants did not experience a higher level of risk for compassion fatigue. Assisting hurricane victims may have given them a sense of accomplishment and fulfillment. Being involved with something that is larger than themselves and has an impact on society, may have been beneficial to these participants and why they were not as affected by compassion stress. Those in group 2 had the greatest and fastest reduction in level of risk for compassion fatigue. Group 2 may be the group who has the empty nest at home, and therefore can turn their attention to caring for others and enjoyed doing so. These findings bolster the argument that middle aged women may be more capable of handling compassion stress and more efficient at recovering from effects of compassion stress because they have "transcended dependency through self declaration" (Sheehy, 1976, 426).

Dr. Charles Figley stated that compassion fatigue "is the convergence of primary traumatic stress, secondary traumatic stress and cumulative stress in the lives of helping

professionals and other care providers (Figley, 1995, p. 16). This supports why the participants did not experience greater levels of risk for compassion fatigue. They did not experience cumulative stress. This was the first experience assisting victims of hurricane for the majority of participants, and the majority had also not provided assistance to victims in other natural disasters. The participants could therefore not accumulate stress because this was their first experience. Dr. Figley also states that variables that are predictive/predispose a client to compassion fatigue include; exposure to client, empathetic ability, prolonged exposure to suffering, traumatic memories and degree of life disruption (Figley, 1995). As stated earlier, the participants were only exposed to clients for an average of 2 weeks. They therefore did not experience prolonged exposure to clients or suffering and thus why they had low levels of risk for compassion fatigue. What may have attributed to the amount of risk they did experience is life disruption. The exploratory variables that inquired about life disruption for the participants revealed that 84% reported disruption in their personal/family life, and 76% reported disruption in their professional responsibilities.

Each of the three theories lends an explanation for results from the analyses. Erikson and Sheehy help to explain the presence or lack of life stressors in the unique period of midlife. These theories should be utilized in future research to further investigate how midlife affects the stress experience. Dr. Charles Figley's theory explains how assisting the traumatized can predispose health care providers to compassion fatigue, but that the stress must be cumulative to produce fatigue.

Implications for Nursing Practice

In recent months the nation has seen the need for improved response to disasters. In September 2005 the Gulf Coast was hit by Hurricane Katrina. This was a disaster of historical proportions. Nurses and health care professionals from across the country were called to aid the victims. The nation has since learned that its' response rates to disasters of this magnitude is not sufficient. One is left to wonder if these nurses and health care professionals were adequately prepared to assist all of the victims. In the current study the majority of participants only provided care for 2 weeks, and after only 2 weeks they were experiencing some compassion stress. Assisting victims of Hurricane Katrina and repairing the damage will take months. The nurses and health care providers will undoubtedly experience compassion stress, and possibly fatigue in that amount of time. It is the responsibility of the disaster relief agencies to form a

comprehensive plan for assisting victims in a disaster of this magnitude. Ideally, relief workers should not come from the devastated areas. Those unaffected personally by the devastation will not have the additional stress of personal loss in conjunction with compassion stress. A system needs to be established that promotes a rotation of shifts of relief workers. No team of relief workers should be deployed for more than 2 weeks at a time. There should also be a time span between deployment periods so that the relief workers may have some time to recuperate from the previous deployment. Mandatory counselors should be available at disaster sites for relief workers to discuss their emotions and needs. Implementing these changes and policies may provide a more conducive work environment and reduced amounts of compassion stress/fatigue. The role of leader is a sub role of the Advanced Practice Nurse (APN). It is the duty of the APN to take positions of leadership in order to implement changes that will assist those nurses who are providing relief assistance during disasters such as hurricanes.

Recommendations for Future Research

In light of recent events, Hurricane Katrina, and Hurricane seasons that will follow in the future, this research should be repeated. However, in the future, data collection should be done with a one on one interview, ideally during the time the participants assist victims. A follow up interview should be conducted, again in person, 3-4 months after the participant provided care to victims. In the follow up interview, variables that may have influenced levels of compassion fatigue should be investigated. The participant should be able to provide information as to what variables may have influenced their individual level of compassion fatigue. A much larger sample size should be utilized in order to improve reliability and validity of results. Future research should include participants of all ages and should include men, as they are a growing portion of the nursing population. Participants should also be allowed to give testimony as to what they think would improve their working conditions and reduce their levels of compassion stress/fatigue. Another variable that may prove valuable in assessing compassion stress/fatigue is culture. The literature indicated that certain cultures were more or less predisposed to compassion stress/fatigue. The United States of America is comprised of a variety of cultures and ethnicities, and therefore so is the nursing population. Investigating what aspects of a culture predisposes them to compassion fatigue and what aspects may reduce their incidence of compassion fatigue would be quite valuable in addressing a solution to reduce the incidence of compassion stress/fatigue.

Summary

While results from this study may not entirely support the literature they do demonstrate that the concept of compassion stress/fatigue is real within the nursing profession. The levels of risk for compassion fatigue may have been low, but they were present and thus compassion stress and fatigue should be considered when addressing the threats to and needs of the nursing profession. Future research should be conducted with a larger sample to elicit a more valid and reliable response.

Examining middle aged, female nurses for this study proved unique in that it may have confirmed Gail Sheehy's theory that women in midlife are more capable of handling stress and caring for others. Our nursing population is aging and this age group should be examined more carefully in future research to determine what variables influence their capabilities to handle compassion stress. Future research should also examine the male population as they are a growing part of the nursing profession.

APPENDIX A

Sample of Survey Packet Mailed to Participants

Letter of Introduction

We would like to introduce ourselves. We are nursing faculty at Florida State University whose backgrounds and interests are in mental health, grief, and secondary post traumatic stress (compassion fatigue). We also supervise students in community health and leadership. This fall, a group of our students volunteered for one week to assist hurricane victims. They joined with public health nurses across the State to provide care. This certainly was a unique situation for them as well as for all of you who were assisting hurricane victims. The unparalleled devastation, the extended length of time that help was needed and the stress levels of the clients needing assistance were unique factors surrounding the care you were providing. Not to mention, many of you may have had family and friends who also were in need. Indeed, it was a stressful time for everyone in the state and everyone had to cope with the demands and stresses brought on by these hurricanes and storms.

We are interested in understanding more about how you responded to these demands and what this experience was like for you. Such knowledge can help nurses in leadership or administrative positions better understand what we need to do to assist you in preparing for such experiences as well as in coping with the stresses that may have been experienced.

We have enclosed a survey that asks you about your reactions and feelings during the time you were assisting hurricane victims. We also would like to understand better how you are currently feeling. There is a section which asks about you and your background and experiences. There are numerous places where you can provide your comments about your experience and we would hope you would do that. We would ask that you review the detailed informed consent and if you wish to participate, fill out the survey and mail it back in the envelope provided. Our phone numbers and email addresses are below if you have any questions, wish to make additional comments or wish to have a copy of the results of this research. Please remember, that we do NOT want your name or address on any of the forms. And your personal responses will be viewed only by the research team.

We appreciate your participation in completing this survey and certainly applaud your efforts in providing nursing care to the people in this state.

Sincerely,

Deborah Frank ARNP PhD School of Nursing, FSU
dfrank@nursing.fsu.edu
850-644-5608

Sally Karioth ARNP EdD School of Nursing, FSU
skarioth@nursing.fsu.edu
850-644-6845

Nurse Informed Consent

This project is being conducted by **Dr. Frank and Dr. Karioth who are faculty at the Florida State University School of Nursing in conjunction with the Department of Health.**

The purpose of this research project is to begin to understand the reactions of nurses and nursing students who participated in assisting hurricane victims. If you agree to participate, you will be asked some questions about your self. You will also be asked to complete a self-assessment survey related to your experiences while assisting hurricane victims as well as your current feelings. You will be asked to provide comments about your experience. This entire survey should take about 20 minutes.

Your participation is totally voluntary. You may stop at any time without any penalty. You will not be asked any identifying information. Thus, all answers will be anonymous. Your individual answers will be confidential to the extent allowed by law. In addition to the research staff, authorized representatives from the Department of Health, the FDA and other regulatory authorities, and representatives of the Florida Department of Health Institutional Review Board (DOH IRB) Subjects may see your records to verify the information collected during the study. All data will be stored in a locked file cabinet within the Researcher's office. No individual responses will be reported. Only group findings will be reported.

There is very little risk involved if you agree to participate. You may feel a little anxious when answering questions about your experiences and feelings. We will be available by telephone or email to talk with you should you feel this way or wish to have a referral to talk with someone in your local area. Also, you may stop participation at any time.

The benefit of participation is that knowledge gained from this project may be used to help nursing faculty and the Department of Health administration understand how they can better assist student nurses, nurses and/or volunteers who assist disaster victims. Also, if results indicate a need, you are invited to participate in any Debriefing sessions the Department of Health will offer.

By filling out this survey you are providing consent. You agree, without force or threat to be a participant in the project titled Nurses' Responses to Assisting Hurricane Victims. If you have any questions about this research study, contact Dr. Frank or Dr. Karioth, at the telephone numbers and email addresses are listed below. If you have any questions about your rights as a person who is taking part in a research study, you may contact a member of the DOH IRB free in Florida at (866) 433-2775. You may also contact the Florida State University IRB at (850) 644-8663. Finally, you may get a copy of the results by emailing a request to us.

Dr. Frank (850) 644-5608) dfrank@nursing.fsu.edu

Dr. Karioth (850) 644-6845) skarioth@nursing.fsu.edu

CODE NUMBER _____

Demographic Data Sheet

Please fill in the blank or circle the response that best describes you

Age _____

Gender: Male Female Transgender

Ethnicity: African American Non Hispanic White Hispanic Other _____

Marital Status Single Married Divorced Other _____

Religious Preference (Please indicate) _____

Number of children living in your household? _____

Are you the primary caregiver for other members of your family (e.g. parent)? Yes No
If yes, briefly describe:

How long have you been a nurse? _____ years

Are you currently an LPN , RN, ARNP Other _____

How long have you been in public health nursing? _____ years

Was this your first experience providing care to victims of hurricanes Yes No
If no, briefly describe other experiences.

Have you provided care in other traumatic crises or natural disasters? Yes No
If yes, briefly describe

How many times were you deployed during this hurricane season?

- Only once
- 2-3 Times
- 4 Times

Did you participate in a debriefing session after working with hurricane victims? Yes No

If yes , about how long ago was it from the time you are filling out this survey? Circle your answer:

Within the last 2 weeks

Within the last month

Over a month ago

THINK BACK TO THIS PAST HURRICANE SEASON

What area of Florida did you work in?

Can you briefly describe what your responsibilities were?

How many weeks did you provide care to hurricane victims? _____

How many days, on average, did you work each week? _____

How many hours, on average, did you work each day? _____

Comments:

How were your immediate family or close friends directly affected by the hurricanes in the past months? (Briefly describe)

Have you or your family had previous experience with hurricanes or other natural disasters before this month of hurricanes? Yes No If yes, briefly describe

Please rate the statements and comment on the rating. We are very interested in your comments. Use the back of the page to further comment if you wish.

Please rate the statements on a 1-5 scale

**1 Strongly Disagree (SD) 2 Disagree (D) 3 Somewhat (S)
4 Agree(A) 5 Strongly Agree (SA)**

Working during the hurricane caused me to question or re-examine my spiritual or religious beliefs

1 2 3 4 5
SD D S A SA

Comments:

Working during the hurricane disrupted my personal/family life

1 2 3 4 5
SD D S A SA

Comments:

Working during the hurricane was disruptive to my carrying out my normal job responsibilities

1 2 3 4 5
SD D S A SA

Comments:

I could have worked more time than I did with the hurricane victims

1 2 3 4 5
SD D S A SA

Comments

I would have preferred to work less time than I did.

1 2 3 4 5
SD D S A SA

Comments

Self Test

The following was designed to assist care-givers to identify the symptoms of Compassion Fatigue in themselves (See Figley, 1995, in *Compassion Fatigue* for the original version). **THINK BACK TO YOUR FEELINGS DURING THE WEEK(S) YOU WERE ASSISTING HURRICANE VICTIMS. CONSIDER EACH OF THE FOLLOWING ITEMS ABOUT YOU AND YOUR WORK/ LIFE SITUATION DURING THAT WEEK. Write the number that best reflects your experience, using the rating system where 1 signifies RARELY OR NEVER and 10 means VERY OFTEN. Please answer all of the items even if they do not seem applicable. Then read the instructions to get your score.**

1=Rarely/Never(N/A) -----2-----3-----4-----5-----6-----7-----8-----9----- 10=Very Often

- ___ 1. I forced myself to avoid certain thoughts or feelings that reminded me of a frightening experience.
- ___ 2. I found myself avoiding certain activities or situations because they reminded me of a frightening experience.
- ___ 3. I had gaps in my memory about frightening events.
- ___ 4. I felt isolated from others.
- ___ 5. I had difficulty falling or staying asleep.
- ___ 6. I had outbursts of anger or irritability.
- ___ 7. I startled easily.
- ___ 8. While caring for a victim I felt angry at the fact there were hurricanes.
- ___ 9. I had flashbacks connected to my clients.
- ___ 10. I have had first-hand experience with traumatic events in my adulthood.
- ___ 11. I have had first-hand experience with traumatic events in my childhood.
- ___ 12. I have thought that I need to "work through" a traumatic experience in my life.
- ___ 13. I was frightened of things a client had said or done to me.
- ___ 14. I experienced troubling dreams similar to those of my clients
- ___ 15. I experienced intrusive thoughts after working with especially difficult clients.
- ___ 16. I suddenly and involuntarily recalled a frightening experience while working with a client.
- ___ 17. I was losing sleep over a client's traumatic experiences.
- ___ 18. I thought that I might have been "infected" by the traumatic stress of my clients.
- ___ 19. I reminded myself to be less concerned about the well-being of my clients.
- ___ 20. I felt trapped by my work.
- ___ 21. I felt a sense of hopelessness associated with working with clients.
- ___ 22. I felt I was in danger working with clients.
- ___ 23. I thought that there was no one to talk with about these highly stressful work experiences.
- ___ 24. I felt "on edge" about various things and I attribute this to working with certain clients.
- ___ 25. I frequently felt weak, tired, or rundown as a result of my work as a caregiver.
- ___ 26. I felt depressed as a result of my work.
- ___ 27. I felt I was unsuccessful at separating work from personal life.
- ___ 28. I had a sense of worthlessness/disillusionment/resentment associated with my work.
- ___ 29. I felt that I was a "failure" in my work.
- ___ 30. I thought that I was not succeeding at achieving my life goals.

Scoring instructions:

(i)Be certain you resounded to all items. (ii)Add the numbers you wrote next to the items. (iii)Note your risk of Compassion Fatigue: 94 or less=Low risk; 95 to 128=Some risk; 129 to 172=Moderate risk; 173 or more=High risk. *(note. Items 1 through 22 are reflective of post-traumatic and/or secondary traumatic stress. Items 23 to 30 reflect the issue of burnout. The complete scale represents Compassion Fatigue.

Self Test

The following was designed to assist care-givers to identify the symptoms of Compassion Fatigue in themselves (See Figley, 1995, in *Compassion Fatigue* for the original version). **THINK ABOUT YOUR FEELINGS THIS WEEK. CONSIDER EACH OF THE FOLLOWING ITEMS ABOUT YOU AND YOUR WORK/ LIFE SITUATION THIS WEEK. Write the number that best reflects your experience, using the rating system where 1 signifies RARELY OR NEVER and 10 means VERY OFTEN. Please answer all of the items even if they do not seem applicable. Then read the instructions to get your score.**

1=Rarely/Never(N/A) -----2-----3-----4-----5-----6-----7-----8-----9----- 10=Very Often

- ___ 1. I forced myself to avoid certain thoughts or feelings that reminded me of a frightening experience.
- ___ 2. I found myself avoiding certain activities or situations because they reminded me of a frightening experience.
- ___ 3. I had gaps in my memory about frightening events.
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- ___ 5. I had difficulty falling or staying asleep.
- ___ 6. I had outbursts of anger or irritability.
- ___ 7. I startled easily.
- ___ 8. While caring for a victim I felt angry at the fact there were hurricanes.
- ___ 9. I had flashbacks connected to my clients.
- ___ 10. I have had first-hand experience with traumatic events in my adulthood.
- ___ 11. I have had first-hand experience with traumatic events in my childhood.
- ___ 12. I have thought that I need to “work through” a traumatic experience in my life.
- ___ 13. I was frightened of things a client had said or done to me.
- ___ 14. I experienced troubling dreams similar to those of my clients
- ___ 15. I experienced intrusive thoughts after working with especially difficult clients.
- ___ 16. I suddenly and involuntarily recalled a frightening experience while working with a client.
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- ___ 24. I felt “on edge” about various things and I attribute this to working with certain clients.
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- ___ 26. I felt depressed as a result of my work.
- ___ 27. I felt I was unsuccessful at separating work from personal life.
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- ___ 29. I felt that I was a “failure” in my work.
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Scoring instructions:

(i)Be certain you responded to all items. (ii)Add the numbers you wrote next to the items. (iii)Note your risk of Compassion Fatigue: 94 or less=Low risk; 95 to 128=Some risk; 129 to 172=Moderate risk; 173 or more=High risk. *(note. Items 1 through 22 are reflective of post-traumatic and/or secondary traumatic stress. Items 23 to 30 reflect the issue of burnout. The complete scale represents Compassion Fatigue.

APPENDIX B

Permission Letter from Dr.s Frank and Karioth to use subset of Data Set



The Florida State University
School of Nursing, Graduate Program
Vivian M. Duxbury Hall
Tallahassee, FL 32306-4310

March 23, 2005

TO: Lauren Adkinson , MSN candidate

FROM: Deborah Frank ARNP, PhD and Sally Karioth ARNP, EdD

RE: Use of data

We give you permission to use a subset of the data we had acquired from the study entitled Nurses Responses to Assisting Hurricane Victims. We ask only that we receive a copy of your results.

Phone: (850) 644-5974 • Fax: (850) 644-7660

APPENDIX C

Florida State University Institutional Review Board Approval Letter



Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2763
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 8/25/2005

To:

Lauren Adkinson
1976 Gina Drive
Tallahassee, FL 32303

Dept.: **NURSING**

From: **Thomas L. Jacobson, Chair**

A handwritten signature in black ink, appearing to read "Thomas L. Jacobson".

Re: **Use of Human Subjects in Research**
Compassion Fatigue in Middle Aged Women Who Work on Disaster Relief Teams

The forms that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Exempt per 45 CFR § 46.101(b) 4 and has been approved by an accelerated review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If the project has not been completed by **8/23/2006** you must request renewed approval for continuation of the project.

You are advised that any change in protocol in this project must be approved by resubmission of the project to the Committee for approval. Also, the principal investigator must promptly report, in writing, any unexpected problems causing risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols of such investigations as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Protection from Research Risks. The Assurance Number is IRB00000446.

Cc: Deborah Frank
HSC No. 2005.634

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BIOGRAPHICAL SKETCH

Lauren Fullenkamp Adkinson was born Lauren Jean Fullenkamp in Riverside, CA on May 28, 1980. She joined her Air Force family and continued to move across the country until her father retired from the Air Force in 1994. The Fullenkamp family settled in Orlando, FL, where Lauren graduated from University High School in 1998. Her life long love of medicine and pursuit of a nursing career led Lauren to Florida State University, where she received a Bachelor's of Science in Nursing, Cum Laude in 2002. Lauren took a position at Florida Hospital in the Coronary Care Unit upon graduation. She married her husband Clay Brown Adkinson in the summer of 2003, and returned to Tallahassee with him upon his acceptance to Florida State School of Law.

While working at North Florida Women's Care in Tallahassee Lauren decided to seize the opportunity to continue her Nursing education at her Alma Mater. She began the pursuit of her Masters in Nursing in the summer of 2004. Lauren will fulfill her dream of becoming a Family Nurse Practitioner in December of 2005. Her husband Clay will graduate that same semester and together they will return to Clay's home town of DeFuniak Springs, FL. Lauren hopes to initiate community education programs in DeFuniak Springs and surrounding rural areas and take a position in a local Family Practice.