Measuring Compassion Fatigue in Public Health Nurses Providing Assistance to Hurricane Victims

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ABSTRACT

Background: It has been documented that disaster care providers are at risk for compassion fatigue (CF). However, there is only a beginning understanding of the factors that places nurses at risk for CF. This survey research measured the risk for CF in public health nurses who provided care to hurricane victims during the 2004 hurricane season in Florida.

Method: One hundred seventeen nurses responded by completing the Compassion Fatigue Self Test regarding how they were feeling during the time they were providing care, as well as how they were feeling at the current time (three to four months post hurricane).

Results: Findings revealed the majority were at low risk for CF. This may be because the majority were deployed for only two weeks and this was their first time to provide assistance to disaster victims. Variables correlated with increased risk for CF during the hurricane assistance and post hurricane included the sense of personal/family/normal job responsibility disruption, preferences to work less time that they did, and number of hours worked.

Conclusions: The findings of this study suggest that nurses are vulnerable to CF. Disaster relief agencies need to develop plans for deployment of nurses that minimize this risk. It suggests that research is needed in looking at the risk for CF in First time responders as compared to those who may perceive a deployment as a "here we go again" experience of burden.

Key words: public health nurses, compassion fatigue, and hurricane victims

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Introduction

In Fall 2004, an unprecedented number of severe hurricanes and tropical storms inflicted devastating damage to residents of Florida. Public health nurses in the state were among those deployed to provide assistance to these victims, often in atypical settings such as special need shelters. One unique aspect of this situation was that many victims were in the process of recovering from one hurricane when they then incurred damage from yet another. These public health nurses were faced with providing care to a population reeling from multiple crises and high levels of stress. Many of the nurses had likely never experienced such severe and ongoing stress from clients because of the overwhelming devastation that occurred. Loss of family members, homes, jobs, electricity, and water were just some of the stressors experienced by clients. The length of time that the hurricanes and tropical storms were presenting a threat resulted in nurses possibly needing to provide assistance for an extended period of time. Finally, these nurses were residents of Florida. Thus, they, their families, and their friends were also likely to have been affected by one, or all, of the hurricanes. This entire experience of coping was one that was novel for the population of Florida and most likely, for the nurses. The question then arose: "how did nurses respond to these demands?"

Joinson[1] suggests that nurses, who are empathetic, caring individuals, may absorb the traumatic stress of those they help. Figley[2] notes that caregivers in a disaster relief effort are susceptible to suffering negative effects as a result of their work, especially if they too have experienced similar devastation. Disaster relief workers may experience stress from the demands of helping those in need, while feeling that they are not doing enough and need to do more. Figley has referred to this phenomenon as compassion stress.[2] Prolonged exposure to compassion stress can lead to compassion fatigue (CF). CF is defined as a holistic state of exhaustion and dysfunction in which workers take on the

emotional strain and burden of the victims themselves.[2] CF occurs in those affected by the trauma of another (usually a client or family member).[2] Cognitive, emotional, behavioral, spiritual, personal relationship, physical and work performance symptoms can be evident in CF. Specific symptoms of CF can include re-experiencing the traumatic event, intrusive thoughts, avoiding or numbing reminders of the event, sleep disturbance, irritability, anxiety, and loss of hope.[1,2]

Four factors that place trauma workers at higher risk for CF are (a) being empathetic, (b) having a history of traumatic experiences, (c) having unresolved trauma, and (d) events in which children are involved.[1,2] Factors that impact the severity of these symptoms include the duration of the experience, potential for recurrence, whether the worker was exposed to death, dying, or destruction, and the degree of moral conflict.[1,2]

There is a growing body of literature, which describes CF in disaster relief workers from various professions such as firefighters, policemen, and EMT's.[3-6] This

literature indicates that work-related triggers, such as increased length of time working, or exposure to dead bodies and people dying, increase the risk for CF. The findings regarding the influence of demographic factors such as age or gender in experiencing CF are mixed.[4,7-10] There is a paucity of research specifically addressing nurses' responses as disaster relief workers.

The topic of nurses and their risk for CF is just now being investigated. Some research has focused on nurses caring for unique populations, such as chronically ill pediatric patients[11] or hospice clients.[12] These studies have identified possible risk factors for nurses to experience CF, which include financial strain, dying patients, sacrificing personal needs for needs of their clients, and the push/pull of wanting to be home with family while also wanting to help the clients.

Such factors could easily be present in those nurses who were caring for hurricane victims. However, one difference may be that nurses caring for special populations have made a deliberate choice to work with those populations. That is to say, they may have made a conscious choice to become a pediatric nurse or hospice nurse. Further, these nurses may have acquired a

specialized knowledge base related to that specific patient population, and would likely have access to the resources necessary to provide care, as well as a routine of scheduled times to work. Such conditions may not have been present for the nurses who were deployed to provide care for hurricane victims.

The circumstances of the 2004 hurricane season and the responsibilities of these nurses to assist the storm victims, sometimes in very unpredictable and primitive conditions, were unique for Florida nurses. From the existing literature, we can speculate that these nurses would have been at risk for experiencing CF. However, with the limited research on nurses' experiences in these conditions, we do not know how nurses were affected during the time they were assisting victims. Nor do we know how they adjusted upon returning home to resume personal/work responsibilities after having just experienced a stressful experience. Did the absence from work and home provide additional stressors upon the nurses' return that may have increased their risk for CF post hurricane?

Purpose. This research investigated nurses' risk for CF related to their work during the 2004 Florida hurricanes. It also examined their risk for CF three to four months post hurricane, at the time they completed the survey. This post hurricane measurement was an attempt to capture the emotional adjustment of participants after they returned to home and work responsibilities, as the stress of having to "catch up" may have been an additional layer of stress in addition to that experienced while working with hurricane victims. Returning home may also coincided with the nurses' acknowledgement of the stress the nurses felt when deployed. Factors that may have influenced their response were examined, including the extent to which their own lives were disrupted, the extent to which their families and friends were affected, their prior experience with such events, and the time that elapsed between the care giving and the survey.

Research Questions

1. What were the levels of risk for CF in public health nurses while they were assisting hurricane victims?

2. What were the levels of risk for CF in these nurses at the time they completed the survey (about three to four months later)?

3. What variables were related to levels of risk for CF in this population?

Methods

This research utilized a survey design gathering quantitative and qualitative data about the responses of nurses to their experience of assisting hurricane victims. The Florida State Department of Health (DOH) provided a list of names and addresses of 500 public health nurses who could have been deployed to assist hurricane victims.

Procedure. The nurses identified by the DOH were sent a survey questionnaire that elicited demographic data, as well as information about their feelings during the time they were deployed to assist hurricane victims, and their current feelings. Specifically, they were asked to think back to their hurricane experience and respond to the Compassion Fatigue Self-Test (CFST) based on those feelings. Then they were asked to respond to the same CFST based on how they were currently feeling. This second CFST was printed on a different color paper to differentiate it from the first. The survey also provided space for open-ended comments to the various questions. A self-addressed return envelope was included for return of the survey.

Instruments. The instruments used included a demographic questionnaire, which included work experience, and questions about the personal and family circumstances that have been identified as possible factors influencing risk for CF. Questions about the effects of the hurricanes on their families and friends, the family responsibilities the nurses had such as being primary caregivers for children or parents, and the extent to which being deployed disrupted personal/family and work responsibilities were included.

The CFST consists of thirty questions that describe a stressful event or feeling. Participants are asked to rate each question on a scale of how frequently they experienced that event or feeling. The CFST utilizes a 10-point Likert scale (1=rarely, 10=very often). The range of possible scores is from 30 to 300. The scores from each individual question are summed to give a total score (range from <94 to >173) and level of risk for CF. According to Figley,[2] interpretation of the scores is as follows: <94 = low risk for CF, 95-128 = some risk of CF, 128-172 =

moderate risk for CF, and >173 = high risk for CF. The CFST has been utilized numerous times and implemented in the analysis of levels of risk for CF in various settings. Researchers have reported the tool as having reliability (alpha .86-.94) and validity.[7]

Protection of Human Subjects. The project received approval from both the Florida State University Institutional Review Board (IRB) as well as the Florida Department of Health IRB. Nurses were not asked to provide any identifying information. A one-page informed consent document described the risks and benefits, including the risk that they might be reminded of unpleasant memories when completing the survey. The researchers were trained in traumatology and mental health nursing and information on how to contact them was provided, in the event that participants experienced distress. They were assured that participation was totally voluntary and would not affect their employment at the Department of Health. Also, the Department would not have access to their individual responses.

Results

Five hundred surveys were mailed out. Of those, 117 participants returned the survey, yielding a response rate of 23.4%. Demographic findings revealed that the age of the participants ranged from 24 to 66 (n=117). Of this group, only eight were under 40 and eight were over 60, so the majority were 40-60 years of age. Ninety seven percent   were female and the majority were non-Hispanic white in ethnicity (87%). Most were married (72%) and a little over half did not have children living with them. Further, most (70%) were not the primary care giver for other family members.

Regarding nursing experience, the median of years being a nurse was 27 and the median of years being a public health nurse was nine. While 70% had family experience with previous hurricanes, surprisingly, the majority (63%) stated that this was their first experience working in a hurricane disaster, and even fewer (31%) had experience with other kinds of disasters (for instance fires, floods, tornados, bombings).

 Of the nurses who did assist with hurricane victims, 59% worked two weeks or less. Three nurses (3%) reported deployment of less than one week, 38% worked one week, 18% worked two weeks,

20% worked three weeks, 17% worked four weeks and only four percent reported being deployed more than four weeks.

The first research question examined the nurses' level of risk for CF during the time they were deployed. 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 average score on the CFST was 75.8 (SD = 41.7), indicating an average risk level of low. The remaining 27% (*n*=31) were at some to high risk for CF (Table 1).

Table 1
Level of risk for compassion fatigue during hurricanes

Level of Risk	N	Percent
Low	83	72.8
Some	18	15.8
Moderate	9	7.9
High	4	3.5
N = 114		

The second research question explored the participants' risk for CF at the time they were completing the survey, which was three to four months later. Only 77 of the participants completed this CFST. Again, the mean risk score for CF was in the low risk category (mean score 63.8, SD=38.16). The remaining 18.2% had some to high risk (Table 2).

Table 2
Level of risk for compassion fatigue post hurricane

Level of Risk	N	Percent
Low	63	81.8
Some	6	7.8
Moderate	6	7.8
High	2	2.6
N = 77		

The third research question sought to identify variables that may be associated with risk for CF. To accomplish this, participants were asked to rate their level of agreement with five statements using a Likert scale of 1-5, with 1=strongly disagree, and 5= strongly agree. These statements were derived by the authors from Figley's theory of risk factors for CF,[2] and included the following (Table 3):

1. working during the hurricane caused me to question or re-examine my spiritual or religious beliefs,

2. working during the hurricane disrupted my personal/family life,

3. working during the hurricane was disruptive to my carrying out my normal job responsibilities,

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

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

Table 3
Client perception variables

Statement	SD/D*	Neutral	A/SA*
Working during hurricane spiritual/religious beliefs	75.5%	6.5%	18%
Working during hurricane personal life	21%	6%	73%
Working during hurr8icane was disruptive to my carrying out my normal job responsibilities	57%	18%	25%
I could have worked more time than I did with the hurricane victims	41%	12%	47%
I would have preferred to work less time than I did	36%	13%	51%

N = 116
*SD/D = strongly disagree/disagree; A/SA = agree/strongly agree

Correlational analyses were performed to assess the relationship between the variables and the continuum of CFST risk scores. The level of significance was set at $p < .05$. Personal/family disruption ($r = .27$, $p = .004$), preferring to work less time that they did ($r = .41$, $p = .000$) and hours per day worked ($r = .20$; $p = .028$) were significantly positively correlated with CF risk scores during deployment. Post hurricane/current risk for CF scores was still significantly correlated with personal/family disruption (.29, $p = .005$) and preferring to work less time than they did ($r = .29$; $p = .005$). However, normal job responsibility disruption was also significantly positively correlated to CF risk scores

($r = .31$, $p = .002$) while hours per day worked during the hurricane was no longer a significant correlation.

Discussion

The majority of the participants were at low risk for experiencing CF. This finding may be explained by the characteristics of the sample and their experiences. The majority of the nurses were deployed only once, for a time period of two weeks or less and this was the first time assisting victims of a hurricane or any other type of disaster for most of the participants. CF is a buildup of stress over time, so that may not have been experienced by these nurses. The finding does support the theory of CF in that there may lower

levels of risk for CF in those who are providing care for the first time and for a limited time period.

Analysis showed that an increasing sense of personal/family life disruption and preferring to work less time that they did, were correlated to a higher level of risk for CF both during the hurricane and post-hurricane time frame. These findings can help explain the overall low risk of CF in this study's participants, as well as suggesting variables that may increase risk. 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 may have been at low levels of risk because they did not have the concurrent buildup of stress from additional life stressors at home. On the other hand, those who did perceive stresses at home while they were deployed as well as upon return home, may be more vulnerable for experiencing CF. The finding that approximately half reported they felt they could not work more than they did, supports the argument that nurses may be vulnerable for experiencing CF, if they have to work for an extended time, especially if they also perceived personal

stressors related to home responsibilities or when returning to work.

The number of hours worked per day was positively correlated with risk for CF. Given the magnitude of destruction and need, nurses could literally work around the clock and still have more to do. Nurses may not be able to limit themselves because of their empathy for the overwhelming needs of patients. This finding suggests there may be a need to have policy guidelines for how long one can work each day in disaster situations. Further, policies may need to be in place to give nurses' permission to return "home" and back to regular jobs after a specified amount of time. Since work disruption was also significantly correlated with higher levels of risk for CF post hurricane expectations about "catching up" with normal job responsibilities upon return to work may need to be clarified by supervisors and with policies in place to address that issue.

Limitations. There were several limitations of this study that may have biased the results. A major limitation was the retrospective survey design. Participants were asked to recall how they felt during an average two-week

time span, three to four months prior, so recall bias may be present related to how they were feeling while working during the hurricanes. The number of usable returned surveys (117 of the 500 surveys mailed out yielding a 23.4% response rate,) may also bias results. Figley[2] noted that avoiding reminders of a traumatic event is one of the symptoms of CF. Thus, those who were truly experiencing CF may not have wanted to relive their experience by recalling information for a survey or by acknowledging how they were currently feeling. These limitations may have caused the nurses who were at higher risk for CF to be under represented in this study. Mailing surveys posed limitations, such as having incorrect addresses. The data from those participants who did not receive their surveys may also have biased the findings. Finally, a limitation of the findings is that the reliability and validity of the instruments utilized have had only limited testing.

Recommendations for future research. In light of the 2005 hurricane season, and the knowledge that hurricanes will occur each year, further research should be conducted to understand how best to prevent CF in nurses and how to assist nurses to reduce the risk factors associated with CF. Ideally data collection could commence immediately after the participants' assist victims, as opposed to three to four months later. Then follow up information collected several months post hurricane experience would have more meaning in assessing nurses' adaptation after the experience. Future research should include a more diverse sample with more males and nurses of diverse ethnic backgrounds.

To confidently measure risk factors related to CF, instruments must have well-established reliability and validity. Thus, research efforts could be focused on this goal. Also, because our understanding of risk for CF in nurses is still evolving, qualitative methodology would be helpful. Participants could then freely express their experiences and the unique factors that may contribute to their risk for CF may be revealed. Further, implications for policies regarding what would improve their working conditions and what interventions might reduce their levels of CF could evolve from such exploration.

The nation has seen the need for improved response to disasters. The

hurricane season of 2005 was of even greater disaster proportions with Katrina, Rita, and Wilma inflicting unprecedented damage on the Gulf Coast. Nurses and health care professionals from across the country were called upon to aid the victims. In this study the majority of participants reported providing care for only two weeks, and after only two weeks some were experiencing risk for CF. The extraordinary amount of damage of the 2005 hurricanes compared with the 2004 hurricanes suggests that nurses could be very vulnerable to experiencing CF. Disaster relief agencies have the responsibility to form a comprehensive plan for assisting nurses who are caring for victims in hurricane disasters to prevent nurses from developing CF. Finally, this study does support the possibility of a difference between first time responders and those who are initially deployed first to provide care. Those providing assistance for the first time may perceive the experience as novel or exciting. However, those called upon to provide initial assistance, but who have previous experience may perceived this as a "here we go again" experience that carries a burden. This is definitely a phenomenon that requires further research in determining risk for CF in nurses.

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