

THE FLORIDA STATE UNIVERSITY

COLLEGE OF NURSING

COMPASSION FATIGUE EXPERIENCED BY  
EMERGENCY DEPARTMENT NURSES WHO PROVIDED CARE  
DURING AND AFTER THE HURRICANE SEASON OF 2005

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## ABSTRACT

Health care individuals such as emergency preparedness teams, clergy, nurses, and physicians are first responders during times of disaster. These types of responders are at risk to develop compassion stress, compassion fatigue, or even burnout. Compassion stress is a result of the cumulative demands of experiencing and helping the suffering; compassion fatigue is defined as “a state of exhaustion and dysfunction, biologically, physiologically, and emotionally, as a result of prolonged exposure to compassion stress” (Figley, 1995). Burnout is a gradual process that occurs over time as the accumulation of fatigue leads to a state of exhaustion; “being physically and emotionally fed up with the job as a result of general dissatisfactions as a worker” (Figley, 2005). The symptoms of burnout include “depression, cynicism, boredom, loss of compassion and discouragement” (Figley, 1995).

This purpose of this study was to determine the prevalence and effects of compassion fatigue in Emergency Department nurses following a natural disaster. The study was a descriptive exploratory study asking nurses to examine their perceptions, feelings and experiences after caring for hurricane disaster victims following the 2005 hurricane season. A total of 28 registered nurse respondents met the eligibility inclusion criteria. The instrument utilized for the study was the PROFESSIONAL QUALITY OF LIFE SCALE Compassion Satisfaction and Fatigue Subscales—Revision IV (ProQOL) developed by Figley (1996) and revised by Stamm (1997-2005).

The prevalence of compassion stress, compassion fatigue and/or burnout experienced by registered nurses was analyzed using a Spearman’s rho, and Kendall’s tau b test was conducted. Emergency department nurses in this study showed low risk for compassion fatigue. The nurses demonstrated compassion satisfaction in the care they had provided during the aftermath of the hurricane season of 2005. Analysis showed no significant correlations between age, gender, marital status, employment status, number of years as a nurse, education level and/or previous disaster experience. There was a positive correlation between number of years as a nurse and age. This relationship demonstrated as the age went up in number of years, the level of compassion satisfaction also increased. A T-test and a Levene Test for Equality of Variances with assumed equal variance was conducted to determine if gender differences existed between male and

female found no specific correlations between genders. Older more experienced nurses demonstrated higher levels of compassion satisfaction.

Future research should be aimed at hard hit disaster areas, as this study examined an outlying region and may have underrepresented true risk to disaster areas. The risk for compassion stress/fatigue may have been attenuated due to the retrospective design and the year-long time span from disaster to the completion of data collection. Future evaluation of compassion stress/fatigue should examine the personal coping mechanisms, level of expertise, age, and experience of the nurse. Research should be aimed at discovering the link between these variables, focusing on nurses' ability to continue delivering care during times of unusually high demand. Employer programs should be developed for prevention of compassion stress/fatigue in those nurses who are most at risk.

## CHAPTER ONE

### INTRODUCTION

On Monday, August 29, 2005, Hurricane Katrina made landfall as a Category 4 hurricane and tragically ripped apart the lives of millions of people living along the Gulf Coast states of Florida, Mississippi, Alabama, and Louisiana. The suffering of these individuals was televised in the news daily for weeks and continues to be a frequent topic of the media, as well as government, business, scientific, and scholarly investigations. People living in these areas were often without water, food, power, housing and emergency medical care. Families were separated; Katrina survivors were displaced across the United States. The devastation of Hurricane Katrina extended far beyond the Gulf Coast.

Disasters, whether man-made or natural, can involve large portions of the population and affect widespread geographic areas. This has created numerous challenges for the citizens who were impacted and resulted in a call for the assurance of public safety, adequate health care, and availability of emergency preparedness providers. In addition, the lack of mental health resources compounds the physical and safety stressors brought on by the disaster. Only a limited workforce is willing to invest personal time in extraordinary conditions during times of challenge in order to achieve public security and safety for those involved. First and secondary responders, including nurses, are classified as people with deep compassion; however, intensive efforts by this very limited workforce may lead to secondary psychological trauma for the workers, termed compassion fatigue. Carla Joinson (1992) first coined the term compassion fatigue when she examined the phenomena of burnout in nurses. Dr. Charles Figley, traumatologist, identified this secondary stress as a form of traumatic stress not due to experiencing trauma directly, but indirectly. He argued that the disorder known as Post Traumatic Stress Disorder (PTSD) does not account for those who experience similar symptoms from a secondary source of stress (Figley, 1995). Figley credits Joinson for the term “compassion fatigue” and agrees that secondary traumatic stress can be identified by the more user-friendly term “compassion fatigue” (Figley, 1995). Compassion fatigue is defined as 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). The scale of compassion stress, compassion fatigue and burnout can be used for measuring the degree of stress suffered by the care provider. Figley defines compassion stress as “the cumulative demands of experiencing and helping the suffering” (Figley, 1995). He also distinguishes compassion fatigue as “a state of exhaustion and dysfunction, biologically, physiologically, and emotionally, as a result of prolonged exposure to compassion stress” (Figley, 1995). Further, he defines burnout, which is the accumulation of fatigue that leads to a state of exhaustion, as “being physically and emotionally fed up with the job as a result of general dissatisfactions as a worker” (Figley, 2005). Burnout is noted as a gradual process that occurs over a period of time. The symptoms of burnout include “depression, cynicism, boredom, loss of compassion and discouragement” (Figley, 1995). Health care individuals such as emergency preparedness teams, clergy, nurses, and physicians are first responders during times of disaster. These types of responders are at risk to develop compassion stress, compassion fatigue, or even burnout.

Figley further distinguishes 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 events, persistent arousal, combined with the added effects of cumulative stress/burnout” (Figley, 1995). Compassion fatigue could range from mild anxiety to exacerbation of substance abuse problems and other somatic complaints (see Appendix A) (Figley, 1995:1997). The complaints may be affecting the individuals’ cognitive, emotional, behavioral, spiritual, personal relationships, physical somatic complaints, and work performance (Figley, 1995). The complaints may be vague and go unnoticed as a direct link to compassion fatigue.

### **Statement of Problem**

Hospitals have been overwhelmed with an influx of patients from hard hit disaster areas. One subject that is often overlooked on a national level is how the hurricanes and other catastrophic disasters affect health care and its providers. Research suggests that health care workers are affected by disasters, but few interventions have been examined to retain health care workers or to provide coping strategies (Patterson,

2005). Nurses who deal with people who have post-traumatic stress disorder (PTSD) may have their psychological equilibrium subtly and inevitably affected. Figley describes this as a “natural consequence of caring for traumatized people” (Figley, 1995). In addition to disaster situations, nurses who work in emergency rooms, psychiatric units, chemical dependency units, or hospice can potentially develop compassion fatigue.

### **Significance of the Problem**

Compassion fatigue can disrupt nurses’ mental and emotional well being to such an extent that troubling changes begin to develop in their personal lives. Compassion is defined as a “feeling of deep sympathy and sorrow for another who is stricken by suffering or misfortune, accompanied by a strong desire to alleviate the pain or remove its cause” (Agnes & Guralnik, 2001). Anyone who works with victims or survivors could be at risk for developing compassion fatigue. Caregivers can be at risk for experiencing guilt, shame, anxiety or even rage. Figley notes factors contributing to this phenomena are “professional isolation, emotional drain from empathizing, difficult client populations, 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). Repeated exposure to traumatized patients can potentially affect the caregiver.

This type of work-related stress can be a factor in the development of compassion stress, which can lead to compassion fatigue. Acknowledging that compassion fatigue exists and that its manifestations can affect the nurses is one step toward reducing the compassion stress and/or fatigue. Resolutions by the health care industry must be examined in order to promote health care retention and assist in developing healthy coping mechanisms demonstrated by its providers. It is important to examine the health care workers’ responses since they will likely be called upon again and again when disaster strikes. If the health care workers cannot be kept healthy and if their problems go unnoticed or untreated, no relief staff will be available during future disaster situations.

### **Purpose of Study**

The purpose of this descriptive retrospective study is to determine the prevalence and effects of compassion fatigue in nurses following a natural disaster. Determining the prevalence and the effects of compassion fatigue experienced by nurses in specific

locations may increase awareness of this condition which in turn may lead to the development of effective coping mechanisms demonstrated by health care providers. Joinson (1992) notes that symptoms of compassion fatigue follow a “classic stress pattern.” Joinson also reports that someone suffering from compassion stress or compassion fatigue may experience forgetfulness, lose things, have a shorter attention span, be exhausted, have frequent headaches or stomach discomforts. They may have a lower resistance which results in being sick more often. Some may exhibit signs of depression, or often may have anger out of proportion to the situation (Joinson, 1992). Further research is needed to determine the effects of compassion fatigue on nurses during times of disaster. These studies need to identify problem areas and address possible solutions in order to properly recognize and treat any compassion fatigue experienced by emergency room nurses. A consequence of such investigations will be a vital contribution to the body of literature relating to compassion fatigue and its effects on nurses.

### **Research questions**

This study will attempt to answer questions relevant to compassion fatigue experienced by emergency department nurses when dealing with disaster situations.

Specific questions of interest are:

1. What is the prevalence of compassion stress, compassion fatigue and/or burnout experienced by registered nurses in the Gulf Coast states during the period of July-December 2005?
2. What are the perceptions/feelings of the registered nurses caring for post-hurricane disaster victims during the period of July-December 2005?

### **Operational Definitions**

The following terms are defined operationally for use in this study:

1. Compassion fatigue will be examined by using the Professional Quality of Life Scale- Compassion Satisfaction and Fatigue Subscales- Revision IV (ProQOL). The ProQOL tool, as operationalized by the developer Charles Figley (1995), and revised by B. Hudnall Stamm, (1997-2005) will evaluate the nurses’ degree of related symptoms. The ProQOL tool is a 30-question survey scored on a five-point scale with 1 being interpreted as rarely/never

and 5 being interpreted as very often. The test is broken into subscales with 10 questions specific to compassion satisfaction, 10 questions specific to trauma/compassion fatigue, and 10 questions exploring burnout. (See Appendix B)

2. Compassion stress is defined as “the cumulative demands of experiencing and helping the suffering” (Figley, 1995). Compassion fatigue differentiates in that “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 events, persistent arousal, combined with the added effects of cumulative stress/burnout” (Figley, 1995). Burnout is the final level of compassion fatigue and can be manifested as a chronic state of emotional, physical, and mental exhaustion. Factors in burnout are related to long-term involvement in emotionally demanding situations that have psychosomatic symptoms (Figley, 1995).
3. Registered nurse is defined as a person who practices professional nursing. Professional nursing means the performance for compensation of any act in the observation or care of the ill, injured or infirmed or for the maintenance of health and prevention of illness of others. These acts require substantial nursing skill, knowledge, training, or application of nursing principles based on biological, physical and social sciences, such as the observation and recording of symptoms and reactions, the execution of procedures and techniques in the treatment of the sick under the general or special supervision or direction of a physician, podiatrist, or dentist. (Department of Regulation and Licensing, 2006). This will be surveyed in the demographic tool developed by the researcher (See Appendix C).
4. Perceptions and feelings can be defined as the ability to receive, use, experience in common with others; to perceive mental grasp of qualities by means of senses, awareness, comprehension, insight or intuition (Agnes & Guralnik, 2001).

### **Limitations**

The main limitation of this study is that it included only registered nurses who indicate they were involved in post-hurricane disaster victims' care during the time period of July 1, 2005 through December 31, 2005. Other limitations to be noted:

1. Missing data can occur from those participants who do not fully complete responses or do not return the survey packet to the researcher.
2. Subjects may not clearly remember their feelings or a perception from one year prior; therefore, self-reports may be unreliable.
3. There is a possibility of researcher bias due to this researcher's experience as an emergency room relief nurse who has been directly affected by working with the disaster relief victims.
4. Due to convenience sampling, there is limited generalizability to the entire population of registered nurses along the Gulf Coast states.

### **Assumptions**

Assumptions in this study included:

1. The participants answered the demographic questionnaire and the exit interview truthfully.
2. The data provided by the registered nurses was completed and include only registered nurses who have been directly caring for disaster relief victims.
3. Participation by answering the questions on the demographic questionnaire or the compassion fatigue survey implied informed consent from the respondent to the researcher.

### **Theoretical Framework**

Dorothy Johnson's Behavior System Model conceptualizes that the nurse should focus on the patient as an individual, and not as a specific disease entity. She conceptualizes a person as a behavioral system in which the functioning outcome is the observed behavior. She believes that a person is a behavioral system and that a person's specific response patterns form an organized and integrated whole. Specific patterns of behavior are reaction to stressors from biological, psychological, and sociological sources. The focus is placed on behavior affected by the actual or implied presence of other social beings that has been shown to have major adaptive significance. Seven

subsystems can be identified in which motivation drives and directs the activities of each subsystem. They are continually changing through maturation, experience, and learning. The subsystems appear to exist cross culturally and are controlled by biological, psychological and sociological factors. Equilibrium is a key concept. It is defined as a stabilized but more or less transitory, resting state in which the individual lives in harmony with himself and with his environment. The concept of tension is defined as a state of being stretched or strained and can be viewed as an end product of a disturbance in equilibrium (Tomey & Alligood, 2002). Stressors are internal or external stimuli that produce tension and result in a degree of instability. The environment consists of all factors that are not part of the behavioral system.

Excessively strong environmental forces disturb the behavioral system balance and then threaten the person's stability (Tomey & Alligood, 2002). Johnson's Behavior Systems Model has been used to develop assessment tools relating to the nursing process, caring for children, patient and nurse satisfaction, coping abilities and perception of families with newborn infants. This investigation used Johnson's Behavioral System Model, as it relates to the environment, equilibrium, tension and stressors of the nurses caring for disaster victims, and how behaviors may affect health care as an industry to direct the study.

### **Summary**

There is a health care crisis all along the Gulf Coast states that began after the hurricane season of 2005. This crisis has placed added stress on health care workers in the Gulf Coast states and it may impact the future delivery of healthcare in this area. The long-term effects of working with trauma victims can affect emergency room nurses.

This study sought to identify any stressors added to emergency room nurses who work in post-disaster areas. The findings of this study may assist in identifying areas that are of concern for compassion fatigue. This may, in turn, assist management teams in future disaster situations. Developing new strategies may assist in providing more efficient care for the victims while inducing less stress on the caregiver teams, and thus, increasing overall satisfaction within the health care delivery system.

## CHAPTER TWO

### REVIEW OF LITERATURE

A nurse is expected to take on many roles in a disaster recovery situation. Nurses are frequently involved in assisting in emergencies, and the sudden increase in the level of expectation can become overwhelming. There is a limited research database regarding compassion fatigue and its relationship to the nursing profession. This is a growing area of research. Little has been written on the subject of emotional cost of caring or strategies for limiting negative outcomes (Robbins, 1999). The emergency room nurse is one category of the helping professionals that can be affected by disaster recovery. This area of study needs to be addressed as the nursing profession becomes more involved with this type of disaster response. This investigation of literature examined focus on compassion fatigue and its effects on nursing and closely related helping professions following a crisis in the area.

Carla Joinson (1992) led the way in research regarding nursing and compassion fatigue, and is credited with coining the term “compassion fatigue.” Joinson first published an article in 1992 that discussed how compassion fatigue affects the nursing profession. She found that nurses are at a greater risk due to the inherent caring nature of nursing. She suggested that compassion stress and the resultant compassion fatigue could be harmful to the emotional and physical well being of the nurse. Joinson promoted awareness as the only way to combat the phenomena of compassion stress/fatigue. The findings suggested that this type of stress was not an isolated incident, but something that a nurse is likely to face periodically during her/his career (Joinson, 1992).

Dickerson et al. (2002) studied Nursing at Ground Zero: experiences during and after the September 11th World Trade Center attack. Identified areas were to discover shared perceptions, feeling and common experiences of nurses after the September 11<sup>th</sup> World Trade Center terrorist attack through interpretive analysis of narrative stories of seventeen nurses. Dickerson et al. (2002) stated, “The need for all healthcare personnel to have disaster training is extremely important because of the unpredictability of these events.” The research design was an interpretive phenomenological approach. Nurses involved with September 11 were interviewed and a constitutive pattern was noted; nursing enables a humanitarian response. Authors stated, “Hospital and rescue workers

can be especially traumatized by disasters” (Dickerson et al., 2002). The study’s review of literature indicated that previous studies had concluded the nurses who had little emergency or disaster experience initiated no leadership action and felt less prepared to deal with disaster situations. This is an important point for comparison in examining the Hurricane Katrina workers. The sharing of these experiences gives a voice to the nursing profession.

Charles Figley, traumatologist at Florida State University is credited with clarification of the concept of compassion fatigue. Figley along with colleagues studied compassion fatigue following the September 11th terrorist attacks by examining the emotional exhaustion experienced by those working with disaster victims (Boscarino, Figley, & Adams, 2004). The quantitative study surveyed 274 randomly selected social workers in New York after September 11; the survey focused on compassion fatigue and job burnout. The Compassion Fatigue Scale developed by Figley was used as the survey instrument and was found to be a valid tool for measuring psychological stress and compassion fatigue. Social workers are similar to nurses in that they are often called upon to assist individuals who have limited resources available to them. Authors stated, “previous studies have often failed to include a comparison group that may increase the vulnerability of a therapist to compassion fatigue, and to implement research to assess the causal relationship between client exposure and compassion fatigue” (Boscarino, Figley, & Adams, 2004). This study also concluded that mental health professionals working with traumatized victims were at a greater risk for compassion fatigue (Boscarino, Figley, & Adams, 2004). This suggested that more research in the area of compassion fatigue could help our health care delivery system when dealing with traumatic events.

Saliba, Buchanan, & Kington (2004) studied the role and function of nursing facilities after disaster. The study was phenomenological in nature. The authors surveyed administrators at 144 nursing facilities after the Los Angeles Northridge earthquake. Administrators used written surveys to conduct structured interviews with social workers who had been involved in the discharge planning of the patients. The purpose was to determine the role of the facilities and the problems reported with disaster planning. Staff absence during a disaster was a problem that disaster plans had inadequately addressed. The study concluded that nursing facilities will continue to assume

responsibility for a greater number of frail, medically complex patients, and their effective functioning during community disasters will have more importance (Saliba, Buchanan, & Kington, 2004). This study also documents the important role that nursing plays in disaster recovery and the wide spectrum of implications on nursing individuals.

Chase (2005) performed a study titled *Emergency Department Nurses Lived Experiences with Compassion Fatigue*. This study was qualitative in approach with a phenomenological design in order to capture and describe the lived experiences of emergency department (ED) nurses. Chase found that work-related stress in the ED is the result of numerous stressors including a hectic and chaotic environment. These stressors include the large number and continuous influx of patients, increased patient acuity, and the lack of skilled nursing staff. Chase states, “This study provided a glimpse into the experience of the ED nurses with compassion fatigue and work-related stress, however, gaps within the literature still exist” (Chase, 2005). This study has relevance to the proposed study in order to support the theory that ED nurses may be at a high risk for developing compassion fatigue under stressful situations, and highlights the need for further investigation on this topic. In addition, this study adds further validity to the concept of compassion fatigue.

Adkinson (2005) studied compassion fatigue in Public Health Nurses working on Disaster Relief Teams. This study included 55 middle aged female nurses who provided care to the victims of the 2004 hurricane season in Florida. Adkinson stated “middle aged nurses comprise the majority of the current nursing population” (Adkinson, 2005). This study used a subset of data and was retrospective in design. The participants completed a survey 3-4 months after they assisted hurricane victims. The study used the compassion fatigue tool developed by Figley (1995). The majority noted this was their first experience assisting hurricane victims. The results indicated there was a low risk for compassion fatigue both during the hurricanes and 3-4 months post hurricane. Results from analysis suggested that those with the most experience in public health did not experience significant levels of risk for compassion fatigue. The conclusion suggested, “The factor of being middle aged and female seemed to prove beneficial in dealing with compassion stress/fatigue” (Adkinson, 2005). This study adds to the body of research

regarding compassion fatigue/stress during disaster situations and its relevance to the nursing profession as a whole.

Pfifferling & Gilley (2000) discussed physicians who experience compassion fatigue. The authors stated that the demands that managed care places on its physicians has a major influence on the development of compassion fatigue. The article reviewed warning signs, and included a self-test for compassion fatigue. Key points can be summarized in that compassion fatigue manifests as physical, emotional and spiritual exhaustion. Suggested ways to prevent or recover included time for self-reflection to identify what is important and to develop a self-care plan. (Pfifferling & Gilley, 2000). Implications of the importance of self-care and evaluating one's own coping mechanisms may be beneficial also. This article added to the understanding of compassion fatigue and its broad aspect of implications for practice in the health care industry.

Emergency preparedness trainers Cohen and Mulvaney (2004) detailed a field observation study regarding Disaster Medical Assistance Team response for Hurricane Charley, in Punta Gorda, Florida, in August 2004. This qualitative phenomenological study described the services provided by a federally organized disaster response team during Hurricane Charley, the conditions under which they functioned, and the lessons learned (Cohen & Mulvaney, 2004). Medical response teams encountered many difficult challenges. All four hospitals in the areas suffered major damage. Pre-event preparation was discussed in relation to housing of supplies and equipment, as well as the readiness of teams. Working conditions during the recovery phase was described at length. The establishment of a triage area outside of the hospitals was detailed. Patient care scenarios were explained. The lessons learned included that emergency preparedness should check and rotate supplies and equipment, create and encourage team down time, anticipate limited communication, work with affected communities in transport, and expect the unexpected in dealing with disasters. This study was detailed on the experiences of the nurses dealing with disasters on site. It gave clear guidance to avoid some possible mishaps that occurred during the process. The ideas expressed in this study are guidelines to help nurses in the future in dealing with disaster preparedness in order to avoid the compassion fatigue that often is associated as secondary trauma. As disasters

continue to strike, field observational studies will be valuable informative tools for emergency department nurses.

### **Summary**

Preliminary review of literature suggests that health care providers may be at risk for compassion fatigue when working major disaster recovery areas. Nursing is often on the front line of defense in these crisis situations and nurses can experience the devastation at a personal level. Both Figley (1995) and Joinson (1992) suggest that aspects of the nurses life can influence the likelihood of developing compassion fatigue. Research in this area is essential to facilitate proper recognition and treatment of this phenomenon.

The process of examining disaster recovery and its affects on the emergency department nurse is an important area in nursing research. Collins and Long (2003) reviewed literature and discussed indicators of psychological distress or dysfunction, cognitive shifts, and relational disturbances. The review concluded that health-care workers are subject to significant stress and are vulnerable to secondary traumatic stress more commonly termed compassion fatigue. Personal, professional and organizational support may be needed to reduce the risk of developing secondary traumatic stress (Collins & Long 2003).

Emergency nurses are faced with difficult life situations daily. Caring intimately for individuals along the health care continuum can be difficult. The effects on the caregiver need to be assessed for proper recognition. An examination of the fatigue associated with compassion behaviors during disaster phenomenon is relevant as part of the disaster preparedness plan for the future.

## CHAPTER THREE

### METHODOLOGY

This chapter describes the methodology to be used in this study. Discussion related to the study's design, setting, sampling plan, and instruments, procedure and data analysis are presented. Additionally, the protection of human subjects and ethical considerations are discussed.

#### **Design**

The research design utilized for this study was a descriptive study, asking nurses to examine their perceptions, feelings and experiences after caring for hurricane disaster victims following the 2005 hurricane season. The study is a descriptive, retrospective survey design utilizing emergency department (ED) nurses. The purpose of a non-experimental descriptive study is to observe, describe and document aspects of a situation as it naturally occurs (Polit & Beck, 2004). Descriptive correlational research describes the relationship among variables rather than interfere with cause-and-effect relationships (Polit & Beck, 2004). This design was appropriate because it attempts to examine the relationship between the disasters of the hurricane season of 2005 and the emergency department nurses' risk for compassion fatigue.

#### **Setting**

Nurses were surveyed from two hospital emergency departments located in the southeastern United States along the Gulf Coast, which were affected by the hurricanes of 2005. One facility housed a 36-bed emergency department and the second hospital facility housed a 10-bed emergency department. The hospitals were from different counties serving both urban and rural areas.

#### **Population and Sample**

The sample consisted of emergency department (ED) registered nurses who indicated that they had worked with disaster recovery victims from July 1, 2005 through December 1, 2005. A recruitment poster was placed in the ED staff break areas to recruit participants. The poster summarized the study and detailed the researcher contact information. Eligibility criteria was printed on the poster and included 1) Must be a registered nurse 2) Must have provided nursing care to patients involved in the hurricanes

of 2005. The researcher also presented a short verbal explanation to interested nurses. Those who were interested were scheduled for a convenient time to complete the survey. Convenience sampling yielded 28 registered nurses who completed the survey.

### **Procedure**

The researcher contacted the Internal Review Board and the Emergency Department (ED) directors at the two participating hospitals. The researcher provided a written copy of the proposal along with a verbal explanation of the study. The researcher requested a written approval for placement of a recruitment poster in the hospitals emergency department staff break areas. After receiving written approval from both hospitals, approval from the Florida State University Institutional Review Board (IRB) was granted (See Appendix E).

Upon approvals the recruitment poster was placed in the EDs to inform interested registered nurses about the study and to seek volunteer participants. Eligibility criteria were detailed on the recruitment poster. The researcher's title, phone number and e-mail contact were listed so potential participants could contact the researcher with any further questions. Any interested registered nurse participants were asked to fill out an index card and slide it into a small opening in the sealed legal envelope secured to the poster. The researcher collected names from the envelope daily for one week. Contact was made with the nurses who volunteered to participate in order to set up a convenient time to meet for administration of the tool. Informed consent (See Appendix D) was provided to and signed by the participant prior to interviewing. Completing the survey packet also indicated consent by the participant. The participant's right to end participation at any time was explained. No monetary gain was offered to the participants. No identifying information was recorded on the surveys. All responses were coded numerically; names were omitted.

### **Protection of Human Subjects**

In this descriptive study the ethical considerations of research were followed to assure the protection of the participants. Respect for human dignity and privacy, specifically the participant's rights to self-determination and full disclosure were maintained. Assurances for confidentiality were outlined in the informed consent. Participation was strictly voluntary. All completed interviews were stored as raw data by

the researcher in a locked drawer in the researcher's home office. There were no audio or visual recordings made of the participants. Findings of this study are reported or published only in aggregate form. Individual responses were not shared.

### **Instruments**

This study used a demographic questionnaire developed by the researcher (See Appendix C). The tool utilized for the study was the PROFESSIONAL QUALITY OF LIFE SCALE Compassion Satisfaction and Fatigue Subscales—Revision IV (ProQOL), developed by traumatologist Charles R. Figley (1996) and revised by B. Hudnall Stamm, (1997-2005). The tool is designed to measure psychometric information with a multivariate analysis of variance (see appendix B). The tool is a self-test that estimates compassion status by ranking certain emotions by number of times experienced. The tool utilizes specific scoring with ratings 0=never experienced, 1=rarely, 2=a few times, 3=somewhat often, 4=often, 5=very often. There are 30 questions with three subscales designed to examine compassion satisfaction, burnout and compassion fatigue. Each subscale has 10 questions that assist in determining the potential for compassion satisfaction, risk for burnout, and risk for compassion fatigue. The alpha reliabilities for the scales are as follows: Compassion Satisfaction alpha = .87, Burnout alpha = .72 and Compassion Fatigue alpha = .80 (Stamm, 1997-2005).

Compassion satisfaction questions are designed to determine the satisfaction or pleasure the nurse may derive from her work in the ED. High scores represent a greater satisfaction in their ability to be effective as a nurse. Stamm's ProQOL manual for tool scoring notes that the average score in scale definitions is 37 (SD = 7), with an alpha scale reliability .87 (Stamm, 1997-2005 p.11). The burnout scale, which measures the nurses' feelings associated with hopelessness and difficulty in performing their job effectively has an average score of 23 (SD = 6) (Stamm, 1997-2005 p.11). The Compassion Fatigue scale measures the individual's risks for negative emotions associated with caring behaviors. This scale has an average score on this scale of 13 (SD = 6). Stamm suggests that, typically, 25% of people score below 8 and 25% above 17. (Stamm, 1997-2005 p.12).

### **Data Analysis**

Data analysis consisted of applied descriptive statistics. Descriptive statistics are tabular, graphical and numerical summaries of data. There was no manipulation of variables. The purpose of descriptive statistics is to facilitate the presentation and interpretation of data. Univariate methods of descriptive statistics use data to enhance the understanding of a single variable; multivariate methods focus on using statistics to understand the relationships among two or more variable (Trochin, 2002). Demographic data were measured, summarized and entered into tables. Responses from the interview questionnaires generated data that was analyzed by multivariate analysis for each ranking. These rankings were statistically applied to examine the research questions.

### **Summary**

This non-experimental retrospective descriptive study identified the demographics of the convenience sample—perceptions, feelings and experiences of the registered nurses caring for disaster victims. This study also provided an understanding of the relationships between the emergency room nurses overall compassion fatigue risks experienced after hurricane disaster in order to help prepare nurses for similar situations in the future.

The setting included two selected hospitals along the Gulf Coast state of Florida that were affected by the hurricanes of 2005. Participants selected for this study were responders to recruitment posters that were placed in the hospitals ED staff break area. Interviews were conducted with the participants utilizing a demographic questionnaire and a compassion fatigue scale.

The protection of human subjects was in accordance with the (IRB) at Florida State University. Confidentiality was maintained by the researcher, omitting names and other identifying information on each survey packet. A numeric coding system was used for identification.

## CHAPTER FOUR

### FINDINGS

The purpose of this non-experimental retrospective descriptive study was to determine if ED nurses who worked with disaster victims during and after the hurricane season of 2005 were at risk for developing compassion fatigue. Demographic variables that may have affected the levels of compassion satisfaction, compassion fatigue or burnout were also examined for any significant correlations. Those variables included the age of the nurse, gender, marital status, and present employment status and education level. Other variables examined included number of years as a nurse, number of years as an ED nurse and any past experiences in disaster relief situations (See demographic tool, Appendix C).

#### **Sample**

A total of 32 responses was received and, of those, only 28 met the eligibility inclusion requirement. Of the 32 respondents, 2 of the nurses were not registered nurses and were practicing as licensed practical nurses, and 2 of the respondents had been registered nurses for less than one year, and thus were not used for this analysis. Those who met the inclusion criteria and completed the questionnaires comprised the final sample of n=28.

#### **Demographics**

The 28 participants used in the sample for this study included 18 female and 10 male. The mean range of ages was 24-55 years. The median age was 46 years. The majority of the sample (92.9%) identified themselves as non-Hispanic white, and 7.1% identified themselves as African American. Four choices were listed for participants to choose from in regards to marital status: single, married, divorced, or widowed. The majority of the sample, (67.9%) reported being married; 21.4% reported being divorced, 10.7% reported being single and none reported being widowed. The majority of the nurses (85.7%) reported a full time employment status; part-time status was reported at 7.1% and as needed (prn) status reported at 7.1%. The respondents were asked what degree in nursing they held with the choices being Associate of Science degree in nursing (ADN), Bachelor of Science degree in nursing (BSN) or a Master of Science degree in nursing (MSN). The majority of the sample (75%) reported an ADN, 21.4% reported a

BSN, and 3.6% reported a MSN. See table 1, 2, 3, and 4 for complete data (See Appendix F, G, H, I).

The study also examined other variables that may have affected the nurses' risk for compassion fatigue such as number of years as a nurse, number of years as an ED nurse, and previous disaster experience. The number of years in experience as a nurse had a range of 2-35 years. Numbers of years as a nurse reported was 10.7% reporting 3 years, 10.7% reporting 8 years, and 10.7% reporting 10 years as a nurse. The number of years of experience as an ED nurse was between 1-35 years. The majority of the sample (35%) reported 2 years experience as an ED nurse. The majority of the respondents (67.9%) reported no previous disaster experience. The percentage reporting having worked in some type of disaster recovery in the past was 32.1%. See table 5, 6, 7, 8, and 9 for complete data (See Appendix J, K, L, &M).

### **Exploratory Variables**

The study examined a tool specific to compassion fatigue symptoms and feelings called the PROFESSIONAL QUALITY OF LIFE SCALE Compassion Satisfaction and Fatigue Subscales—Revision IV (ProQOL) developed by traumatologist Charles R. Figley (1996) and revised by B. Hudnall Stamm, (1997-2005). The tool was designed to measure psychometric information with a multivariate analysis of variance (see Appendix B). The tool is a self-test that estimates compassion status by ranking certain emotions by number of times experienced. The tool utilizes specific scoring with ratings 0=never experienced, 1=rarely, 2=a few times, 3=somewhat often, 4=often, 5=very often. Thirty questions measure three subscales designed to examine compassion satisfaction, burnout and compassion fatigue. Each subscale has 10 questions that assist in determining the potential for compassion satisfaction, risk for burnout, and risk for compassion fatigue. The alpha reliabilities for the scales are as follows: Compassion Satisfaction alpha = .87; Burnout alpha = .72, and Compassion Fatigue alpha = .80 (Stamm, 1997-2005).

Compassion satisfaction questions are designed to determine the satisfaction or pleasure the nurse may derive from her work in the ED. High scores represent a greater satisfaction in the nurse's ability to be effective as a nurse. According to Stamm's ProQOL manual for tool scoring notes, the average score in scale definitions is 37 with a SD 7; alpha scale reliability .87 (Stamm, 1997-2005 p.11). The burnout scale which

measures the nurse’s feelings associated with hopelessness and difficulties in dealing with doing their job effectively has an average score of 23 with a SD 6 (Stamm, 1997-2005 p.11). The Compassion Fatigue scale measures the individual’s risks for negative emotions associated with caring behaviors. Compassion fatigue has an average score on this scale of 13 with SD 6. Stamm suggests that 25% of people score below 8 and 25% above 17. (Stamm, 1997-2005 p.12). Compassion satisfaction data in the ProQOL manual for scoring notes that the average score for compassion satisfaction is 37. About 25% of people score higher than 41, and 25% of people score below 32 (Stamm, 1997-2005).

In this study of the aftermath of hurricane season of 2005, the emergency department nurses demonstrated comparable results to Stamm’s findings. The compassion satisfaction results for the hurricane season of 2005 study were 39 (SD=5). See Table 4.1 for a summary of the results.

Table 4.1: Compassion satisfaction, burnout and fatigue variables for ED nurses

	COMPASSION SATISFACTION	BURNOUT	COMPASSION FATIGUE
Valid	28	28	28
Missing	0	0	0
Mean	39.1071	20.5714	13.9643
Std. Deviation	5.82675	4.63824	5.12425

The majority of the respondents reflect satisfaction in the pleasure they derive from being able to help others. These participants’ responses express confidence in their ability to contribute to their work setting and even the greater good of society in their work as an ED nurse. The majority of the nurses in the sampled population demonstrated compassion satisfaction when faced with the disaster relief situation.

The majority of respondents for burnout were in the average according to the Stamm’s ProQOL manual scoring of 23 (Stamm, 1997-2005). The mean for this study was 20 (SD=4.60 which supports an overall positive feeling about the nurses’ ability to be effective during times of disaster. See Table 4.1 for summary of results. Scores above 28 would indicate the nurses’ perception of being ineffective in handling the increased

patient volume that may occur during disaster situations. However, this study did not indicate a risk for burnout in the sample population. This study demonstrated lower scores, which indicated positive feelings regarding the ED nurses' ability to cope in disaster situations.

Compassion fatigue levels of stress were compared with the average score of 13 SD=6 (Stamm, 1997-2005). The Compassion Fatigue scale is designed to measure the nurse's risk for negative emotions associated with caring behaviors. This study of the ED nurses in the aftermath of the hurricane season of 2005 resulted in a mean of 13.9 (SD=5). The result indicated a low risk level for compassion fatigue demonstrated in the ED nurses. The data did not support the concept of negative emotions within the ED nurses. This result also supports the compassion satisfaction variable that indicated, overall, the ED nurses demonstrated compassion satisfaction in their ability to handle disaster situations during the hurricane season of 2005.

### **Research Questions**

The study sought to determine the perceptions, feelings, and experiences of the emergency department nurse. The prevalence of compassion stress, compassion fatigue and/or burnout experienced by registered nurses was examined after a Spearman's rho, and Kendall's tau b test was conducted. The data correlations showed no significant correlations between age, gender, marital status, employment status, number of years as a nurse, education level and/or previous disaster experience (See Appendix F). There was a positive correlation between number of years as a nurse and age; as the age went up in number of years the level of compassion satisfaction increased. The finding also supported results that suggested that, overall, the emergency department nurses demonstrated compassion satisfaction in their care provided after the hurricane season of 2005. This findings of both the parametric and non-parametric analyses indicated that as the nurses aged they demonstrated a higher level of satisfaction in the care they provided. Analyses supported the non-parametric findings that demonstrated no significant correlations between age, gender, marital status, years of experience, employment status, and education level. A T-test was conducted to determine if gender differences existed between male and female in regard to risk for burnout. A Levene Test for Equality of Variances with assumed equal variance showed that the males demonstrated a mean 21.5

(SD=3.8) and the females demonstrated a mean 20 (SD=5.0). Inspection of the data found no significant correlations between the male or female nurse. So, the results indicated in each comparison analysis that emergency nurses demonstrated an overall compassion satisfaction. Also the older nurses demonstrated higher levels of compassion satisfaction.

### **Summary**

The final sample for this analysis consisted of 28 emergency department registered nurses who indicated that had worked with disaster victims during and after the 2005 hurricane season. The emergency department nurses showed an overall compassion satisfaction in the care that they had provided during the hurricane season of 2005. The sample demonstrated a low level of compassion fatigue as measured by the ProQOL survey tool (Stamm, 1997-2005). The study found no significance in correlation with regards to age, gender, marital status, employment status, education level, and number of years as a nurse. The number of years as a nurse did show a positive correlation in a higher level of compassion satisfaction, indicating that as the nurses aged and became more experienced they had a higher level of overall satisfaction in the care provided.

## CHAPTER FIVE

### DISCUSSION

Compassion, by its very definition, is an empathetic and sympathetic awareness of the unhappiness or misfortune another person or groups of people are feeling, combined with a desire to reduce or alleviate their distress level. Nurses are among those who glean satisfaction from this compassion; hence, their choice of nursing as a profession. The very nature of a nurse's role consistently places the nurse in a position to respond to the needs of others during times of misfortune. However, despite the exhilaration that compassion success can bring, being present and helping others can lead nurses to over-transference of the victims' emotions, frustrations, and anxieties, particularly following catastrophic events.

This study examined questions relevant to compassion fatigue experienced by emergency department nurses when dealing with disaster situations. This study identified the demographics of the convenience sample in regard to the perceptions, feelings, and experiences of the registered nurses caring for disaster victims. The design was retrospective, descriptive, and exploratory. The study also examined the perceptions/feelings of the registered nurses caring for post-hurricane disaster victims during the period of July-December 2005. This chapter presents a discussion of findings, limitations, implications for nursing practice, and recommendations for future research.

#### **Discussion of Findings**

Research Question 1 explored the prevalence of compassion stress, compassion fatigue and/or burnout experienced by registered nurses in two hospitals located near Northwest Florida's Gulf Coast during the period of July-December 2005, one of the nation's most destructive hurricane seasons on record. The study impetus was the continuing media and government investigational attention that was being paid to the aftermath of the hurricanes, combined with a health care crisis that includes a shortage of nursing staff. This raises the question that perhaps nurses who catered to the needs of victims from remote locations might be experiencing lingering psychological impacts. These impacts could have affected retention of nurses, development of stress-related symptoms, or a shift away from emergency room care to a less-intensive care giving area.

The analysis showed that the majority of participants demonstrated compassion satisfaction, and a year later, reported no adverse reactions that might be related to compassion fatigue. The sample demonstrated a low level of compassion fatigue as measured by the ProQOL survey tool (Stamm, 1997-2005). The more seasoned ED nurses demonstrated higher levels of compassion satisfaction, which was in keeping with the findings of Adkinson (2005), who studied middle aged female nurses who provided care to victims of the 2004 hurricane season. The results of Adkinson's study concluded that being middle aged seemed to be beneficial in dealing with compassion stress/fatigue (Adkinson, 2005).

Dickerson et al. (2002) indicated that nurses who had little or no disaster experience initiated no leadership and felt less prepared in such situations. This indication can be compared with findings of the current study that the older nurses demonstrated more compassion satisfaction. Older "seasoned" nurses have more experience, which may increase competency and confidence, and contribute to their overall satisfaction. The review of the literature suggested that nurses who had little emergency or disaster experience initiated no leadership action and felt less prepared to deal with disaster situations. The psychological responses of younger, less experienced nurses are an important area of research to consider, in particular factors outside their experience arena that might contribute to their compassion fatigue, such as being expected to work longer than normal long hours during a crisis while they have young children at home.

Research question 2 examined the perceptions/feelings of the registered nurses caring for post-hurricane disaster victims during the period of July-December 2005. Stamm relates compassion satisfaction to the pleasure individuals derive from being able to do their work well. Compassion satisfaction denotes a positive feeling about colleagues and the work environment (Stamm, 1997-2005). The study findings indicate compassion satisfaction among the study respondents who reported positive recollections of gratification and pleasure from providing their services to help others. The majority of respondents reported no feelings of being overwhelmed by the impact the disaster had on its victims.

In response to the 30 survey questions that measured compassion satisfaction, burnout, and compassion fatigue, the majority of the nurses appear to have assimilated their experience into an awareness of their ability to provide care in times of disaster and handle the situations appropriately. This awareness will undoubtedly add to their confidence in dealing with future similar situations. The finding of a higher age correlation with a higher level of compassion satisfaction suggested that older “seasoned” nurses were better able to cope with increased stress and trauma at work. The older “seasoned” nurses may have more experience; their lifestyle coping mechanisms may be better.

Figley notes compassion fatigue is a buildup of compassion stress over time (1995). The ED nurses were not exposed to this type of stress for an extended period of time. This study substantiates Figley’s model/theory that stress has to be long-term in order to be significant. For 67% of the survey respondents, the hurricane season of 2005 was their first disaster experience. The results indicated that perception and feeling of compassion stress during this time was generally low.

This investigation focused on compassion fatigue and its effects on emergency department nurses and closely related helping professionals. Joinson opened the door to research on compassion fatigue and promotes awareness as the only way to combat the phenomena of compassion fatigue. She also suggests that nurses will face this periodically during their career, especially those in high acuity areas like the ED and ICU. Figley suggests that compassion fatigue is a hazard associated with the clinical setting and with first responders to disaster situations (Adams, Figley, & Boscarino, 2006).

Chase studied emergency department nurses and their potential for developing compassion fatigue. Chase found that stressors in the ED included large numbers and continuous influx of patients, increased patient acuity and the lack of skilled nursing staff (Chase, 2005). Gradual daily stress can collide with a natural disaster situation and place the ED nurse at an increased risk for developing compassion fatigue associated with caring behaviors. This adds to understanding of the ED nurses’ risk for developing compassion fatigue.

### **Limitations of Research**

The retrospective design of this study was a primary limitation. The severity of the feelings the nurses actually felt during the influx of disaster victims may have diminished over the time period. The participants were asked to recall what their feelings had been during the past year. The accuracy of those feelings may be lessened due to the expanded time frame. The sample size (n=28) may have been too small to generate accurate and reliable results. The geographic location of the study was a limitation due to the sample population being from the outlying area away from the hard hit disaster locations.

The researcher's access to emergency department nurses who had been directly impacted by the natural disasters was limited due to geographic location. The recruitment design of the study also limited the access to the emergency department nurses. The use of a poster for recruitment could have been enhanced by direct access to the researcher. Due to patient needs, the staff requirements and obligations did not allow this type of access.

Additionally, the researcher had no access to personnel records or nurses who may have left the nursing profession or moved from emergency department care after their 2005 hurricane response experiences.

The limitations may have contributed to the findings of low levels of risk for compassion fatigue among emergency department nurses who had provided care to disaster victims during and after the hurricane season of 2005. Areas of high impact may have generated a higher risk for compassion fatigue. The retrospective design may also have misrepresented the actual potential for compassion fatigue.

### **Theoretical Framework**

This investigation applied Johnson's Behavioral System Model in relating the participants' environment, equilibrium, tension and stressors of the nurses caring for disaster victims and how behaviors may affect health care as an industry.

Johnson's model conceptualizes that the nurse should focus on the patient as an individual. The nurse may exhibit specific patterns of behavior that are a reaction to stressors from biological, psychological, and sociological sources. The focus is placed on

behavior affected by the actual or implied presence of other social beings. This focus has been shown to have major adaptive significance. The subjects in this survey demonstrated adaptive competencies in their ability to provide care to disaster victims. Johnson feels that individuals are continually changing through maturation, experience, and learning. An example of this is the finding that the older nurses had a higher level of compassion satisfaction than the younger, less experienced nurses. The older, more experienced emergency department nurses exhibited a more stabilized equilibrium.

### **Implications for Nursing Practice**

In the aftermath of 2005 hurricane season, unprepared federal, state and local agencies failed to respond with immediate coordination in disaster preparedness. Displaced victims were moved to unfamiliar towns without any medical records or systems in place to help them receive the medical care they desperately needed. Hospitals experienced high volumes of victims with dislocation trauma who were uncertain of how they would care for themselves. Emergency department nurses were on the front line of the frustration and hopelessness experienced by the victims.

Numerous displaced victims were admitted into hospitals all along the Gulf Coast seeking medical treatment for various injuries, viruses, and chronic conditions. Caring for a large volume of trauma victims has the potential for increasing work-related stress, which can be a factor in the development of compassion stress and compassion fatigue. Acknowledging that compassion fatigue exists and that its manifestations can affect nurses is one step toward reducing compassion stress and/or fatigue. However, the concerns regarding compassion fatigue during future disasters remain. Compassion fatigue takes a toll on the nurses and their work place. This could lead to decreased productivity, more sick days and higher turnover. Resolutions by the health care industry must be examined in order to promote health care retention and assist in developing healthy coping mechanisms for its health care providers. It is important to examine the ED nurses' responses since they will likely be called upon again and again when disaster strikes. It is equally important to institute programs to prepare nurses for coping with the victims of natural disasters, particularly in areas most at risk.

Joslyn (2002) suggests ways in which hospitals need to take an active role in reducing the risk for developing compassion fatigue. She suggests discussing the concept

with new employees. Utilizing management teams that specialize in debriefing techniques may be beneficial also. During staff meetings, allowing the staff time to debrief can reduce the build up of stress. Occasional workshops with ideas relating to stress and the importance of recognizing this phenomenon is important (Joslyn, 2002). Emergency department nurses should be provided access to counseling services that help resolve conflicts. Nurses need to be encouraged to voluntarily express their feelings and thoughts without the influence of what they may perceive is expected of them. A new specialty similar to grief counseling could emerge, someone akin to a “compassion consultant” who would work to prepare nurses for what to expect and to give them a post event outlet to express, cope, and accept the changes their experiences will inevitably have in their outlook toward their work and other aspects of their lives. Perhaps such a basic skill as assembling a personal survival kit to have on hand for brief respites during disaster response service would be beneficial. Such a kit might include favorite snacks, a journal to write down their experiences, and other basic necessities should their duty time extend beyond a normal shift into days. Perhaps partnering seasoned nurses with those who are younger and less experienced might also help curtail compassion fatigue.

The management teams should be actively promoting the nurses’ personal and professional development. Health care in general should promote a culture that values the nurses and ensures they feel supported. This area of research is valuable to nursing and should continue to be expanded.

### **Recommendations for Future Research**

The geographical area for which this research took place should be recognized for its disaster potential and be the target of future research due its coastal location and high yearly threat of hurricanes. Health care management teams should be aware of the implications for future practice, including ongoing disaster preparedness training, and procedures and processes developed to assure personnel, supplies, and equipment are available when a hurricane is forecast. Cohen and Mulvaney (2004) concluded in their study of pre and post event preparedness for Hurricane Charley by the medical community that checking and rotating supplies and equipment, and accommodating team down time. In general preparing the medical providers about what to expect in the way

of communications, community interaction, and the unexpected would help nurses prevent mishaps while dealing with disasters.

ED nurses will continue to be on the frontline of disaster recovery. Ideally, future research regarding the impact on ED nurses should be conducted during the period of disaster recovery and in increments up to 3-6 months after recovery.

In the aftermath of hurricane Katrina seen during the 2005 hurricane season, the state of Louisiana was hardest hit. Compassion fatigue results for this area may have been entirely different. Nurses along the costal areas of Florida were not affected to the same degree as those in Louisiana who experienced not only professional stress, but also personal loss. Data collection would be better suited to a hard hit disaster area for an accurate sample of compassion stress/fatigue. A larger sample size may have provided more accurate information and improved reliability and validity of results.

In addition to the time frame and location, the variables of age and experience in nursing may be worthy of more study. Older more experienced nurses demonstrated higher levels of compassion satisfaction. The more inexperienced nurse may be at a higher risk for developing compassion fatigue. A further assessment of their coping skills may assist in the development of programs to teach these skills to younger, less experienced nurses. It may also assist in properly recognizing and treating compassion fatigue.

### **Summary**

Future research should be aimed at hard hit disaster areas rather than those located in areas that are removed from the direct consequences of the disaster. The results from this study may have under represented compassion fatigue for the emergency department nurse in relationship to disaster situations because the research was unable to take into account how nurses may have coped if the need for their services were prolonged while their personal lives, loved ones, and property were disrupted. The results from this study add to the body of literature regarding the nursing profession and compassion fatigue. It is relevant in its findings that the aged nurses demonstrated higher levels of compassion satisfaction, which can help guide future studies. Examination of the variables that enable the aged nurses to experience compassion satisfaction may be relevant to the nursing profession. Further evaluation of compassion stress/fatigue should examine the

personal coping mechanisms, level of expertise, and experience of the nurse. A person's personal identity is closely tied to their professional role. Future research should be aimed at discovering the link between these variables, focusing on nurses' ability to keep delivering "hugs and hope" even when demands on them are far above normal.

## APPENDIX A

Crisis Y2K: Institute on Crisis Management in Higher Education

### **Examples of Compassion Fatigue/Burnout Syndrome Figley, C. (1995; 97)**

#### **Areas of Personal and Professional Function**

<b>Cognitive</b>	<b>Emotional</b>	<b>Behavioral</b>	<b>Spiritual</b>	<b>Personal Relationships</b>	<b>Physical Somatic</b>	<b>Work Performance</b>
Lowered Concentration	Powerless	Impatient	Question the meaning of life	Withdrawal	Shock	Low morale
Less self-Esteem	Guilt	Withdrawn	Loss of Purpose	Decreased Interest in Intimacy & sex	Sweating	Low motivation
Apathy	Anger/rage	Moody	Decreased Self-appraisal	Mistrust	Rapid breathing	Task avoidance
Rigidity	Survivor guilt	Regression	Pervasive Hopelessness	Isolation from Others	Increased heart rate	Obsession About details
Disorientation	Shutdown Numbness	Sleep disturbances	Anger at God	Overprotective As parent/spouse	Breathing Difficulty	Dichotomous thinking
Perfectionism	Fear	Nightmares	Question Religious beliefs	Projective anger or blame	Joint and muscle aches	Apathy
Preoccupation With trauma	Helplessness	Appetite Changes	Loss of Faith in higher power	Intolerance	Dizziness And disorientation	Negativity
Thoughts of self-harm or harm to others	Sadness	Hyper-Vigilance	Greater degree of Skepticism	Loneliness	Increase in # and severity of medical concerns	Lack of appreciation
	Depression	Elevated Startle response		Increase in Interpersonal Conflicts	Impaired Immune system	Detachment
	Mood swings	Accident prone			Other somatic complaints	Poor work quality and communication
	Depleted energy	Easily looses things				Staff conflicts
	Increased Sensitivity					Absenteeism
						Exhaustion Irritability
						Withdrawal from colleagues

APPENDIX B

PROQOL IV  
PROFESSIONAL QUALITY OF LIFE SCALE  
Compassion Satisfaction and Fatigue Subscales—Revision IV

Taking care of people puts you in direct contact with their lives. As you probably have experienced, your compassion for those you help has both positive and negative aspects. We would like to ask you questions about your experiences, both positive and negative, as a nurse. Consider each of the following questions about you and your disaster experience. Select the number that honestly reflects how frequently you experienced these characteristics in the last 1 year.

**0=Never 1=Rarely 2=A Few Times 3=Somewhat Often 4=Often 5=Very Often**

- \_\_\_\_\_ 1. I am happy.
- \_\_\_\_\_ 2. I am preoccupied with more than one person I help.
- \_\_\_\_\_ 3. I get satisfaction from being able to help people.
- \_\_\_\_\_ 4. I feel connected to others.
- \_\_\_\_\_ 5. I jump or am startled by unexpected sounds.
- \_\_\_\_\_ 6. I feel invigorated after working with those I help.
- \_\_\_\_\_ 7. I find it difficult to separate my personal life from my life as a nurse.
- \_\_\_\_\_ 8. I am losing sleep over traumatic experiences of people I help.
- \_\_\_\_\_ 9. I think that I might have been “infected” by the traumatic stress of those I help.
- \_\_\_\_\_ 10. I feel trapped by my work as a nurse.
- \_\_\_\_\_ 11. Because of my helping, I have felt “on edge” about various things.
- \_\_\_\_\_ 12. I like my work as a nurse.
- \_\_\_\_\_ 13. I feel depressed as a result of my work as a nurse.
- \_\_\_\_\_ 14. I feel as though I am experiencing the trauma of someone I have helped.
- \_\_\_\_\_ 15. I have beliefs that sustain me.
- \_\_\_\_\_ 16. I am pleased with how I am able to keep up with nursing techniques and protocols.
- \_\_\_\_\_ 17. I am the person I always wanted to be.
- \_\_\_\_\_ 18. My work makes me feel satisfied.
- \_\_\_\_\_ 19. Because of my work as a nurse, I feel exhausted.
- \_\_\_\_\_

- \_\_\_\_\_ 20. I have happy thoughts and feelings about those I help and how I could help them.
- \_\_\_\_\_ 21. I feel overwhelmed by the amount of work or the size of my caseload I have to deal with.
- \_\_\_\_\_ 22. I believe I can make a difference through my work.
- \_\_\_\_\_ 23. I avoid certain activities or situations because they remind me of frightening experiences of the people I take care of.
- \_\_\_\_\_ 24. I am proud of what I can do to help.
- \_\_\_\_\_ 25. As a result of my nursing, I have intrusive, frightening thoughts.
- \_\_\_\_\_ 26. I feel “bogged down” by the system.
- \_\_\_\_\_ 27. I have thoughts that I am a “success” as a nurse.
- \_\_\_\_\_ 28. I can't recall important parts of my work with trauma victims.
- \_\_\_\_\_ 29. I am a very sensitive person.
- \_\_\_\_\_ 30. I am happy that I chose to do this work.
- \_\_\_\_\_

APPENDIX C  
NURSES DEMOGRAPHIC DATA SHEET

1. What is your age in number of years? \_\_\_\_\_
2. Are you? (please select one)      White, non-Hispanic \_\_\_\_\_  
   African American \_\_\_\_\_  
   Hispanic \_\_\_\_\_  
   Asian \_\_\_\_\_  
   Other \_\_\_\_\_
3. What is your marital status? Single, Married, Divorced, Widowed
4. Are you? (please circle one) Male or Female
5. How many years have you been a nurse? (please list number) \_\_\_\_\_
6. How many years have you been practicing as an emergency room nurse? (please list number) \_\_\_\_\_
7. What is your present employment status?      Fulltime \_\_\_\_\_  
   Part-time \_\_\_\_\_  
   PRN \_\_\_\_\_
8. What degree do you have in nursing?      ADN \_\_\_\_\_  
   BSN \_\_\_\_\_  
   MSN \_\_\_\_\_
9. Have you ever worked in disaster recovery in the past? Yes or No

## APPENDIX D

### NURSES INFORMED CONSENT

This project is being conducted by Melanie Alexander who is a graduate student under the direction of Dr. Linda Sullivan, in the Master of Science Program/School of Nursing at Florida State University. The purpose of the research is to determine the prevalence of compassion fatigue experienced by registered nurses in the Gulf Coast states after a natural disaster. This study will also examine the perceptions of nurses caring for post-hurricane disaster victims affected by the 2005 hurricane season. This study will attempt to determine the effects on nurses who have experienced compassion fatigue.

Participation will involve completing a consent form, demographic form and a compassion fatigue questionnaire. The entire process should take between 20-30 minutes. I understand that by agreeing to participate, I am agreeing to answer questions that will be asked about me. I will be asked to complete a self-assessment survey related to my experiences while assisting hurricane victims. My participation is voluntary and I may stop at any time without any penalty. There is very little risk involved in my agreement to participate. If I feel a little anxious when answering questions about my experiences and feelings, Melanie Alexander, the researcher, will be available by telephone or email to talk with me. Should I feel this way or have any concerns after my participation, I understand I can withdraw my participation. The benefit of participation is that knowledge gained from this project may be used to help nurses understand how they can better assist and cope during times of disaster. The questionnaire is anonymous and will be numerically coded. The results of this study may be published, but my name will not be used. All responses will be separated and coded numerically without identifying information about me and other participants. Data will be analyzed using a software package for statistics. Data will be generated in aggregate form only. There will be no sharing of individual responses and I have been given the assurance that responses will be kept confidential to the fullest extent allowed by law. The completed surveys will be transported to the researcher's home to be placed in a locked box. The only people who will have access to this information will be the researcher, research advisor, and a statistician. There is no monetary gain associated with my participation.

Any questions I have concerning the research study or my participation in it, before or after my consent, will be answered by Melanie Alexander whose contact information is as follows: email [dmdc@earthlink.net](mailto:dmdc@earthlink.net) or telephone number 850-209-5223. I may also contact Dr. Linda Sullivan at 850-644-5351 or email her at [lsullivan@nursing.fsu.edu](mailto:lsullivan@nursing.fsu.edu). If I have questions about my rights as a subject/participant in this research, or if I feel I have been placed at risk, I can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-8633. I have read the above informed consent form. I understand that I may withdraw my consent and discontinue participation at any time without penalty or loss of benefits to which I may otherwise be entitled. In signing this consent form, I am not waiving any legal claims, rights or remedies. A copy of this consent form will be offered to me.

Subject's Signature \_\_\_\_\_ (Date) \_\_\_\_\_

## APPENDIX E

Table 2: Frequency table for demographic variable: age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	24.00	1	3.6	3.6	3.6
	27.00	1	3.6	3.6	7.1
	29.00	1	3.6	3.6	10.7
	31.00	1	3.6	3.6	14.3
	32.00	1	3.6	3.6	17.9
	33.00	2	7.1	7.1	25.0
	34.00	1	3.6	3.6	28.6
	35.00	1	3.6	3.6	32.1
	36.00	2	7.1	7.1	39.3
	38.00	2	7.1	7.1	46.4
	40.00	1	3.6	3.6	50.0
	42.00	1	3.6	3.6	53.6
	43.00	2	7.1	7.1	60.7
	44.00	2	7.1	7.1	67.9
	46.00	4	14.3	14.3	82.1
	49.00	1	3.6	3.6	85.7
	51.00	1	3.6	3.6	89.3
	53.00	2	7.1	7.1	96.4
	55.00	1	3.6	3.6	100.0
	Total		28	100.0	100.0

## APPENDIX F

Table 3: Frequency table for demographic variable: race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	WHITE-NON HISPANIC	26	92.9	92.9	92.9
	AFRICAN AMERICAN	2	7.1	7.1	100.0
	Total	28	100.0	100.0	

## APPENDIX G

Table 4: Frequency table for demographic variable: marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SINGLE	3	10.7	10.7	10.7
	MARRIED	19	67.9	67.9	78.6
	DIVORCED	6	21.4	21.4	100.0
	Total	28	100.0	100.0	

## APPENDIX H

Table 5: Frequency table for demographic variable: gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid MALE	10	35.7	35.7	35.7
FEMALE	18	64.3	64.3	100.0
Total	28	100.0	100.0	

## APPENDIX I

Table 6: Frequency table for demographic variable: years nursing

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	2.00	2	7.1	7.1	7.1	
	3.00	3	10.7	10.7	17.9	
	4.00	2	7.1	7.1	25.0	
	6.00	1	3.6	3.6	28.6	
	8.00	3	10.7	10.7	39.3	
	9.00	2	7.1	7.1	46.4	
	10.00	3	10.7	10.7	57.1	
	11.00	2	7.1	7.1	64.3	
	15.00	1	3.6	3.6	67.9	
	16.00	1	3.6	3.6	71.4	
	17.00	2	7.1	7.1	78.6	
	20.00	1	3.6	3.6	82.1	
	22.00	1	3.6	3.6	85.7	
	24.00	1	3.6	3.6	89.3	
	25.00	1	3.6	3.6	92.9	
	29.00	1	3.6	3.6	96.4	
	35.00	1	3.6	3.6	100.0	
	Total		28	100.0	100.0	

## APPENDIX J

Table 7: Frequency table for demographic variable: years as a ED nurse

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	1.00	7	25.0	25.0	25.0	
	2.00	10	35.7	35.7	60.7	
	3.00	1	3.6	3.6	64.3	
	5.00	2	7.1	7.1	71.4	
	10.00	1	3.6	3.6	75.0	
	15.00	2	7.1	7.1	82.1	
	16.00	1	3.6	3.6	85.7	
	17.00	2	7.1	7.1	92.9	
	26.00	1	3.6	3.6	96.4	
	35.00	1	3.6	3.6	100.0	
	Total		28	100.0	100.0	

## APPENDIX K

Table 8: Frequency table for demographic variable: employment status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	FULLTIME	24	85.7	85.7	85.7
	PART-TIME	2	7.1	7.1	92.9
	PRN	2	7.1	7.1	100.0
	Total	28	100.0	100.0	

## APPENDIX L

Table 9: Frequency table for demographic variable: education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ADN	21	75.0	75.0	75.0
	BSN	6	21.4	21.4	96.4
	MSN	1	3.6	3.6	100.0
	Total	28	100.0	100.0	

## APPENDIX M

Table 10: Frequency table for demographic variable: past disaster experience

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid YES	9	32.1	32.1	32.1
NO	19	67.9	67.9	100.0
Total	28	100.0	100.0	

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## **BIOGRAPHICAL SKETCH**

Melanie Alexander received a Master of Science in Nursing in December 2006 from the Florida State University College of Nursing in the Family Nurse Practitioner track. She graduated with an Associate Degree in Nursing from Wallace Community College in 1998, and received her Bachelor of Science in Nursing from Florida State University in 2004. She has worked in Intensive Care nursing during her eight year career as a Registered Nurse. She worked in medical surgical intensive care for five years and then focused on cardiac intensive care for two additional years. The last two years of her nursing career have been primarily in the Emergency Department to gain additional clinical experience in preparation for her role as a Family Nurse Practitioner. Melanie was raised in Marianna, Florida. She is married with two small boys. She will work as an Advanced Registered Nurse Practitioner in an Internal Medicine Clinic in Marianna, Florida beginning January 2007.