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## The relationship between time on the job and compassion/ satisfaction fatigue in firefighters

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THE RELATIONSHIP BETWEEN TIME ON THE JOB AND  
COMPASSION/SATISFACTION FATIGUE IN FIREFIGHTERS

by

Juanita M. Buck

Bachelor of Arts, Psychology  
University of California, Bakersfield  
2001

A thesis submitted in partial fulfillment  
of the requirements for the

**Master of Science Degree in Counseling  
Department of Counseling  
Greenspun College of Urban Affairs**

**Graduate College  
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## Thesis Approval

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THE RELATIONSHIP BETWEEN TIME ON THE JOB AND COMPASSION/SATISFACTION  
FATIGUE IN FIREFIGHTERS

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## ABSTRACT

### **The Relationship between Time on the Job and Compassion/Satisfaction Fatigue in Firefighters**

by

Juanita M. Buck

Dr. Patricia Markos, Examination Committee Chair  
Professor of Counseling  
University of Nevada, Las Vegas

First Responders such as firefighters who experience disasters and observe traumatic events may be at risk for generalized stress resulting from the type of work they do. Studies suggest that the more a person is subjected to traumatic incidents, the more they are at risk. This study assessed the relationship between time on the job and the levels of compassion fatigue and job burnout in firefighters. Results of this study did not indicate that there was a significant relationship between time on the job and compassion fatigue and burnout in the studied population. However, results did indicate that participants were consistently high in job satisfaction. The results and implications of these findings and suggestions for future research are discussed.



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## CHAPTER 1

### INTRODUCTION

While a considerable amount of work has been written documenting the effects of traumatic incidents in adult survivors of traumatic events (Briere, 1996; Gold & Slaby, 1991; McCann & Pearlman, 1990; Starr & Wolfe, 1991; van der Kolk, 1987), there has been minimal yet promising research investigating whether trauma work places the individual at a higher risk over time as an end result of trauma work (Alexander & Klein, 2001). First responders such as firefighters who experience disasters, and observe traumatic events on a regular basis may be at a greater risk for job burnout, compassion fatigue and general stress related symptomology than individuals who do not experience traumatic events on a regular basis (Dean, Gow & Shakespeare-Finch, 2003).

#### Purpose of the Study

The purpose of this study is to investigate the relationship between time on the job and compassion fatigue, job burnout and job satisfaction. This study will also address the degree of job satisfaction in firefighters, and will evaluate the amount of time on the job, and the level of compassion fatigue and burnout that firefighters in Carson City, Nevada may be experiencing. The results of this study are essential to determine whether firefighters should incorporate better coping strategies within their programs in

order to provide first responders with the mental health tools necessary to stave off compassion fatigue and job burnout associated with caring for others. The importance of this knowledge may help to understand the impact of traumatic events on firefighters, and to better equip these helping professionals for possible negative consequences as a result of their duties as firefighters.

The outcome of this study may produce a better understanding of why some firefighters recover quickly from traumatic incidents with minimal effect, and why others may find solace in drugs and alcohol abuse, isolation, problems in relationships, and physical manifestations of stress. It is important for the mental health community who care for these first responders, to understand the impact of job burnout, and compassion fatigue in firefighters (Bass & Yep, 2002; Figley, 2002; Gold & Slaby, 1991).

Research suggests that firefighters in general are at a higher risk for psychological problems due to the trauma they experience in their profession. In recent years, there has been an increased awareness in the literature of the psychological distress that may result from repeated exposure to traumatic events and experiences as part of an individual's every day work environment (Dean, et al., 2003; Gold & Slaby, 1991). Exposure to both the stress of the event and the stress of their role as a help provider may indeed elevate the risk for job burn out, relationship problems, and a host of physical and emotional issues (Fullerton, McCarroll, Ursano, & Wright, 1993). For Firefighters, their employers, and within the counseling profession, there is definitive information clearly indicating the need to understand, assess, and treat job stress in firefighters who are impacted by trauma work (Figley, 1995).

As emergency responders, firefighters are exposed to overwhelming and physically taxing events as well as the psychological impact that these events have on them and those they help. The first responder has the responsibility of protecting the vulnerable community while upholding a professional persona. Many firefighters are able to process disaster events and continue to do so without personal psychological damage (Brown, Mulhern, & Joseph, 2002; Lerner & Shelton, 2001). However, increased attention by researchers has indicated an increase in the development of posttraumatic stress symptoms in firefighters following a call to a disaster (Figley, 1995; Mitchell & Dyregov, 1993).

Outcome impacts of traumatic experiences resulting from the September 11<sup>th</sup> terrorist attacks in the United States may help the mental health community understand the unique stressors faced by rescue workers such as police and firefighters, National Guard members, and other emergency technicians and volunteers, and may offer insight on how these stressors affect response workers (Department of Veterans Affairs, 2003; Wellbrock, 2000). Rescue workers daily face the potential danger of death, physical injury, loss of coworkers and friends, and witness the devastating effects of catastrophes on their communities. As a result, these professionals are at a higher risk for behavioral and emotional readjustment problems such as burnout and stress (Bass & Yep, 2002; Dean, et al., 2003; Fullerton, et al., 1992).

The psychological problems that result from disaster experiences may include temporary reactions lasting for several days to a few weeks. However, if the individual is vulnerable to chronic stress, they are likely to display more stress related symptomology, resulting in intrusive and lasting effect on the individual. Any



occurrence of psychiatric symptoms in firefighters increases the need to understand the many dimensions of the work performed by first responders. It is important for the mental health community to address the mental health needs of those first responders that society depends on in emergency situations (Bass & Yep, 2003; Dean, et al., 2003).

There is evidence that some individuals are at a higher risk for chronic stress symptoms if they have a history of exposure to other traumas such as severe accidents, abuse, assault, combat, and rescue work. Chronic medical illness or psychological disorders have also been implicated in putting the individual at a higher risk. And finally, recent or subsequent major life stressors or emotional strain such as single parenting, divorce, death of a loved one, may compound an individual's difficulty in handling an emergency on the job (Department of Veterans Affairs, 2003). The ensuing stress after responding to a difficult call may revive memories of prior trauma for the firefighter, and may intensify pre-existing conditions of stress (Casey & Leger, 2000).

The human response to disaster work is complex and varied. Experienced disaster workers utilize innate resiliency to adapt to their work-related stresses. If firefighters must rely on their ability to cope with the demands of their job, are those coping skills healthy, and up to the task? Research indicates emergency workers who have personal trauma coupled with disaster work; show a higher level of cumulative secondary traumatic stress levels in emergency workers. Hyman (2001) indicates that if the firefighters ability to cope is maladaptive, than further psychological harm is inevitable when re-exposed as result of trauma work.

Bio-psychosocial attributes may play a role in the firefighters' ability to handle traumatic events as well. Firefighters experience the same personal stressors that affect

most people; however, the effects of stress on firefighting personnel are cumulative as a result of stress effects beyond normal stressors of daily living (Casey & Leger, 2000). Personality, social support, coping style, and mental health are but a few of the attributes to be considered when trying to understand one's ability to withstand traumatic experiences. Thus the degree of psychological distress experienced by firefighters may depend on their vulnerability. This vulnerability may be dependant on extenuating factors related to personal issues of the individual firefighter, and not simply the exposure to job related incidents (Dean, et al., 2003). The individual firefighter's personality, coping skills, history of traumatic incidents, and job stress may exacerbate the demanding duties of these first responders.

Some firefighters may only experience mild, normal stress reactions to a disaster call on the job. Depending on the individual's coping style, support system, and resiliency, disaster experiences may even promote personal growth, by fostering a sense of accomplishment, and the strengthening relationships within the firefighter unit by working as a team toward a common good (Bandera, 1997; Beaten, & Murphy, 1995). Training as a first responder may also facilitate the workers ability to focus on their job and less on the traumatic implications of the event.

Studies indicate that one out of every three rescue workers experience severe stress symptoms, which may lead to lasting psychological distress (Department of Veterans Affairs, 2003). The task of providing help to victims of traumatic events is stressful. Firefighters who repeatedly attend traumatic events are constantly exposed to both the stress of the traumatic event and the stress of helping the victims. This repeated exposure can overwhelm the trained system of care that gives the professional

firefighter a sense of control, connection and meaning in their work. The higher levels of exposure than civilian victims to traumatic events may lead to the conclusion that firefighters are at a higher risk of developing a spectrum of emotional, behavioral, physiological and cognitive symptoms. These symptoms may develop into syndromes such as Secondary Traumatic Stress, or other stress related psychological difficulties, as well as other job related problems such as Compassion Fatigue and job burnout, (Dean, et al., 2003; Hyman, 2001).

Although there is considerable information on the instance of compassion fatigue in many helping professions, such as social workers, nurses, counselors, and peace officers, research investigations such as the one proposed here may help to provide empirical evidence to support the necessity for further studies on the impact that trauma work has on firefighters. A quantitative research design was utilized in this study, which will include a self-administered psycho-social questionnaire, and a self report survey addressing the topics of compassion fatigue, job burnout, and generalized job satisfaction of the participants in this study. The focus of this study was to see if there is a relationship between time on the job as a firefighter, and the presentation of compassion fatigue, job burn out, and the instance of job satisfaction.

Two major questions that were addressed in this study asked if time on the job affected the level of compassion fatigue and burnout that firefighters report on a survey. Secondly, if the population surveyed did not report substantial levels of compassion fatigue and burnout, do they report a high level of job satisfaction?

## CHAPTER 2

### LITERATURE REVIEW

Firefighters are in the profession of trauma work. These professionals are at risk for physical harm as part of their job description. However, mental fatigue, stress, and the need to adapt to the strain of the job may put some firefighters in a position of being on the psychological defensive. A review of the literature indicates that firefighters are impacted by their work as first responders, and many succumb to psychological problems such as job burnout, compassion fatigue, traumatic stress reactions, and secondary traumatic stress. They are also susceptible to maladaptive coping strategies such as substance abuse, and relationship problems. In chronic cases, firefighters may also be susceptible to PTSD due to their responsibilities of being in life threatening situations on a regular basis. This literature review will help define terms relevant to the study, and solidify the necessity for the research to be studied. An understanding of traumatic stress is relevant to this study, as it offers a basis by which to understand compassion fatigue as a secondary response to traumatic incidents in firefighters.

#### The Psychology of Stress

Rescue workers are exposed to the stress of events on the job and the stress of their role as a help provider. Repeated exposure to trauma can put firefighters who are frequently first responders at increased risk because of their direct contact with the

disaster scene (Fullerton, et al., 1992). Patton and Smith (1997) researched methodological and assessment studies of stress in disaster workers, and found that high levels of job demand and multiple disaster experiences may elevate levels of stress symptomology above the levels of traumatic stress within general populations. The removal of victims from fires, handling the dead from traumatic events, and losing a fellow first responder can have lasting effects on a firefighter. Identification with the victim can impact the rescue worker with intrusive dreams, nightmares, sleeplessness, recall of sights sounds and smells, can leave lasting psychological problems, and can impact the workers ability to function effectively (Brown, Mulhern & Joseph, 2002; Fullerton, et al., 1992).

Bandura (1997) suggests that humans are direct agents in shaping and responding to environmental conditions, and that coping mechanisms, are directly tied to how one adapts to the environment (Benight & Harper, 2002). Negative perceptions to intrusive stimuli may incite negative reactions that are both physical and psychological in nature. The initial acute stress response may lead to symptoms of dissociation, hyperarousal and avoidance of trauma related stimuli that inhibit the individual from modifying the cognitive schema of the trauma and restricting healthy resolution of the event (Horowitz, 1982; van der Kolk, et al., 1996).

Coping skills seem to play a definitive role in the ability to process traumatic reactions and deter psychological distress, and could be what may be occurring for firefighters who do not display psychological distress. There is mounting evidence that problematic coping style behavior is likely to be associated with a greater degree of psychological distress, and suggest that a first responder's identification with the victim,

feelings of helplessness and guilt, fear of the unknown and psychological reactions may also lead to secondary traumatic stress symptoms (Beaton & Murphy, 1995; Fullerton, et al., 1992).

Early attachments between a child and caregiver are the foundations for patterns of coping styles, trust, and resiliency. Attachment theory focuses on survival instincts and the resulting stress when survival is perceived as threatened. Attachment theory also links early attachment styles to current coping with stress. It is reasonable to conclude that secure attachment in early childhood would result in healthy reciprocal attachment bonds during adult life (Bowlby, 1969). This is a key in understanding the psychology of disaster work, by which firefighters must react to on an ongoing basis (Hyman, 2001). Problematic coping style behavior is likely to be associated with a greater degree of psychological distress (Brown, Mulhern & Joseph, 2002; Follette, et al., 1996; Ford, & Kidd, 1998).

Identification with a victim is a natural human response. Specific coping strategies are taught to firefighters in order for them to continue the rescue work in spite of personal feelings. These feelings may include shock, fear, grief, anger, resentment, guilt, shame, hopelessness, helplessness, or emotional numbness. Cognitive reactions may include confusion, disorientation, indecisiveness, worry, difficulty concentrating, intrusive memories of the event, and self blame. Maladaptive interpersonal reactions in relationships, distrust, irritability and conflict, withdrawal, isolation, feelings of rejection or abandonment, judgmental or over-controlling attitude may be indicators of traumatic stress as well (Brown, et al., 2002; Catherall, 2002; Department of Veterans Affairs, 2003; Fullerton, et al., 1992; Matheny, Gfroerer & Harris, 2000).

When firefighters are exposed to events that are classified as disastrous, there is the threat to their own safety and anxiety for the safety of the crew. Once the incident is contained, residual physiological as well as psychological reactions may continue. The devastation that disasters such as a fire may leave behind reminds those present of the frailty of human life and may trigger the firefighter's sense of vulnerability (Hyman, 2001). Prolonged exposure to trauma leaves residual effects, which can be long lasting. Chronically traumatized people are hyper-vigilant, anxious, irritated, and have difficulty relaxing (Violanti & Patton, 1997). However, what must be accounted for is that fatigue and physical exhaustion may exacerbate the rescue workers ability to cope as well. Repeated exposure to trauma can put rescue workers at increased risk (Fullerton, et al., 1992).

Secondary traumatic stress is defined as the behaviors and emotions that result from learning about a traumatizing event experienced by significant others or the stress that results from helping or attempting to help a traumatized or suffering person (Figley, 1995). Secondary traumatic stress differs from Post Traumatic Stress Disorder (PTSD) by the mode of exposure to the traumatic event. Direct exposure to the event may result in PTSD, whereas indirect exposure to the event may result in secondary traumatic stress (DeVires, 1996; Figley, 1995). Firefighters by trade experience both direct involvement in traumatic experiences and indirect exposure to the events, and to the people involved in the traumatic event (Follette, Polunsky, Bechtle & Naugle, 1996).

Several demographic and personality factors may play a mediating role in the context of secondary stress, job burnout, and compassion fatigue, and include the level of control the individual may have over cognitive re-experience, perceived meaning of

the event, and behavioral self blame for what may occur during the event. Attribution style and hardiness are factors that significantly effect coping (Lauterbach, 2001; Matheny, et al., 2000; Patton & Smith, 1997). Historical antecedents such as the individuals learning history, socioeconomic status, early childhood experiences, and pre-existing psychopathology may be indicators for secondary stress reactions, as well as avoidance of threat situations. Social skill deficits may lead to problems in obtaining and utilizing social support. Hypervigilance of threat, relevant cues, and inadequate problem solving behavior, history of domestic violence, divorce, drug and alcohol abuse are all precipitating factors in the individual's resiliency factor and ability to cope with stressful situations (Green, et al., 2000; Patton, & Smith, 1997).

### The Physiology of Traumatic Stress

The Diagnostic and Statistical Manual of Mental Disorders (2000) defines trauma as resulting when one experiences, witnesses, or is confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self and others (and) the person's response involved intense fear, helplessness, or horror. Biological vulnerability factors may also include genetically based predispositions such as a heightened autonomic and physiological reactivity. These factors may exacerbate the reaction to the exposure to traumatic incidences (Patton & Smith, 1997).

The Federal Emergency Management Agency issued a report in 1980 about the hazards of firefighting. Although the information is dated, the report intrigued researchers to explore the physical, mental, and emotional costs of emergency service



work, and concluded that fire fighting; by its very nature is a high-stress occupation. Within fifteen to thirty seconds after an alarm sounds, a firefighter's heart rate can increase by as much as 117 beats per minute. Firefighters often work in extreme temperatures, both high and low. The physical exertion and stress to the body in the form of carrying heavy equipment, climbing with heavy tools, conducting search and rescues, extracting trapped victims can exacerbate acute stress reactions, or worse, delayed reactions to the stressful events that firefighters encounter regularly (Casey & Leger, 2000).

Trauma and stress are different in that they represent differentiating psychological and physiological responses. Stress may be related to anxiety, while traumatic stress involves the way in which the brain receives and encodes the information and then becomes memory. The stress response consists of massive, reflexive physiological changes designed to prepare the individual to cope with acute physical emergencies, and seems to be the result of the reduction of HPA (hypothalamus, pituitary, and adrenal) function (Violanti & Patton, 1997; Violanit, Patton & Dunning, 2000). Repeated or prolonged exposure to traumatic stress may cause the body to react under emergency conditions, even when there is no actual emergency. Physical reactions to disaster experiences may include tension, fatigue, difficulty sleeping, somatic complaints of pain and body aches, being easily startled, nausea, appetite change, and changes in sex drive.

Previous studies indicate that the two central symptoms of traumatic stress are intrusive re-experiencing of the traumatic event and avoidance of stimuli that could trigger the re-experiencing of the traumatic event (Hyman, 2001). However, more difficult and alarming responses to emergency rescue work may result in traumatic

stress in firefighters. These responses may include: identification with the victims, feelings of helplessness and guilt, fear of the unknown and physiological reactions (Fullerton, et al., 1992). The result of this type of traumatic stress may be directly related to job burnout, and compassion fatigue at the minimal level of impact.

Literature supporting the impact of traumatic stress, and its implications on secondary trauma, suggest that individuals who have experienced multiple traumatic events fare worse than those who have experienced only a single traumatic event. In addition, those who have experienced interpersonal traumas are more distressed than those who have experienced only non-interpersonal events. This suggests that there is a possibility that finding elevated secondary traumatic symptom levels among firefighters of non interpersonal events may be an indicator of residual effects of a different traumatic event, or the individual may have other mental health difficulties not associated with trauma exposure per se (Green, et al., 2000).

Research indicates that emergency service workers are at a greater risk of developing health problems (Dean, et al., 2003). The nature of the stress response consists of reflexive physiological changes designed to prepare the individual to cope with acute physical emergencies. However, prolonged stress arousal is believed to play a causal role in hypertension, stroke, coronary heart disease, ulcers, migraine headaches, tension headaches, cancer, allergies, asthma, rheumatoid arthritis, and backaches (Matheny, et al., 2000). The United States Fire Administration released its U.S. firefighter fatalities list in 2002, citing heart attacks to continue to be the leading cause of firefighter deaths, killing 31 firefighters in 2002, representing almost one third of the 2002 total fatalities of firefighters for that year (U.S. Fire Administration, 2002).

## Compassion Fatigue

The great controversy about trauma induced by helping is not the question of “can it happen,” but rather “what shall we call it”. In reviewing references from PILOTS, PsychLit, Medline, and Social Services Index, it is apparent that there is considerable inconsistency in defining vicarious trauma, or simply put, a helper’s exposure to another’s traumatic material by virtue of one role as a helper (Stamm & Figley, 1999). Compassion Fatigue is the latest term used in the field of traumatology.

According to the literature, there are four terms commonly used to label this phenomenon: Counter transference, compassion Fatigue, Secondary traumatic stress, and vicarious traumatization (Stamm & Figley, 1996). Compassion Fatigue (CF) is the latest in the evolving and expanding research into the field of stress related dysfunctions. CF is believed to be a combination of secondary traumatization and burnout precipitated by services that bring professionals in direct contact with traumatic incidents and or persons impacted by a traumatic event. CF is the convergence of primary trauma (direct exposure to a traumatic event), secondary traumatic stress (i.e. vicarious trauma exposure), and burnout (Gentry, Baranowsky & Dunning, 2002). Based on current research studies, burnout, counter transference, worker dissatisfaction and other related concepts could mask what is believed to be compassion fatigue (Figley, 1995).

Compassion Fatigue is related to the cognitive schema of the helper, and stems from feeling and acting with deep empathy and sorrow for those who suffer, and may be used interchangeably with secondary traumatic stress disorder, which is nearly identical in symptomology to PTSD (Figley, 1995). The helper’s motivation is shaped in part, by

the satisfaction derived from the work of helping others. Compassion Fatigue is the convergence of primary traumatic stress, secondary traumatic stress and cumulative stress/burnout in the lives of helping professionals and other care providers. The symptoms of Compassion Fatigue can mimic the trauma that the victim of the traumatic incident is experiencing. Vicarious traumatization is a related term that also depicts the transmission of traumatic stress by observation. Primary traumatic stress may create a latent vulnerability to secondary traumatic stress and/or Compassion Fatigue (Figley, 1995).

The measurement used in this study is aptly named *The Compassion/Satisfaction Fatigue Self-Test for Helpers* (CSFT) (Stamm & Figley, 1996). The satisfaction component plays a vital role in the equation of human service. Factors related to the helpers ability to cope with the risk factors associated with helping others may well come from collegial support, social support, and issues of living such as the amount of time spent working, sleeping, visiting with family and friends, doing paper work, continuing education, shopping, and outdoor activities. It is further suggested that those who have more time to sustain relationships and engage in basic self-care tasks may be less likely to be at risk for the negative effects of care giving (Figley, 1995).

Compassion fatigue develops over time. The ability to feel and care for others may begin to erode the individual's ability to cope under strenuous circumstances. The helper experiences emotional blunting, aggravation and a lack of compassion when they were once very compassionate and empathetic. Job performance seems to diminish while forgetfulness and mistakes escalate. Persistent hyperarousal can get in the way of job performance. Job morale may decline and personal relationships may be impacted.

The health of the helping professional may also be affected, and maladaptive defense mechanisms such as alcohol and/or drug abuse, and domestic violence may be reactions to the stress (Matheny, et al., 2000). First responders and crisis workers absorb the traumatic stress of those they help, and by doing so they put themselves at risk (Beaton & Murphy, 1995).

Helpers who are most vulnerable to compassion fatigue are those with past histories of stress disorders, burnout and multivariate personal issues such as relationship problems or substance use issues. Exposure to difficult situations in which the helper is giving with little or no return or closure is also at risk (Catherall, 2002). Compassion Fatigue symptoms such as feeling burdened by the victims, rejected, feelings of inadequacy, and unprofessionalism, may become overwhelming, and extend well beyond the job site (Mitchell & Dyregov, 1993).

### Secondary Trauma

The field of traumatology has come to recognize that those who interact with trauma survivors are themselves exposed to traumatic experiences (van der Kolk, 1987). Specialists in this field of study call this secondary traumatic stress and is defined as a psychological effect that comes from behaviors and emotions resulting from helping or wanting to help a suffering person (Figley, 1995). The trauma survivor is exposed to a primary trauma and the accompanying traumatic stress; the helper is exposed to the trauma survivor, making the helper vulnerable to vicarious traumatization. The professional helper may not be involved with the survivor until after the trauma has occurred, and thus subject to secondary exposure. The exception is in the case of

disasters, where helpers may be on the scene either while the disaster is still in progress or while the victims are still being rescued (Catherall, 2002).

Violanti, Patton, and Dunning (2000), describe in their work a form of dependent behavior labeled as “counter disaster syndrome”, characterized by physical and/or time pressures. The disaster worker may see themselves and their work activities as essential for the success of the disaster relief effort. They become completely involved in the response effort, often at the expense of their own well-being. Consequently the risk of their experiencing physical and psychological exhaustion increases in the process. These demands and self-induced expectations often encourage over involvement in the situation (Bass & Yep, 2002).

Secondary traumatic stress responses resemble primary traumatic stress and follow the same emotional, cognitive behavioral and biological patterns. Symptoms may present immediately after exposure or be delayed, they may be acute, or become chronic and last longer than three months (Hyman, 2001). Secondary exposure to a traumatic incident focuses on the development of traumatic symptoms; however these traumatic symptoms do not qualify for Post Traumatic Stress Disorder. Vicarious traumatization and compassion fatigue are other terms used in the mental health profession for secondary traumatic stress. Regardless of the term there is indication that first responders and the helping profession in general are susceptible to the development of trauma symptoms due to the vicarious exposure to traumatic events on the job (Catherall, 2002).

First responders, including peace officers, Emergency Medical Technicians, search and rescue workers and firefighters are at-risk for secondary trauma due to their

exposure to both the trauma of the event and the suffering of the victims (Baldwin, 2001). Secondary traumatic stress may interfere with levels of functioning at work and in the individual's personal life. Repeated exposure to emergency events in which there is human suffering may put a first responder at risk for bio-psychosocial problems, and decreased levels of functioning on the job, placing the individual at a higher risk for developing secondary traumatic stress (Hyman, 2001). Understanding the unique stressors faced by rescue workers may also help us recognize how these stressors may affect response workers on the job.

Firefighters who directly experience or witness life threatening danger or physical harm, exposure to death, bodily injury, or maimed bodies during rescue work may suffer chronic traumatic effects long after the event. Extended exposure to danger, fatigue, weather exposure, or sleep deprivation may be additional demands made on a firefighter while on a disaster call, making the firefighter more vulnerable to chronic stress. Intense emotional demands on firefighters, such as searching for survivors or interacting with grieving family members, extends the firefighter beyond their capacity to handle their own stress reactions, and put them at risk for traumatic stress (Casey & Leger, 2000).

#### Post Traumatic Stress Disorder

Post Traumatic Stress Disorder, or PTSD is a complex psychiatric condition, triggered by a variety of traumatic events, particularly those that include a threat to life. When the victim is exposed to situations similar to that which caused the onset of PTSD, acute, severe, or extreme episodes of mental anguish and anxiety may ensue. Intrusive thoughts, nightmares, and "flashbacks" may accompany the re-experiencing of

the traumatic event and cause a type of reliving of the event (Davidson, 2000).

Although PTSD is not a component variable in this study, it is prudent for this study to address PTSD as a possible diagnostic sequence when studying the effects of trauma work on first responders such as firefighters.

Coping with each traumatic experience may decrease a person's perceived internal as well as external resources, which exacerbates existing stress levels. In this cycle of compounding stress and diminishing resources, each additional traumatic exposure may be experienced as more severe (Hyman, 2001). The severity, duration, and proximity of an individual's exposure to the traumatic event are the most important factors affecting the likelihood of developing PTSD (Nutt, 2000; Wagner, et al., 2000). In studies on PTSD and trauma work, there are clear indications that the majority of people who have been exposed to a trauma do not subsequently develop symptoms of PTSD. However, lower cognitive abilities and maladaptive attribution style may be sources of vulnerability, as well as poor post-trauma adjustment, and lack of support systems (Grey, 2000).

The clinical management of PTSD is complicated by the high rates of co morbid psychiatric disorders that often accompany the disorder. In particular, major depression, disassociative identity disorder, anxiety disorders, substance abuse and antisocial behavior. Early intervention is desirable to diminish or prevent the development of acute PTSD, which may also prevent the development of the associated co-morbid disorders and other psychiatric complications (Bass, & Yep, 2003; Hidalgo, & Davidson, 2000; Wagner, et al., 2000).



## Job Stress and Burnout

Burnout or cumulative stress is the state of physical, emotional, and mental exhaustion caused by a diminished ability to cope with one's environment resulting from the high demand characteristics of daily living. It is a depletion of the ability to cope with one's environment (Figley, 1995). High levels of cumulative stress in the lives of first responders negatively affect their ability to be resilient, making them more susceptible to Compassion Fatigue and burnout, which negatively affects absenteeism, job productivity, and physical and mental health (Wellbrock, 2000).

Burnout is the result of prolonged frustration, powerlessness, and a perceived inability to complete one's desired goals. Some of the psycho-physiological dynamics of burnout include sleep disturbances, headaches, irritability, aggression, and exhaustion. Psycho-sociological symptoms may appear as cynicism, low motivation, problems with relationships, and a drop in work performance (Valent, 2002). According to Figley (1995), symptoms of burnout are a result of frustration, powerlessness, irritability and aggression. Physical and mental exhaustion may accompany these symptoms as well. Further, job burnout seems to be an occupational hazard for those in the helping professions namely firefighters, peace officers, and emergency medical personnel (Casey & Leger, 2000).

The dialectic of trauma constantly challenges the person's emotional balance. Psychosocial reactions to burnout may include feelings of cynicism, anger, helplessness, and sadness. Job performance seems to diminish while forgetfulness and mistakes escalate. Persistent hyper arousal can get in the way of job performance, and job morale

can decline. Personal relationships can be compromised, and one's health may also be affected (Matheny, et al., 2000).

### Substance Abuse and Trauma Work

Substance abuse may be an indicator of problems in adaptation. How a person manages their lives, problem solves, and cope with stress may be an indicator of maladaptive coping mechanisms. With the inclusion of Post Traumatic Stress Disorder in the DSM-III-R, (1992) the mental health profession has come to recognize that symptoms surrounding overwhelming life events can have devastating effects (Gold & Slaby, 1991; van der Kolk, 1987). Strong relationships among stress, alcohol consumption, and emotional problems, with connections between stressful life events and depression effect both men and women with similar results (Bray, et al., 1999).

The use of drugs and alcohol may be used to alleviate symptoms of job stress and burnout, and may be obvious, or subtle and indiscrete. Sleep disturbances and nightmares are problems that alcohol may relieve temporarily, as it suppresses dreaming as well as REM sleep. Sedative-hypnotic drugs can be sought for self-medication of insomnia, anxiety, agoraphobia and flashbacks. Drug stimulants may offset emotional numbing, isolation, depression and anhedonia, while narcotics may be used to ease physical pain associated with psychosomatic conditions, (Gold & Slaby, 1991). Research has indicated that stressors are highly predictive of drinking problems among those who rely heavily on avoidance coping strategies (Bray, et al., 1999).

## Hardiness, Resiliency, and Job Satisfaction

Emergency service workers must respond to the disaster, and to disaster victims as part of their job duties. They are trained professionals in handling recovery of property and human victims of disasters. Firefighters who experience the intensity of disasters for long periods of time, whether directly involved, or over the course of their career, can experience a variety of psychological reactions (Wee & Myers, 2002).

Although exposure to traumatic incidents may generate many negative reactions, working in traumatic contexts may also generate positive outcomes as well. High performance expectations coupled with opportunities to perform at a high level may result in traumatic experiences being perceived as rewarding. An enhanced sense of professionalism, an opportunity for personal growth, stronger emotional bonds with significant others and a heightened awareness of the value of life may be indicators of a resilient personality, and further an underlying sense of hardiness and accomplishment in the individual (Violanti & Patton, 1997).

Resilient individuals have some common adaptive behaviors. A strong commitment to self, they take action, they see problems as challenges and are willing to seek solutions. They have positive attitudes, high aspirations, and a sense of purpose. Positive outcomes and experiences reinforce these attitudes. Previous research indicates that people who are resilient display an appealing temperament, are above average in intelligence, demonstrate self-efficacy, and have a good command of social skills. They have a good sense of humor, and are attractive and appealing to others. The latter attributes help foster strong relationships with both peers and other social support networks (Charity, 2002; Paris, 2000; Waysman, Schwarzwald & Solomon, 2001).

However, resilience may mask some maladaptive coping mechanisms that need to be better understood with more study. One researcher suggests that one's ability to use good coping skills under stress may later experience delayed stress reactions, leaving the person vulnerable, and without immediate care (Moran, 2002). Previous research in this area suggests a need to consider the adaptive coping methods employed by professional helpers in responding to the difficulties associated with their job. Positive coping styles provide a sense of security, which reduces stress reactions, guards against fear, anxiety, and depression associated with separation and loss (Bandura, 1997; Hyman, 2001; van der Kolk, 1996).

### Support Systems

According to Mitchell & Dyregov (1993), the essential feature of a traumatic event is that it raises concerns about the person's ability to be in a place of potential threat to life, safety, or security. Trained professionals following procedure feel less threatened by their often-hazardous experiences because they have followed procedure and have thus contained the threat to themselves and their team. When firefighters are exposed to fires that are classified as disastrous, there is the threat to safety, and anxiety for the safety of the crew. When the fire is contained, residual physiological as well as psychological reactions may continue. The devastation a fire can leave reminds those present of the frailty of human life and can trigger the individual's sense of vulnerability (Hyman, 2001).

Firefighters are in a special position as they are able to exercise debriefing work among crewmembers in their firehouses at the end of a call. Because fire crews live at

firehouses while they are on call, they are able to discuss in detail all the components of traumatic experiences as a group. Further, their experiences are similar, since they work as a team. Studies have indicated that personal and environmental resources available to the individual can help foster the processes of adaptation and resolution of traumatic stress. Social support has been found to be related to adjustment and well-being, and can address some of the needs arising during a crisis (Figley, 1986; Hyman, 2001).

When a firefighter is able to debrief with their crew, and feels a sense of relief, this is relative to the infant who experiences a secure attachment bond in the presence of a threat. Those firefighters who experience secure attachment bonds in childhood would recreate similar bonds in later years. Research has suggested that firefighters who are able to secure social attachments are less stressed than workers who do not perceive their social world to be available or capable of supporting them and meeting their needs when vulnerable. (Hyman, 2001).

Identification with the victims in rescue work is a complex cognitive process of emotional involvement by which we come to see others as being similar to ourselves. Over dedication, meaning the tendency for a first responder to go on working under difficult conditions that are normally intolerable is frequently reported during a disaster. Supervisors who are in charge of firefighters may recommend that the worker increase an emotional distance between themselves and the victim so as to decrease the stress of the experience (Fullerton, et al., 1997; McCarroll, et al., 1993).

Firefighters and paramedics are trained to have a team mentality. For the most part, this ready-made support system may help the worker handle a variety of disasters and/or traumatic incidents. Adaptive coping and defense mechanisms such as

repression, displacement, isolation of feelings, and what is known as “gallows humor”, allow the firefighter team to express their thoughts within the group (Miller, 1995).

During an emergency situation distress of workers are not usually observed on site. It is suggested that perhaps there is a certain persona that the worker must portray to their supervisor and colleagues. Although this behavior may seem stifling to most, the fact that the firefighter is doing their job, they are in reality facilitating their coping with doing what they were trained to do. Studies suggest that after exposure to a traumatic incident on the job, many of the personnel expressed the need for a post event briefing. These disaster personnel expressed feelings of fatigue, irritability, and the need for a transition from the disaster area back to normalcy. However in one study, involvement in professional counseling was frowned upon by disaster workers due to the perception that they may be ridiculed by fellow workers, or fired because they couldn't take the stress of the job (McCarroll, et al., 1993).

Professional intervention strategies may be advisable such as in house stress management, or critical incident stress debriefing. Well functioning workers who have good coping skills and a positive support system may fare well with a one-time intervention after a traumatic incident. However, where posttraumatic symptoms persist, or where the psychological problems relate to a long-term pattern of maladaptive functioning may continue well after the incident, extensive individual psychotherapeutic approaches may be appropriate. Experts in the field of traumatic stress debriefing suggest that in order to have the greatest impact, intervention services should be part of an integrated program within the department, and have full

administrative commitment and support (Figley, 2000; Miller, 1995; van der Kolk, 1996).

Recent strides in community support for first responders such as peace officers, firefighters, and paramedics have been popularized by Jeff Mitchell and his colleagues, known as Critical incident stress debriefing or CISD. The “Mitchell Model” has been implemented in public safety departments as primary intervention debriefing for first responders who are exposed to traumatic incidents. CISD is known as a structured intervention designed to promote the emotional processing of traumatic events through the ventilation and normalization of reactions, as well as preparation for possible future experiences (Mitchell & Everly, 1996; Miller, 1995).

According to the Mitchell model of Critical Incident Stress Management, criteria in which peer support and command staff might decide to provide a debriefing to firefighter personnel include: 1) if a group of first responders appear to be distressed after a call; (2) signs of stress appear to be severe; (3) personnel demonstrate significant behavioral changes; (4) personnel make significant errors on calls occurring after the critical incident; (5) personnel request help in dealing with the critical incident; (6) the event is unusual or extraordinary (Miller, 1995; Mitchell & Everly, 1996). Perceived social support on the job was related to decreased levels of post-disaster traumatic stress responses in disaster workers, and most disaster workers who reported higher levels of perceived social support had lower levels of secondary traumatic stress symptoms (Hyman, 2001).

While firefighters are able to utilize psychological debriefing techniques such as the Mitchell model, some may follow a continuum of psychological maladaptation to

the traumatic experiences of their job. Social support and psychological debriefing may not be adequate for some firefighters. To the contrary, a few studies have indicated that psychological debriefing is not enough. What has happened to the firefighter who does not feel better two weeks, one month, and three months after a traumatic incident? What may be occurring is that the individual may have a history of trauma that does not allow the person to process new traumas successfully (Alexander & Klein, 2001).

Treatments for helpers have spanned the gamut of suggestions, from management of daily life functions like sleep, food, exercise, and recreation, to contact with nature. Other experts suggest internal treatments such as peer, institutional, and personal help and support are helpful as well. And others suggest a more external mode of support such as a specialized team that provides outside perspective and mediates helper's roles in the community. Peer support in which helpers can engage in group discussions, exchange information, and provide support, help to minimize the likelihood of CF (Figley, 2002).

Based on this literature review, firefighters are at a higher instance in developing compassion fatigue and associated symptoms of burnout, due to the demands of their job. It can be assumed that the more time on the job, the more intrusive that compassion fatigue symptoms may be displayed. By virtue of constant exposure to traumatic events, it is expected that certain factors, including time and experience on the job, and social support, would mediate the impact that trauma work have on psychological functioning of firefighters. Job satisfaction may be the mitigating factor in the display of compassion fatigue and burnout in firefighters, and reduce the incidence of negative effects of trauma work.



Based on the literature, this study will investigate these questions. Does time on the job affect the level of compassion fatigue that the firefighter may present on the survey? It was hypothesized that the more time on the job, the higher level of compassion fatigue and burnout would be present. Conversely, less time on the job would be associated with lower levels of compassion fatigue and burnout. Secondly, a greater perceived job satisfaction lowers the level of compassion fatigue and burnout.

## CHAPTER 3

### METHODOLOGY

The current study examined the manner in which risk and protective factors influence the impact of trauma work on the current psychological functioning of a specific population. Based on the literature review, it is expected that certain factors, including time and experience on the job, would mediate the impact that trauma work has on the psychological functioning of firefighters. Specifically, the research expected to see that the more years on the job, the more psychological distress in the form of job burnout and compassion fatigue was to be expected. In addition, dispositional hardiness and current social support would confound the impact of trauma work on psychological dysfunction by way of job satisfaction, and social support. The researcher selected firefighters due to the likelihood of their experiences as first responders to trauma on a regular basis.

#### Participants

Participants for this study consisted of firefighters from the Carson City, Nevada area. Fifty-two Firefighters in Carson City, Nevada were invited to participate in the study, 39 were in attendance. Thirty-eight participants were male and 1 female. The mean age was 35.51. Valid information regarding ethnicity was given by 94.9% of the participants. Data results indicate 84.6% of the participants were Caucasian, 7.7% were

African American, and 2.6% were described as “other”. Two of the participants declined to state specific ethnicity. Participants indicated that 15.4% were unmarried, and 84.6% were married. Job titles for the participants in this study were 46.2% were firefighters, 5.1% were paramedics, 15.4% were Captains, 17.9% described themselves as firefighter/paramedics, and 15.4% of the participants were in training. With regard to education, 53.8% of the sample held secondary degrees, or the equivalent in continued education and training. See Appendix V, Table 1, Table 2 and Table 3 for frequency statistics of ethnicity, marital status, and job titles, respectively. Only firefighters who were currently employed by the fire service in Carson City, Nevada were invited to participate. Participants were invited via invitation from the Administrative Assistant of the Carson City, Nevada Fire Department (see appendix I).

All participants provided informed consent prior to filling out the surveys for the project (see appendix II). The participants completed the surveys on their assigned shifts at their assigned fire stations. To protect confidentiality, identifying information was removed from the Psycho-Social Questionnaire and survey prior to the instruments being turned over to the investigator. The investigator was on site during the completion of the surveys and questionnaires, and available for questions and clarification at that time.

Only participants who provided fully informed written consent were invited to participate. As part of the research protocol, participants who appeared unable to understand the purpose, methods, procedures, and potential risks of the study were to be excluded from participation. However, none of the participants in this study were

excluded. All ethical aspects in relation to conducting a research study that inquires about the emotional well being of a population were considered (Carlson, 1996).

### Measures

The data for this study was accumulated using a self-report questionnaire and a rating scale. This paper and pencil-testing model required the participant to respond to questions about their current experiences, behavior and attitudes. This technique relies on the ability of the person to report on the factors with some degree of accuracy. The primary reason for using the self-report questionnaire and survey is that it is less time consuming for the participants who were on the job during the implementation of the experimental part of the project.

The study used a correlation design with all data being collected in one phase from a specific group of firefighters. Variables investigated in this study were, compassion fatigue, job satisfaction, and burnout, and their relationship to the participant's time on the job. The study documented gender, age, ethnicity, years on the force, current relationship status, number of children, and educational background, on the general Psycho-Social Questionnaire (see appendix III). Because the purpose of this study was to investigate cognitive factors that may mediate the relationship between time on the job, job satisfaction and compassion fatigue, the Psycho-Social Questionnaire was necessary to identify any confounding relationships that may indicate other variables within the study (Grey, 2000).

The study consisted of two sections, the Psycho-Social questionnaire (PSQ), and the Compassion/Satisfaction and Fatigue Test for Helpers (CSFT) (Stamm & Figley,

1996) (see appendix IV), The PSQ and CSFT were selected for the specific purpose of attending to the variables surrounding compassion fatigue and job satisfaction in helping professionals. The creation of the PSQ by the investigator was to provide specific information required for the study (McLoud, 1994).

### The Psycho-Social Questionnaire (PSQ)

The PSQ includes a description of the participant's gender, age, marital status, length of experience as a firefighter, and general medical, psychological, and relationship health. Demographic information obtained from the study was helpful in discovering if there are other relationships relative to the participating firefighters and compassion fatigue, job stress, and satisfaction. For instance, in relation to gender differences, Meyers and Cornille (2002) compared the difference in intensity of symptoms reported by men and women in their study looking at the traumatic effects of working with traumatized children on helping staff. The study found that female workers reported more symptoms of anger, irritability, and anxiety related symptoms than their male co-workers.

Stamm (2002) suggests that social support, amount of time spent working, sleeping, visiting with family and friends, and general positive self care practices are variables that make the difference in the mental health of caregivers. Questions on the PSQ regarding relationship health identified variables important to the researcher in addressing the participant's ability to cope. Two issues not identified on the PSQ but identified in the course of administration of the experiment was sleep patterns and

camaraderie within the department, and will be revisited in the discussion chapter of this paper.

The firefighter's length of time on the job is the variable that may offer information such as confounding evidence in the relationship between compassion fatigue and job satisfaction. In one study of Child Protective Service workers who work more than 40 hours per week were compared to those who worked fewer hours. The 40 plus hours per week group reported more anger, irritability, jumpiness, exaggerated startle response, trouble concentrating, hypervigilance, nightmares, and intrusive thoughts and images than those who worked less hours per week (Meyers & Cornille, 2002).

To get a better understanding of the participant's professional qualifications and educational stature, the PSQ included school and career questions, such as high school standing, other degrees or certifications, current job title, and job satisfaction. These issues were relevant to the participants coping styles, social support, and goal orientations, and were relative to job satisfaction.

The general physical health questions are relevant to the physiology of job burnout and compassion fatigue. Significant medical conditions and recent hospitalizations were important to understand the participant's level of stress. The dates of the participant's last physical and dental exams were relevant due to the assumption that the participant is taking care of himself or herself, and are aware of any physical ailments at the time of the study.

The general mental health questions offered information relevant to the study as it identified if the participant was seeking assistance for mental health issues. If the participant indicated that they are not currently seeking mental health assistance, and

then presented high ratings on the Compassion Satisfaction Fatigue Test, than this information is relevant to understanding how the participant copes with current stressors. The question regarding substance abuse was relevant to maladaptive coping mechanisms that were addressed in the literature review section of this study. Questions about Critical Incident Stress Management team utilization was used to understand if current methods of stress debriefing are being utilized in order to understand its relevance in the firefighter's regiment of debriefing strategies, and training (Meyers & Cornille, 2002).

Social and relationship health is vital to the firefighter's ability to be supported in the face of compassion fatigue stressors. The literature indicates that family structure, collegial support, and positive intimate relationships are part of a positive mental attitude, as well as an indicator of a resilient personality. Participants were also asked to indicate whom they would go to if they needed to talk to someone or needed advice. Participants were also given the opportunity to offer any other information they believed necessary for the researcher to know on the last part of the questionnaire. Information was made available in the box indicated for this purpose, and discussed in the discussion chapter of this study.

#### The Compassion Satisfaction/Fatigue Self-Test for Helpers (CSFT)

Stamm and Figley (1996), created the CSFT for Helpers in order to measure the level of job burnout and compassion fatigue, as well as levels of job satisfaction of helping professionals. The CSFT estimated compassion status, how much risk the participant is in as to perceived secondary trauma impact, and degree of satisfaction

with helping others. The self-test allowed the participant to estimate their compassion status: how much at risk they were of burnout and compassion fatigue the degree of satisfaction derived from helping others (Stamm & Figley, 1996; Stamm & Figley, 1999).

The CSFT has been established, presented, and published in several articles, and widely accepted as an instrument for research in studies which target compassion fatigue, vicarious traumatization, secondary traumatic stress, and burnout in the helping profession. This self-administered survey examines compassion satisfaction, with a high score indicating better satisfaction with care giving. Burnout is identified with a high score meaning a higher risk of burnout in the workplace. Compassion fatigue is also indicated with higher scores for higher risk of work related stress (Figley, 1999; Figley, 1995; Stamm, in press; Stamm, 1997; Pearlman & Saakvitne, 1995).

The CSFT asked questions in a positive view. Stamm and Figley (2002) understood that the manner in which questions were asked made a difference in the answer to the questions being asked. What they found was that if the question was asked in a negative connotation, then the answer would be missing the positive side of the participant's work. A negative, symptom-focused format would create a response bias.

Previous research utilizing the CSFT indicates there were two uses for the CSFT. The first use was to establish the constructs of secondary exposure to traumatic experiences. Secondly, the CSFT was utilized as a personal exploration of the participants risk for the positive and negative aspects of helping. In this instance, knowing that working under the stress of traumatic events affects the helper, can help in



identifying and placing practices and policies that enhance the probability of satisfaction and reduce the risk of burnout and compassion fatigue in the helping professional (Figley, 1995).

The response format for the CSFT uses a Likert scale: 0- indicating a “never” answer and 5- indicating a “very often” answer. The advantage of this type of self-report method was that it is relatively easy to administer and interpret, and generally acceptable to research participants (McLoud, 1994). The first forty-five questions are relevant to the participant, their attitudes, feelings, and personal beliefs. The last twenty-one questions are ideals and thoughts about being a helper and address the helpers work environment. Scoring instructions are included, indicated items for scoring was circled, checked, or an x was marked. The participants were given the opportunity to see their scored results if they chose to do so. The survey indicated that the scoring is for research purposes and should be used as a guide, and not for confirmatory information, or diagnosis (Figley, 1995).

The question of relevance concerning the use of the CSFT that studies compassion fatigue and satisfaction in the same survey was considered. Stamm (2002) believes that there is a balance between these two dynamic entities. Caregivers who believe that they may have Compassion Fatigue Syndrome but who also like their work because they feel positive benefits from it may feel a sense of satisfaction. However, if Compassion Fatigue and Burnout are combined, than a limited amount of energy is available to sustain a belief that the firefighters work is worthwhile, hence a sense of diminished satisfaction of the job.

The participant's potential for Compassion Satisfaction is indicated as: 118 and above indicates an extremely high potential; 100-117 indicates a high potential; 82-99 indicates good potential; 64-81 indicates a modest potential and below 63 indicates a low potential for Compassion Satisfaction. A 36 or less resulting in extremely low risk indicates the participant's risk for Burnout; 37-50 indicates a moderate risk; 51-75 indicates a high risk; 76-85 indicates extremely high risk. The participants risk for Compassion Fatigue is indicated by; 26 or less resulting in extremely low risk; 27-30 indicates a low risk; 31-35 indicates a moderate risk; 36-40 indicates a high risk; and 41 or more indicates an extremely high risk (Figley, 1995).

Scoring procedures for the CSFT indicate that there are three components to the scoring totals. Twenty-three items of the survey are Compassion Fatigue related. Seventeen items of the survey are Burnout related. Twenty-six items of the survey are Satisfaction related. Compassion Satisfaction is interpreted as higher scores mean better satisfaction with ability to care give (e.g. Pleasure to help, like colleagues, feel good about ability to help, making contributions to the community). Burnout is interpreted as higher score means higher risk for burnout (feel hopeless and unwilling to deal with work, onset gradual as a result of feeling one's efforts make no difference or very high workload. Compassion Fatigue is interpreted as the higher the score the greater the risk for Compassion Fatigue symptoms of work-related PTSD, onset rapid as a result of exposure to highly stressful care giving (Figley, 1995).

## Procedures

The Administrative Assistant that represents the firefighters at the Carson City Fire Department obtained permission to access firefighter staff as participants in the survey. A brief description of the study was sent to the Administrative Assistant of the Carson City Fire Department in the form of an invitation for participation in the study. The author requested voluntary participation in the survey by the firefighters, and participants were asked to sign consent forms before administration of the surveys. The researcher explained the rationale of the survey and clarified the instructions on the survey forms. Each participant detached the consent forms from the survey packet before being handing the survey and questionnaire to the researcher. The study was conducted at the place of employment of the firefighters, in consideration of the least obtrusive impact on the firefighters who were on call work schedule. An identification number was appointed to each survey for data entry purposes only. Only the last four digits of the participant's social security number, and first and last name initials identified the surveys. The survey took about 15 minutes on average to complete.

The raw data was entered into SPSS for Windows (Version 6.1) statistical analysis format to explore covariates among the continuous variables and examine their relationships. Missing data and information that was not applicable to specific participants was identified on the data as a 0. Every effort was made to retrieve any missing data before the completion of the research.

Descriptive statistics for targeted variables were examined in order to detect out-of-range values, evaluate the presence of outliers and inspect the distribution of each of the major variables. After corrections for outliers and kurtosis were consulted to determine

if variables were normally distributed, the data was analyzed to determine if the hypothesis of this study could be solidified. The independent variable in this study was the firefighter's time on the job. The dependent variable was the level of compassion and/or satisfaction in their job, and burnout. Statistical analysis of the data was used to indicate if the independent variable would impact the dependent variable. If so, when the independent variable (time on the job) varies, then the dependant variable should have also varied (Carlson, 1996).

The primary question addressed in this study was: Does time on the job affect the level of compassion fatigue and burnout that a firefighter may experience? It was hypothesized that the more time on the job, the greater the level of compassion fatigue and burnout will be present. Conversely, less time on the job will present lower levels of compassion fatigue and burnout. Secondly, does a greater perceived job satisfaction lower the level of compassion fatigue and burnout?

#### Cultural Relevance Issues

The translation of instruments is a necessary step toward making them cross-culturally applicable. Various factors summed up by the concept of culture might influence the validity of theoretical constructs as well as instrumentation. These factors may include tradition, religion, or other belief system and customs. Reliable and cross-culturally valid data collection, as well as interpretation of findings and results requires familiarity with the respondent's culture. This project made every effort to identify and respect culturally relevant issues that may have impacted the results of the study as well as to respect gender, religious, and political beliefs of those who participated in the

study. The researcher was available at all times during the study to answer questions, assist in completing the study, as well as to observe any relevant cultural issues that may have arisen during the course of this study.

## CHAPTER 4

### RESULTS

#### Data Entry and Screening

Prior to conducting the main analyses, the raw data was double entered into an SPSS spreadsheet. Following data entry, descriptive statistics were calculated for each variable, including frequency counts, skewness and kurtosis statistics. Descriptive statistics for targeted variables were examined in order to detect out-of-range values, evaluate the presence of outliers and inspect the distribution of each of the major variables. In cases where the out-of-range values were present, the out-of-range value was corrected. When outliers ( $\pm 2.5$  standard deviations) were present, the raw data was examined to ensure that the outlier was not a result of data entry error. If the outlier did not represent a data entry error, participant characteristics were evaluated in order to determine if the participant was a valid member of the firefighter group. If the participant was a valid member the data was retained in the analyses. However its influence was minimized in the analysis by reducing it to the next highest (or lowest) value in the distribution of scores.

Only one outlier was found and transformed. No other data was removed from the data set. Following the examination of the data for out-of-range values, outliers, and non-normal distributions, descriptive statistics were calculated for demographic

variables. Subsequent analyses were conducted to determine if there were significant differences among the groups on these demographic variables. None were significant.

### Primary Analyses

The primary questions for this study addressed time on the job, and if it affects the level of compassion fatigue that firefighters may present. The hypothesis was that the more time on the job, the higher the level of compassion fatigue and burnout that would be experienced by the firefighters. In contrast, less time on the job would be associated with lower levels of compassion fatigue and burnout. Secondly, it was also hypothesized that greater perceived job satisfaction would be associated with lower levels of compassion fatigue and burnout.

In order to address the first hypothesis, the group was divided according to number of years on the job, with those having less than 10 years of service included in the low time on job group ( $n=19$ ) and those with 10 or more years of service included in the high time on the job group ( $n=20$ ). Analysis of variance (ANOVA) was used to compare the low and high groups on the CSFT components, Compassion Fatigue, Burnout, and Compassion Satisfaction. Descriptive statistics for each group on each CSFT component are presented in Table 7. Although mean differences were in the predicted directions, results of the ANOVAs indicated that there were no significant differences between the high and low groups for Compassion Satisfaction ( $F = .62$ ,  $df = 1, 37$ ,  $p = .44$ ), Burnout ( $F = .75$ ,  $df = 1, 37$ ,  $p = .39$ ) or Compassion Fatigue ( $F = .63$ ,  $df = 1, 37$ ,  $p = .43$ ). Correlations were also calculated between each of the CSFT components and number of years on the job, to examine the relationships among these

variables. Pearson correlations between time on the job and Compassion Satisfaction, Burnout, and Compassion Fatigue were -.26, .15, and .03, respectively. None of these correlations were significant ( $p < .05$ ). The second hypothesis could not be directly evaluated due to the lack of variability in the job satisfaction rating provided by the firefighters. All participants reported being satisfied with their jobs.

### Secondary Analyses

In order to provide a more in depth analysis of the study results, descriptive statistics were used to investigate participant's responses on the Psychosocial Questionnaire and the Compassion Satisfaction/Fatigue Test. The results of these analyses are presented in the following sections.

#### Analysis of the Psycho-Social Questionnaire

Time on the job, which is the independent variable in this study, was entered into the data and presented in Appendix V, Table 4, and 12.8% of the participants were in training as signified by a 0-time on the job. Participants who indicated that they had 10+ years on the job represented 12.8% of the group. The rest of the participants were relatively distributed between 0 and 34 years on the job (see Appendix V, Table 4 & Figure 1).

No significant data was analyzed from the general physical health component of the questionnaire. Of the 39 participants, only one participant suggested that their general health was fair, as compared to 38 participants who indicated that their general health was good. Three participants cited an ongoing medical condition, and two



participants indicated that they had been hospitalized for a medical procedure within the last year.

The General Mental Health component of the study indicated that 10 participants had sought mental health services consisting of; Grief therapy (1), Marriage and Family Therapy (3), and Substance Abuse Counseling (1), the others did not specify the type of services they received. When asked if the services were helpful, 5 participants indicated yes, and 4 indicated no. One participant did not state their outcome. Three participants indicated that they had at some time had problems with alcohol or drugs. Fourteen participants indicated that they had taken advantage of a Critical Incident Stress Management team when they needed to debrief, however none of the 14 indicated if the debriefing was useful.

In the Social and Relationship Health component of the Psycho-Social Questionnaire, 100% of the participants indicated that their relationships with their families are positive. Participants indicated that they went to a variety of people when they needed to talk to someone or get some advice. Results indicated that 7.7% would not go to anyone for advice; however 92.3% indicated that they would go to one or more people for help if they needed it (see Appendix V, Table 5).

#### Analysis of the Compassion/Satisfaction Fatigue Self-Test for Helpers

Descriptive statistics for compassion satisfaction, burnout, and compassion fatigue are entered in Appendix V, Table 6. Job title was compared with generalized stress (compassion fatigue + burnout), and then with job satisfaction. The results indicate there is an increase in stress response for those respondents who stated they were

Captains in their job description. However, job satisfaction was only slightly lower in the participants who were identified as Captains than the participants who were not Captains (see Appendix VI, Figures 2 & 3). The results did not substantiate the hypothesis of this study, but does indicate that Fire Captains are subject to other variables that may slightly elevate stress, and warrants further investigation.

The time on the job variable was examined using a frequency distribution histogram (see Appendix VI, Figures 4 & 5)). Mean stress Compassion fatigue and burnout) and compassion satisfaction was analyzed with only slight differences in mean stress due to one outlier result in the data. There were no other significant differences in the data investigation for compassion fatigue ( $SD=12.5$ ), burnout ( $SD=10.3$ ), or job satisfaction ( $SD=11.6$ ) (see Appendix V, Table 4b).

## CHAPTER 5

### DISCUSSION

The current study examined the relationship between compassion fatigue and burnout, and job satisfaction and compared these components with time on the job for firefighters. The differences between the groups were in the expected directions. For example the firefighter group in 10 or more years of service, had somewhat higher scores on the CSFT, burnout and compassion fatigue components, and a somewhat lower score on compassion satisfaction component. Similarly there is a negative correlation to time on the job and compassion satisfaction, positive correlations between time on the job and compassion fatigue and burnout. Although these correlations were not strongly significant, they do suggest association between years of service and fatigue. It may be that other variables play a stronger role in the development and maintenance of compassion fatigue and burnout than expected.

The sample as a whole were much lower in severity scores than previous research, which may indicate that confounding factors such as a rural setting, social support, and high peer support may be a protective factor, and may be protective factors that inoculate the development of compassion fatigue and burnout in this population. It is interesting to note that the current sample indicated a low prevalence of divorce. Research indicates that strong social supports have a protective factor in the onset of compassion fatigue, and burnout.

The present study focused on the hypothesis that the more time on the job, the more a firefighter will present with compassion fatigue and job burnout symptoms. Participants were asked to complete the PSQ and the CSFT to assess the relationship between time on the job and the presence of compassion fatigue, job burnout and job satisfaction. However, the participants in this study, did not present with significant distress, rather they were relatively consistent in presenting with high compassion satisfaction regardless of their time on the job.

Time on the job was compared with compassion fatigue, burnout and job satisfaction. The results indicate there is no substantial relationship between time on the job and compassion fatigue and burnout. Time on the job also did not mitigate a higher incidence of compassion satisfaction, but results were relatively similar across time. Previous studies concluded that only time on the job affected psychological distress, and experience was a mitigating factor in job stress and burnout (Dean, et al., 2003). This study did not concur with this previous study, and further sided with those studies that concluded that social support was a positive solution to negative factors associated with first responders such as firefighters (McCarrol, et al., 1992; Patton & Smith, 1997).

Job title was compared with generalized stress (compassion fatigue + burnout), and then with job satisfaction. The results indicate there is an increase in stress response for those respondents who stated they were Captains in their job description. The results do not substantiate the primary hypothesis of this study, but does suggest that Fire Captains by nature of their job duties may be subject to variables that slightly elevate stress levels above other firefighters. The time on the job variable was entered into the data in with

no significant difference in the data investigation for compassion fatigue, burnout, or job satisfaction.

The results of this study were not conclusive in comparison to previous research of this nature (Alexander & Klein, 2001; Regeher, Hill, Knott & Sault, 2003). This may be due to a variety of reasons. The sample size was small, 39 of the 52 firefighters currently employed at the Carson City Fire Department participated. A larger population may have shown greater results. Further, Carson City is a small town, and indicative to a rural community setting. Support for the firefighters is high and the community is very close knit. The recent large scale fires that consumed much of the local mountain foliage had occurred only two weeks prior to the experiment, and staff at all the fire stations stated that morale was still high due to the result of a successful emergency call. It is suggested that rural communities such as Carson City have a unique and supportive partnership within other departments such as Police, and Community Hospital services, and other community resources, creating an availability of support more readily accessible (Casey & Leger, 2000).

In studies that examined the role of perceived social support and well-being of disaster workers such as firefighters; support of family, friends and work supervisors was perceived to be an important resource for countering the negative effects of disaster work. Support from colleagues was found to moderate negative effects of occupational stress. Further, those first responders with more extensive contacts such as an intimate relationship contact with close friends and relatives, church membership, and formal as well as informal group associations fared better than their colleagues who did not have such support systems (Casey & Leger, 2000). The results of this study begin to point in

this direction, as evidenced in participants identifying social supports, and family relationships. However, more information is needed to make a clearer assumption.

These specific issues substantiate the belief that when people feel supported and valued, they experience a sense of high-efficacy and lower levels of distress. Other studies of this nature suggest that when people feel supported and valued, they experience lower levels of distress, and certainly, community support and appreciation are mediators for positive self-efficacy. Self-efficacy has been found to be associated with lower levels of traumatic stress symptoms, depressive symptomatology, and physical manifestations of stress in firefighters (Regeher, et al., 2003). This study addressed issues related to mental and physical health, and concluded that the majority of the participants reported being physically and mentally healthy. A larger sample may offer more substantial information and conclusions.

In observing the participants and their interactions with their colleagues, there was positive interaction among the entire staff. They discussed incidents among each other, regardless of the researcher still present in the room. This study identified only two participants who did not connect with another person when they needed advice or to talk. Thirty Seven of the participants identified at least one person they felt comfortable to discuss issues with, more participants chose two or more confidants. This may be evident in the high job satisfaction results of this study; however there is not enough information to solidify this notion from this study.

Human resiliency and adaptation skills are vital to firefighters who work in difficult and often traumatic situations (Hyman, 2001). Studies that focused on psychological responses of rescue workers, stress was alleviated by the availability of

social support, positive and appropriate leadership, level of training, and the use of social, cultural, and familial rituals (Fullerton, 1992). The availability and quality of social support has a significant bearing on recovery after experiencing a traumatic event (Paton & Smith, 1997). Other studies suggest that high levels of social support may play a significant role in buffering firefighters from the development of fatigue, burnout, and subsequent PTSD symptoms over time (Alexander & Kline, 2001). Positive coping mechanisms may have also helped in the ability to view traumatic experiences in a more optimistic way and to confront difficulties rather than withdrawing or avoiding, but rather utilized support systems to handle compassion fatigue and burnout (Davidson, 2000).

The least surprising result of this study is the high level of job satisfaction. Earlier studies of first responders have indicated that providing care for others is personally gratifying (Alexander & Kline, 2001). The PSQ question indicated high job satisfaction as identified by 100% of the participants being satisfied with their job. In spite of the participants identified as Captains higher level of compassion fatigue on the CFSQ, their levels of compassion satisfaction were only slightly lower than the other participants who were not Captains, suggesting that they were generally as satisfied with helping as the other participants even with higher burnout scores.

The researcher identified Critical Incident Stress Debriefing as an identifying factor in psychological mental health on the PSQ, to investigate if there was a mitigating factor in its use for this population. Previous studies suggest that debriefing is critical for the participant to regain perspective in the augmentation of the human response to traumatic events. Specifically positive cognitive interpretations associated with adaptive

responses to stressors. Further investigation indicated that lower levels of emotional arousal and more positive personal outcomes occur in participants who attend debriefings (Eid, Helge & Weisaeth, 2001; Naser & Everly, 2001). Fourteen of the respondents in this study indicated that they had participated in a CISM debriefing; the data did not indicate if the participants who attended debriefings changed the data results of this study. However, it seems to point in the direction of support on the job, and available help for the firefighters at this particular department.

Trainees were included in this study, with no significant difference in the level of compassion fatigue and burnout than those participants who were seasoned firefighters. What is interesting in the data is that the trainees indicated similar levels of compassion satisfaction as the other participants who had more time on the job. Other studies have attempted to identify mitigating difference in trainees versus seasoned employees with similar results. In those studies the trainees identified less depression and lower levels of trauma symptoms, which was not a target of this project, but worth investigation (Regehr, et al., 2003).

#### Limitations of this Study

This study has a number of important limitations that should be noted. First, the participants in this study were specific to firefighters, and thus a restricted sample of first responders who may experience secondary traumatic stress in the form of compassion fatigue, and job burn out. It is not clear to what extent these findings would generalize to a more representative community of helping professionals who may also be subject to experiencing secondary traumatic stress on the job. Another issue was that



there are disadvantages to the self-report method of the study in that the PSQ and the CPST are open to the subjective interpretation of the participant.

Another concern is that the respondents from the invited population of potential participants may be select. It is not clear how they would differ from those who did not respond. Individuals who choose to answer a questionnaire about their history of trauma may have had more traumatic experiences than those who choose not to respond. Conversely, those who have experienced interpersonal traumatic events may not be agreeable to volunteer if they have not already dealt with the issue.

The natural process of elimination in which firefighters with exceedingly high levels of secondary traumatic stress might have left the job, may also bias the study's sample. Voluntary participation in this study might have also resulted in the sample bias (Hyman, 2001). The complexity of human responses should also be considered when evaluating this study's results.

Factors such as personality, prior psychiatric co-morbidity, types of disasters and the type of prior traumatic experiences may mediate responses from the respondents. First responders who have a history of early trauma, and difficulties with personal issues may rate higher in compassion fatigue and burnout. Unresolved issues working as a first responder may also impact the workers ability to bounce back. In this study, these issues were not evident by the projects survey and questionnaire, however, is an important consideration when addressing the impact of trauma work for this population. Cultural factors such as ethnicity and religiosity may also influence one's perception of the stress response and may also be a factor in one's ability to cope under stressful conditions due to different social support perceptions. Although beyond the scope of

this study, these factors should be regarded as potentially confounding variables that might have influenced the results of this study.

The firefighter culture may have also affected how participants responded to the survey since to admit that an event was personally traumatic may have been understood by participants as evidence of weakness and this may have influenced the degree of disclosure by participants (Dean, et al., 2003). Also, studies suggest that there is a firefighter culture of gallows humor and suppressing emotions which may have influenced the outcomes of this study, but this was not conclusive, nor a target of investigation in this study (Alexander & Kline, 2001).

Respondents, who may have decided to comply with perceived expectation, may have chosen not to provide all the requested data, or provide responses to all items. Social desirability may have biased the participants responses, and some respondents may have not have trusted their anonymity. Anxiety about confidentiality and perceived threat to career prospects may have also confounded responder results, although the researcher made every attempt to clarify the importance of anonymity (Alexander & Kline, 2001).

The low sample of women and ethnic minority firefighters limited the ability to identify any differences between cultures and the variables to be studied. This study was unable to demonstrate that women in a highly stressful, male-dominated profession may or may not have the same degree of commitment as their male counterparts due to the small number of women on the Carson City Fire Department. However, in other studies that addressed issues such as sufficient support provided within the workplace suggested that gender differences might be a factor (Wellbrock, 2000). In this study, the

researcher observed that there appeared to be equal and supportive care extended to all firefighters regardless of gender differences, and there were no differences in the data results due to gender differences. Similar job satisfaction and compassion fatigue results among all firefighters in the department.

### Further Research and Contributions

The results of this study contribute to the existing body of knowledge on the impact of trauma work on first responder populations. This study looked at compassion fatigue, burnout, and satisfaction of the job, and sought to identify outcomes of trauma work and time on the job as possible factors that impact the well being of firefighters. Further research is needed in order to better understand the relationship between mental health and the reactions of first responders after a traumatic incident. It would be beneficial to investigate how perceived social support is related to traumatic stress symptoms in firefighters. This finding would be important to future training and debriefing strategies for the firefighter, and may offer them protection from emotional harm by intervening before the trauma on the job leads to secondary trauma symptomology (Hyman, 2001).

Family and community support is critical for firefighters during the transition period between the traumatic incident and the workers ability to return to a sense of normalcy. However, successful transitions are not always the case. Unfortunately, drinking may provide a social context for the worker and the opportunity for mutual support (McCarroll, et al., 1993). The use of alcohol and other mood altering drugs

occur if the worker has difficulty in dealing with traumatic events, and is a topic of study worth exploring in future studies on firefighters and compassion fatigue.

Traumatic exposure is recognized by the literature to be a risk factor for somatic, social, cognitive, and emotional problems. Difficulties in interpersonal relationships such as marital and family problems and impaired work function have also been definitive results from traumatic exposure (Wysman, Schuarzwald & Solomon, 2001). High levels of secondary traumatic stress would seem to require prevention protocols in order to protect the individual from further harm. However, the mental health community must create a baseline format for testing, evaluating, and identifying individuals who are at high risk before they are in a crisis state. Identifiers may include physiological complaints, psychological issues, marital and social problems, and dysfunction on the job (Bass & Yep, 2002).

Further issues to consider in researching compassion fatigue and burnout in first responder work may include how hardiness, resiliency, and psychological growth through traumatic events may play a role in positive outcomes of those experiences (Violanti & Paton 2000; Waysman, 2001). Further, is it possible to duplicate, or create an intervention therapeutic technique for individuals who are targeted as “at risk” for secondary trauma that can mimic hardiness, resiliency and positive psychological growth through trauma? Resilience literature has examined factors proposed to mitigate long-term negative consequences of trauma, indicating that post-trauma treatment may afford the individual valuable insight to intercept and handle future psychological impact of traumatic events (Dean, et al., 2003).

Understanding the importance of identifying compassion fatigue and burnout in firefighters is important to aid in providing psychological assistance to those workers who are impacted by the very nature of the job (Fullerton, 1992). According to current research, more work is needed in the development of assessment instruments that may be capable of assessing vulnerability to compassion fatigue and burnout (Patton & Smith, 1997). Further, more useful assessment tools in understanding the impact of early trauma, as a precursor to secondary traumatic stress may also be beneficial.

Dispositional hardiness, coping style, and current social support has been known to decrease the impact of trauma work on psychological dysfunction, and may be a confounding variable in the study of compassion fatigue in firefighters. Further, resiliency, and the ability to implement positive coping skills may foster a sense of empowerment. Coupled with a supportive work environment, the individual may have a positive view of their performance, and satisfaction in the related accomplishments of the job (DeVries, 1996; Miller, 1995; Mitchell & Everly, 1996). When those accomplishments are attained, the helping professional may get a sense of control, and feel successful in achieving the desired goals (Valent, 2002).

In the current study, one telltale factor was the high job satisfaction reported by most of the participants. One reason for this result may be due to the camaraderie within the population, and that most respondents indicated a general satisfaction in their job. In one study of Australian emergency crew volunteers, the researchers noted that although these volunteers indicated that they were altruistic in their reasons for joining, they also indicated that factors such as camaraderie as a factor in the levels of high job satisfaction (Moran, 2002).

An important component in the Australian study was the volunteer's ability to focus on the task at hand as a strategy for dealing with the emergency work (Moran, 2002). Emergency work does not necessitate a negative reaction to the incident. One's ability to cope may negate one's job choices, facilitate satisfaction at the accomplishment of a seemingly difficult task, and foster a sense of community and acceptance within a group. This may certainly be the case with firefighters.

People who display a proportionally high amount of hardiness seem able to deal with stressors more effectively and appear less prone to stress related illness and emotional dysfunction. Firefighters may deal with stress better by dampening negative feelings, and may also modify the source of stress by taking direct action, as dictated by the quick response to emergency calls (Moran, 2002; Casey & Leger, 2000; Wellbrock, 2000).

Coping refers to cognitions and behaviors used as one attempts to make a stressor more manageable. Problem solving is a direct action strategy. The individual sees the stressor as part of a problem to be solved, and engages in coping behaviors that achieve the directive (Moran, 2002). Both coping strategies and problem solving are cognitive as well as behavioral attributes that can be practiced if the person does not have the ability as a natural personality trait. Studies in the area of secondary trauma clearly indicate that coping strategies that gear toward promoting resiliency and adaptation should be developed and instituted by disaster relief and emergency service organizations that cater to the special needs of disaster workers such as firefighters (Hyman, 2001).

There is research indicating that most individuals do recover psychologically following traumatic incidents (McCarroll, et al., 1993). In this study, this theory seems to support the idea. More research must be conducted in first responder populations to uncover the most effective resources for these workers. Positive personality traits may prove to be highly protective against the impact of adversity. When early adversities such as childhood trauma are followed by later adversities, and there is a cumulative impact, positive social supports can the difference in the outcome of the person's ability to cope (Paris, 2000).

Personality traits such as sensation seeking, meaning individuals who need stimulation or arousal in order to feel good, are attracted to activities that others consider stressful or dangerous. High sensation seekers may experience less distress in situations usually labeled stressful. The job of being Firefighter may fit this personality type well. However, high sensation seeking firefighters may experience stress when left in a station house for days. For these people boredom creates stress (Moran, 2002).

The role of experience in this study was indicated by time on the job, and sub-supported by the job title of the participant. In one study additional experience initially helped, however, time and experience did not protect the first responder from burnout and fatigue. Due to the nature of responsibility, the experienced firefighter became more reluctant than their less experienced colleagues to admit to having difficulties (Alexander & Kline, 2001). Further research in the area of experience and time on the job as it relates to coping is warranted.

## Conclusion

This study was relatively small in its population, and only sought to uncover possible reactions to the potentially stressful job of firefighting. Hopefully this study will offer a baseline for longitudinal studies to search for a relationship between first responder work and compassion fatigue and job burnout due to critical incident exposure. Moreover, this study may ignite interest in the field of traumatic stress in all groups of first responders such as emergency room personnel, search and rescue teams, and any other emergency response population who come in contact with critical incidents of disaster. More data must be collected for effective and conclusive measurements. The observation of traumatic stress outcomes in firefighters may also spawn the need for understanding how recovery may benefit the population.

The social responsibility in research is that research work makes a contribution to a greater public good, either by easing suffering or promoting truth in the level of care for society (McLoud, 1994). A complete understanding of human reactions to stress requires ontological perspectives, and must engage in empirical research in order to answer questions that can help society. This quantitative research project may provide a foundation by which other similar research may answer the more difficult questions that arise from this population of first responders. This study may also act as a source of further investigations in the area of resiliency factors, personality, and social support, physical and mental health.

The discourse of this research places an emphasis on what research can offer the field of counseling in the effective therapeutic treatment of compassion fatigue and burnout in firefighters. Ongoing research in the area of compassion fatigue and burnout



in the helping professional is vital to understanding the impact that a profession has on the individual. It is important for the counseling profession to gain a wider perspective through research studies such as this one to better serve the psychological adjustment needs of first responders.

An accountability factor helps to provide the best care to first responders, and is part of the rationale for conducting research of this kind. The application of appropriate and tested therapeutic care for the helping profession is vital in the successful treatment of firefighters who are impacted by stress on the job (Bass & Yep, 2002; McLeod, 1994). However, just as important as the negative impact that the job of the helping professional faces, are the positive factors that this population currently utilizes. Community, family and organizational support, seems to be vital in fostering positive self-efficacy and satisfaction on the job for this population.

Peer support programs in the workplace are an important tool in the protection of first responders to compassion fatigue and burn out due to the demanding psychological and physical activity of the job. Robinson and Murdoch (2003) discuss important components of peer support in their work with first responders, and may offer this population some insight on how to address, identify, and create a positive peer support system.

Critical incident stress debriefing has received mixed reviews over the last several years. However, the literature reviews from this thesis has identified more positive outcomes for debriefing than negative. Further, workplace sites that have incorporated stress debriefing availability as an ongoing mental health care component for their

workers may be more interested in the positive support of those workers (Dietz, 2001; Mitchell & Everly, 1997).

It is the hope of the researcher that support systems that are solution focused and strength based is implemented in the course of an ongoing care regiment for first responders who care for their communities, families, and for themselves. Without them, the community they serve would be hard-pressed to overcome the obstacles that a crisis may leave behind.

Life...is arduous, difficult, a perpetual struggle. It calls for gigantic courage and strength. More than anything, perhaps, creatures of illusion as we are, it calls for confidence in oneself. Without self-confidence we are as babes in the cradle.

Virginia Wolf, 1929

APPENDIX I  
LETTER OF INTRODUCTION

Carson City Fire Department  
To: Distinguished Captains, Chiefs, Firefighters,

My name is Juanita Buck and I am a graduate student at the University of Nevada, Las Vegas where I am completing a Masters degree in counseling with an emphasis in addiction treatment. I am currently working on a Masters thesis in which I am exploring the possibility of a relationship between years on the job and compassion fatigue/job satisfaction in firefighters. The primary purpose of this study is to see if there is a relationship between the amount of time that a firefighter is on active duty, and its impact on the person's level of compassion, risk of burnout, and the level of satisfaction in helping others. I am also interested in first responder reactions to the experiences they have while on duty as well as the health and well-being of those individuals.

My interest in first responder stress stems from my interest in emergency crisis intervention of which I am a trained member in the Critical Incident Stress Management team at UNLV. As a counselor intern, I am aware of how life experiences can affect our ability to process future incidents and activities throughout our lives. I am currently a research assistant with two of our distinguished Professors at the University. In this capacity, I have been trained to implement and complete accurate data, and am well versed in working with volunteer participants for research studies.

I would personally like to invite you to participate in this study. It is a completely confidential procedure taking about 30 minutes to complete for each participant. A consent form will be given to volunteer participants to sign, and questions will be answered before the surveys will be given to each participant. I will be at the site to administer the measurements.

Thank you for your time and I look forward to meeting you soon. You may contact me at; 702-630-1896, or e-mail at; [psychehd@hotmail.com](mailto:psychehd@hotmail.com) .

Sincerely,

Juanita M. Buck, CADIC, Intern  
UNLV

APPENDIX II  
INFORMED CONSENT

**University of Nevada, Las Vegas  
Department of Counseling**

- 1. Introduction:** You are invited to participate in a research study being conducted by Juanita Buck, Graduate student from UNLV. You are being asked to take part in a study looking at the relationship between years on the job and compassion fatigue. You must be at least 21 years old to participate in this study.
- 2. Procedures:** The study will last about 30 minutes and involves:
  - \*Completing a Psychosocial Questionnaire
  - \*1 self-administered questionnaires
- 3. Expected Benefits of the Study:** By helping with this study, you will be adding to the general body of knowledge in this area.
- 4. Expected Risks of the Study:** The risks involved in participating in this study are minimal. You may feel anxious or board while completing the surveys associated with study, but there are no other known risks. The researcher will make every effort to refer you to appropriate and approved services if needed.
- 5. Confidentiality:** The material gathered in this study for research purposes will be kept private and confidential. Research records will be kept in locked file cabinets at UNLV. Data from this research project will be kept for three years at the University, and then appropriately destroyed. In order to provide you the best care, information obtained in the evaluations will only be shared with professionals by whom you have requested a referral.
- 6. Voluntary Participation:** Your taking part in this study is strictly voluntary and you may withdraw at any time.
- 7. Questions Regarding the Study:** If you have any questions please call Juanita Buck at 702-630-1896. If you have any questions about your rights as a research participant, you may call the University at 702-895-2794.

**I have read all of the above information and agree to take part in this study.**

\_\_\_\_\_  
**Signature of participant**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Participant Name (please print)**

\_\_\_\_\_  
**Signature of Investigator**

\_\_\_\_\_  
**Date**

APPENDIX III  
PSYCHO-SOCIAL QUESTIONNAIRE



# 

ID# \_\_\_\_\_ (Last 4 of SS#) + Initials

Age _____	
Gender (circle) M      F	(Circle one) Never-married   Married   Divorced
Ethnicity _____	Live-in
High School Grad? (Circle)    Y      N      GED	Any degrees or certifications? Y      N
Year of Graduation    /    /	Specify:
Current Job Title. _____	Are you satisfied with your job? Y   N
Total time as a firefighter _____	
<b>General Physical Health</b>	
How is your general health? (Please circle one)	Good    Fair    Poor
Any significant medical conditions? Specify.	
Any Medical hospitalizations in the last year? Y    N	Date of last physical exam.    /    /    / Date of last Dental Exam.    /    /    /
<b>General Mental Health</b>	
Have you ever seen a mental health professional? Y    N If yes, what was the reason?	If yes, when was the first time?
If yes, was it helpful?	Have you ever had problems with alcohol or drugs?  Y                      N
Do you take advantage of the Critical Incident Stress Management team when you need to debrief? Y    N	If yes, was it useful?    Y      N
<b>Social and Relationship Health</b>	
Are your relationships with your family positive? Y    N	Do you have children?    Y      N Do they live with you?    Y      N
Who do you go to when you need to talk to someone or you need advice? (Circle all that apply)	Any other information you feel the researcher should know?
No one - Friend - Family member - Significant other Counselor - Co-worker - Other (specify) _____	

APPENDIX IV  
COMPASSION/SATISFACTION SELF-TEST FOR HELPERS

# Compassion Satisfaction/ Fatigue Self-Test for Helpers

Adapted with permission from Figley, C.R., (1995).  
Compassion Fatigue, New York: Brunner/Mazel.  
© B. Hudnall Stamm, Traumatic Stress Research  
Group, 1995 -1998 <http://www.dartmouth.edu/~bhstamm/index.htm>.

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Helping others puts you in direct contact with other people's lives. As you probably have experienced, your compassion for those you help has both positive and negative aspects. This self -test helps you estimate your compassion status: How much at risk you are of burnout and compassion fatigue and also the degree of satisfaction with your helping others. Consider each of the following characteristics about you and your current situation. Print a copy of this test so that you can fill out the numbers and keep them for your use. Using a pen or pencil, write in the number that honestly reflects how frequently you experienced these characteristics in the last week. Then follow the scoring directions at the end of the self-test.

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

## Items About You

- \_\_\_\_\_ 1. I am happy.
- \_\_\_\_\_ 2. I find my life satisfying.
- \_\_\_\_\_ 3. I have beliefs that sustain me.
- \_\_\_\_\_ 4. I feel estranged from others.
- \_\_\_\_\_ 5. I find that I learn new things from those I care for.
- \_\_\_\_\_ 6. I force myself to avoid certain thoughts or feelings that remind me of a frightening experience.
- \_\_\_\_\_ 7. I find myself avoiding certain activities or situations because they remind me of a frightening experience.
- \_\_\_\_\_ 8. I have gaps in my memory about frightening events.
- \_\_\_\_\_ 9. I feel connected to others.
- \_\_\_\_\_ 10. I feel calm.
- \_\_\_\_\_ 11. I believe that I have a good balance between my work and my free time.
- \_\_\_\_\_ 12. I have difficulty falling or staying asleep.
- \_\_\_\_\_ 13. I have outburst of anger or irritability with little provocation
- \_\_\_\_\_ 14. I am the person I always wanted to be.
- \_\_\_\_\_ 15. I startle easily.
- \_\_\_\_\_ 16. While working with a victim, I thought about violence against the perpetrator.
- \_\_\_\_\_ 17. I am a sensitive person.
- \_\_\_\_\_ 18. I have flashbacks connected to those I help.
- \_\_\_\_\_ 19. I have good peer support when I need to work through a highly stressful experience.
- \_\_\_\_\_ 20. I have had first-hand experience with traumatic events in my adult life.
- \_\_\_\_\_ 21. I have had first-hand experience with traumatic events in my childhood.
- \_\_\_\_\_ 22. I think that I need to "work through" a traumatic experience in my life.
- \_\_\_\_\_ 23. I think that I need more close friends.
- \_\_\_\_\_ 24. I think that there is no one to talk with about highly stressful experiences.

- \_\_\_\_\_ 25. I have concluded that I work too hard for my own good.
- \_\_\_\_\_ 26. Working with those I help brings me a great deal of satisfaction.
- \_\_\_\_\_ 27. I feel invigorated after working with those I help.
- \_\_\_\_\_ 28. I am frightened of things a person I helped has said or done to me.
- \_\_\_\_\_ 29. I experience troubling dreams similar to those I help.
- \_\_\_\_\_ 30. I have happy thoughts about those I help and how I could help them.
- \_\_\_\_\_ 31. I have experienced intrusive thoughts of times with especially difficult people I helped.
- \_\_\_\_\_ 32. I have suddenly and involuntarily recalled a frightening experience while working with a person I helped
- \_\_\_\_\_ 33. I am pre-occupied with more than one person I help.
- \_\_\_\_\_ 34. I am losing sleep over a person I help's traumatic experiences.
- \_\_\_\_\_ 35. I have joyful feelings about how I can help the victims I work with.
- \_\_\_\_\_ 36. I think that I might have been "infected" by the traumatic stress of those I help.
- \_\_\_\_\_ 37. I think that I might be positively "inoculated" by the traumatic stress of those I help.
- \_\_\_\_\_ 38. I remind myself to be less concerned about the well being of those I help.
- \_\_\_\_\_ 39. I have felt trapped by my work as a helper.
- \_\_\_\_\_ 40. I have a sense of hopelessness associated with working with those I help.
- \_\_\_\_\_ 41. I have felt "on edge" about various things and I attribute this to working with certain people I help.
- \_\_\_\_\_ 42. I wish that I could avoid working with some people I help.
- \_\_\_\_\_ 43. Some people I help are particularly enjoyable to work with.
- \_\_\_\_\_ 44. I have been in danger working with people I help.
- \_\_\_\_\_ 45. I feel that some people I help dislike me personally.

#### **Items About Being a Helper and Your Helping Environment**

- \_\_\_\_\_ 46. I like my work as a helper.
- \_\_\_\_\_ 47. I feel like I have the tools and resources that I need to do my work as a helper.
- \_\_\_\_\_ 48. I have felt weak, tired, run down as a result of my work as helper.
- \_\_\_\_\_ 49. I have felt depressed as a result of my work as a helper.
- \_\_\_\_\_ 50. I have thoughts that I am a "success" as a helper.
- \_\_\_\_\_ 51. I am unsuccessful at separating helping from personal life.
- \_\_\_\_\_ 52. I enjoy my co-workers.
- \_\_\_\_\_ 53. I depend on my co-workers to help me when I need it.
- \_\_\_\_\_ 54. My co-workers can depend on me for help when they need it.
- \_\_\_\_\_ 55. I trust my co-workers.
- \_\_\_\_\_ 56. I feel little compassion toward most of my co-workers
- \_\_\_\_\_ 57. I am pleased with how I am able to keep up with helping technology.
- \_\_\_\_\_ 58. I feel I am working more for the money/prestige than for personal fulfillment.
- \_\_\_\_\_ 59. Although I have to do paperwork that I don't like, I still have time to work with those I help.
- \_\_\_\_\_ 60. I find it difficult separating my personal life from my helper life.
- \_\_\_\_\_ 61. I am pleased with how I am able to keep up with helping techniques and protocols.
- \_\_\_\_\_ 62. I have a sense of worthlessness/disillusionment/resentment associated with my role as a helper.
- \_\_\_\_\_ 63. I have thoughts that I am a "failure" as a helper.
- \_\_\_\_\_ 64. I have thoughts that I am not succeeding at achieving my life goals.
- \_\_\_\_\_ 65. I have to deal with bureaucratic, unimportant tasks in my work as a helper.
- \_\_\_\_\_ 66. I plan to be a helper for a long time.

### Scoring Instructions

Please note that research is ongoing on this scale and the following scores should be used as a guide, not confirmatory information. Cut points are theoretically derived and should be used with caution and only for educational purposes.

1. Be certain you respond to all items.
2. Mark the items for scoring:
  - a. Circle the following 23 items: 4, 6-8, 12, 13, 15, 16, 18, 20-22, 28, 29, 31-34, 36, 38-40, 44.
  - b. Put a check by the following 16 items: 17, 23-25, 41, 42, 45, 48, 49, 51, 56, 58, 60, 62-65.
  - c. Put an x by the following 26 items: 1-3, 5, 9-11, 14, 19, 26-27, 30, 35, 37, 43, 46-47, 50, 52-55, 57, 59, 61, 66.
3. Add the numbers you wrote next to the items for each set of items and note:
  - a. Your potential for Compassion Satisfaction (x): 118 and above=extremely high potential; 100-117=high potential; 82-99=good potential; 64-81=modest potential; below 63=low potential. **Your score** \_\_\_\_\_
  - b. Your risk for Burnout (check): 36 or less=extremely low risk; 37-50=moderate risk; 51-75=high risk; 76-85=extremely high risk. **Your score:** \_\_\_\_\_
  - c. Your risk for Compassion Fatigue (circle): 26 or less=extremely low risk; 27-30=low risk; 31-35=moderate risk; 36-40=high risk; 41 or more=extremely high risk. **Your score:** \_\_\_\_\_

Adapted with permission from Figley, C.R., (1995). Compassion Fatigue, New York: Brunner/Mazel. © B. Hudnall Stamm, Traumatic Stress Research Group, 1995 -1998  
<http://www.dartmouth.edu/~bhstamm/index.htm>.

## APPENDIX V

### TABLES

Table 1

*Descriptive Statistics for Ethnicity*

Ethnicity	Frequency	%
Caucasian	33	84.6
African American	3	7.7
Other	1	2.6
Missing Data	2	6.1

Table 2

*Descriptive statistics for relationship status of target population*

Relationship	Frequency	%
Married	33	84.6
Unmarried	6	15.4
Total	39	100.0



Table 3

*Descriptive statistics for job titles of target population*

Job Title	Frequency	%
Firefighter	18	46.2
Paramedic	2	5.1
Captain	6	15.4
Firefighter/Paramedic	7	17.9
Trainee	6	15.4
Total	39	100.0

Table 4

*Descriptive statistics for time on the job of target population*

Time on the Job	Frequency	%
0=Trainee	5	12.8
1 year	1	2.6
2 years	2	5.1
3 years	4	10.3
4 years	2	5.1
5 years	2	5.1
6 years	1	2.6
8 years	1	2.6
9 years	1	2.6
10 years	5	12.8
11 years	1	2.6
12 years	1	2.6
13 years	1	2.6
16 years	1	2.6
18 years	1	2.6
20 years	2	5.1
23 years	2	5.1
25 years	1	2.6
26 years	1	2.6
27 years	1	2.6
28 years	2	5.1
34 years	1	2.6
Total	39	100.0

Table 5

*Descriptive Statistics for Whom Participants Go to For Advice*

---

Advisor	Frequency
<hr/>	
1- No one	3
2- Friend	22
3- Family Member	23
4- Significant Other	21
5- A Counselor	1
6- A Co-Worker	12
7- Other	1

---

Table 6

*Descriptive Statistics for Compassion Satisfaction, Burnout, Compassion Fatigue.*

CSFT Results	Mean	SD
Compassion Satisfaction	95.64	11.636
Burnout	28.85	10.389
Compassion Fatigue	29.74	12.508
Married	33	84.6
Total	39	100.0

Table 7

Descriptive statistics for the Compassion Satisfaction/Fatigue Test components by Low and High time on the job.

Compassion Satisfaction/ Fatigue Test Components	Low		High	
	Time on the Job (n=19)		Time on the Job (n=20)	
	Mean	SD	Mean	SD
Compassion Satisfaction	97.16	10.79	94.20	12.49
Burnout	27.37	10.98	30.25	9.87
Compassion Fatigue	28.11	11.03	31.30	13.87

APPENDIX VI  
FIGURES

Figure 1

*Descriptive Graph for Time on the Job*

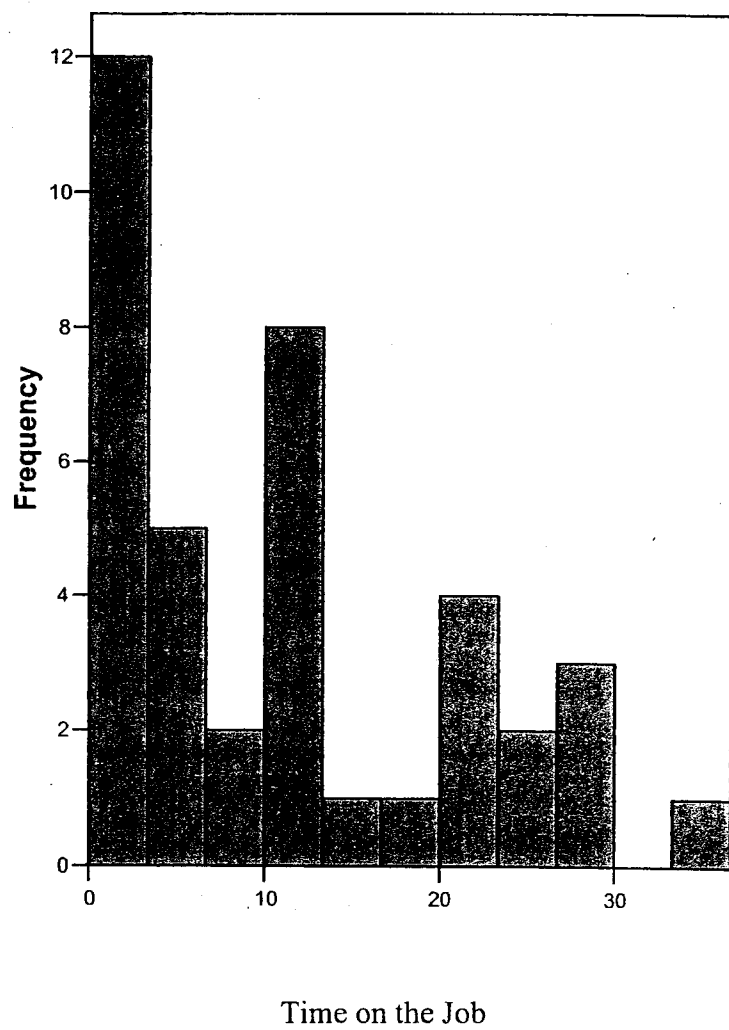
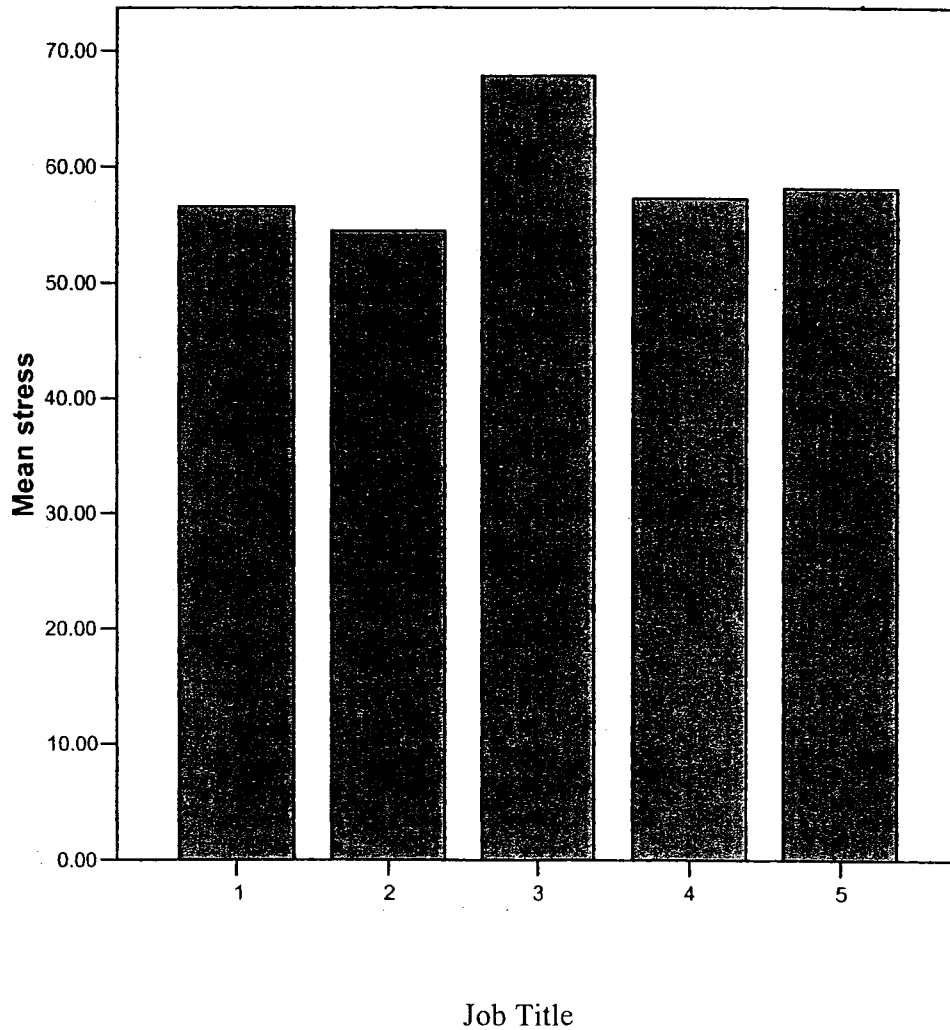


Figure 2

*Descriptive Graph comparing Job Title to Mean Stress (Compassion Fatigue and Burnout).*

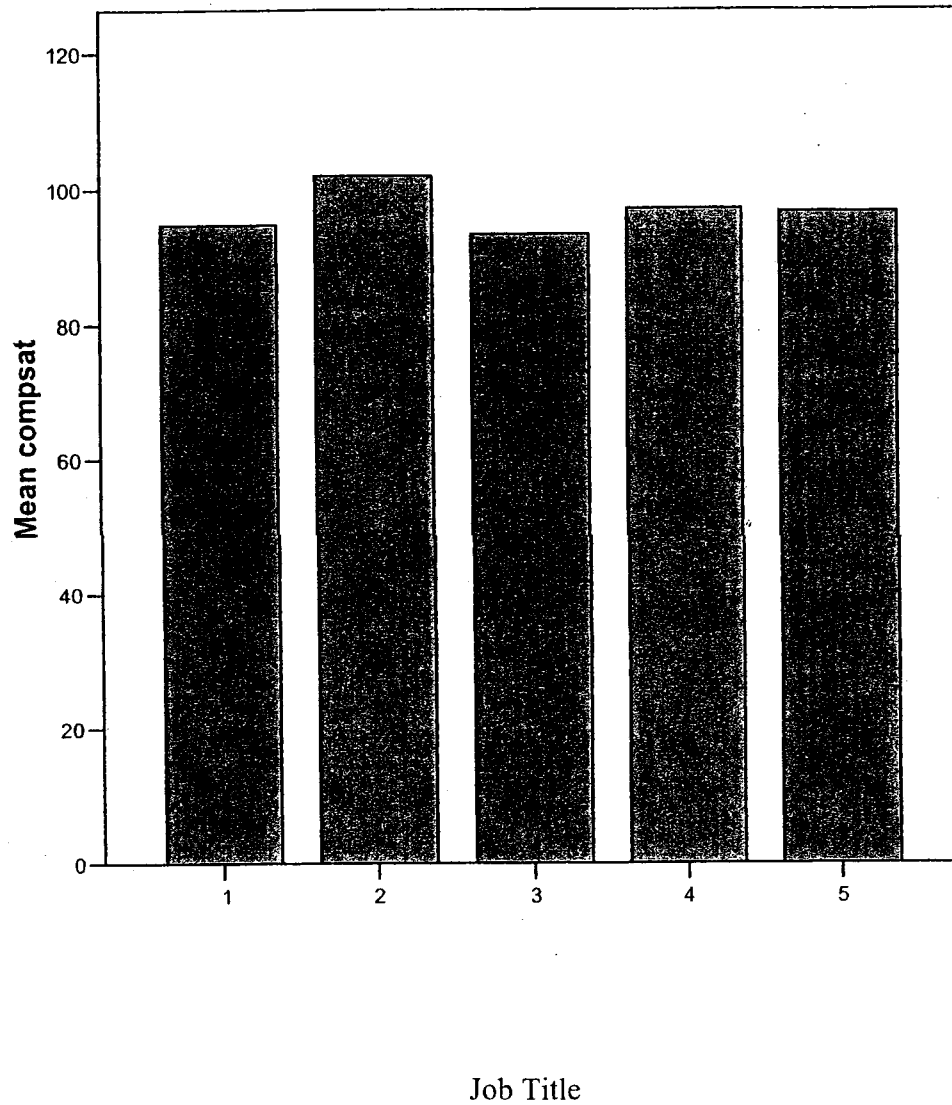


1=Firefighter. 2=Paramedic. 3=Captain. 4=Firefighter/Paramedic. 5=Trainee



Figure 3

*Descriptive Graph Comparing Job Title to Mean Compassion Satisfaction (comsat).*



1=Firefighter. 2=Paramedic. 3=Captain. 4=Firefighter/Paramedic. 5=Trainee

Figure 4

*Descriptive Graph Comparing Time on the Job to Mean Stress Level*

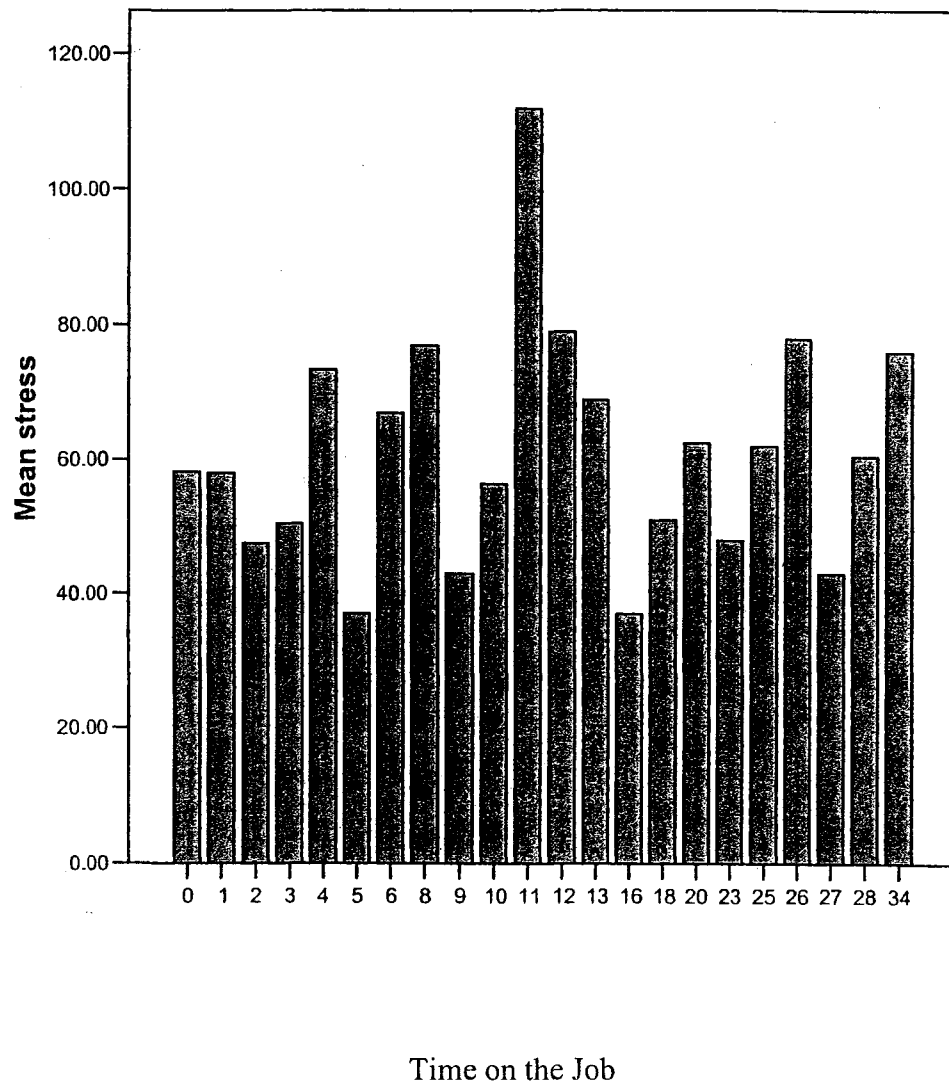
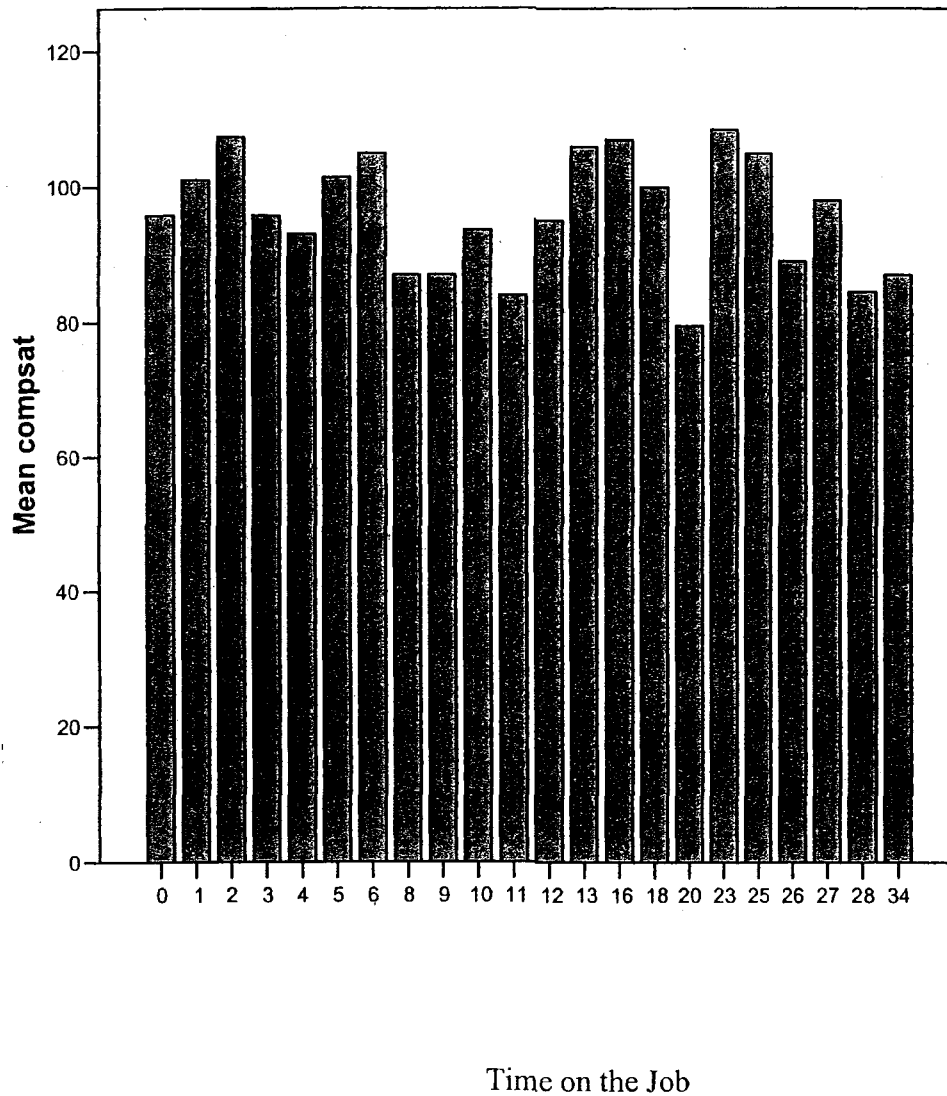


Figure 5

*Descriptive Graph Comparing Time on the Job to Mean Compassion Satisfaction (comsat).*



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