

5-20-2005

The Relationship of the Sensation Seeking Personality Motive to Burnout, Injury and Job Satisfaction among Firefighters

Margaret Jensen
University of New Orleans

Follow this and additional works at: <https://scholarworks.uno.edu/td>

Recommended Citation

Jensen, Margaret, "The Relationship of the Sensation Seeking Personality Motive to Burnout, Injury and Job Satisfaction among Firefighters" (2005). *University of New Orleans Theses and Dissertations*. 218. <https://scholarworks.uno.edu/td/218>

This Thesis is protected by copyright and/or related rights. It has been brought to you by ScholarWorks@UNO with permission from the rights-holder(s). You are free to use this Thesis in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/or on the work itself.

This Thesis has been accepted for inclusion in University of New Orleans Theses and Dissertations by an authorized administrator of ScholarWorks@UNO. For more information, please contact scholarworks@uno.edu.

THE RELATIONSHIP OF THE SENSATION SEEKING
PERSONALITY MOTIVE TO BURNOUT, INJURY AND JOB
SATISFACTION AMONG FIREFIGHTERS

A Thesis

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Master of Arts
in
The Department of Human Performance and Health Promotion

by

Margaret Ann Jensen

B.S. Louisiana State University, 1999
B.S. Louisiana State University, 1999

May, 2005

Dedicated to my husband, family, Lana and Kathe who
have been extremely supportive in my endeavors.

ACKNOWLEDGMENTS

I would like to thank my committee chair, Dr. Anthony P. Kontos, and my other committee members, Dr. Lorelie Cropley and Dr. Mark Loftin. Also, I deeply appreciate the assistance of Dr. Elizabeth Gleckler and her students who assisted in data collection.

TABLE OF CONTENTS

Abstract.....	vi
Chapter 1.....	1
Introduction.....	1
Statement of the Problem.....	1
Nature of the Problem.....	2
Purpose of the Study.....	4
Hypothesis and Exploratory Question.....	4
Operational Definitions.....	5
Limitations.....	5
Assumptions.....	6
Delimitations.....	6
Chapter 2.....	7
Review of Literature.....	7
Introduction.....	7
Stress.....	7
Personality Profiles.....	9
Sensation Seeking.....	10
Burnout.....	11
Job-Related Factors.....	14
Summary.....	17
Chapter 3.....	18
Method.....	18
Design.....	18
Participants.....	18
Measures.....	18
Demographics.....	18
Sensation Seeking.....	18
Burnout.....	19
Job Satisfaction.....	20
Absenteeism.....	21
On-The-Job Injuries.....	21
Procedures.....	22
Data Analysis.....	22
Chapter 4.....	24
Results.....	24

Introduction.....	24
General Descriptive Data.....	24
On-The-Job Injuries and Absenteeism Descriptives.....	25
Sensation Seeking Scale Descriptives	26
Maslach Burnout Inventory Descriptives	26
Job Satisfaction Survey Descriptives.....	27
Evaluation of Hypothesis and Exploratory Question.....	28
Hypothesis.....	28
Exploratory Question.....	32
Summary.....	33
Chapter 5.....	34
Discussion.....	34
Introduction.....	34
General Discussion	34
Implications.....	40
Limitations.....	41
Summary.....	42
References.....	44
Appendix	
Human Subjects Approval Form	
Demographics Questionnaire	
Sensation Seeking Scale, Form V	
Job Satisfaction Survey	
Maslach Burnout Inventory	
Attendance Questionnaire	
On-The-Job Injury Questionnaire	
Participant Assent Form	
Correlation Matrix for Various Factors from the Study	
Vita.....	62

ABSTRACT

The purpose of this study was to determine the relationships among sensation seeking, burnout, injury, and job satisfaction among firefighters. Participants included 93 firefighters from a southeastern fire department. Each participant was asked to fill out a packet of self-report surveys including a demographic form, Sensation Seeking Scale Form V, Maslach Burnout Inventory, Job Satisfaction Survey, Absenteeism form, and an On-The-Job Injury form. This exploratory study provided an initial assessment of personality in relation to burnout and injuries in firefighters. The information from this study will hopefully help fire chiefs and administrators to better understand firefighters and the factors influencing their burnout, injuries, and job satisfaction. This information may, in turn, be useful in developing strategies to reduce burnout and better identify risk-factors affecting burnout and job performance in this population.

CHAPTER I

INTRODUCTION

Statement of the Problem

On any given day a firefighter must expect the unexpected. Within a matter of seconds, firefighters go from low arousal to an immediate sympathetic nervous system response. When the alarm sounds their pulse quickens, their systolic blood pressure increases and they begin to breathe rapidly. However, these arousal highs are juxtaposed with extreme lows throughout much of their time spent at a firehouse. Moreover, after being highly aroused during a 'call', firefighters must then return to homeostasis via the parasympathetic nervous response. This back and forth scenario replays itself repeatedly during the course of a day or week. Moreover, these events can occur at anytime of day or night, with no warning. As a result, firefighters are exposed to a constant and unpredictable cycle of calm (i.e. sitting around at the firehouse) to intense excitement (i.e. responding to a 'call').

Stress and burnout among emergency responders, particularly firefighters, has been well documented (Beaton, Murphy, & Pike, 1996; Boudreaux, Mandry, & Brantley, 1997; Palmer & Spaid, 1996). The myriad factors affecting stress and burnout include personality and coping skills (Beaton, Murphy, & Pike, 1996; Beaton, Murphy, Pike, & Corneil, 1997; Brown, Mulhern, & Joseph, 2002; Clarke & Innes, 1983; Miller, 1995; Palmer & Spaid, 1996; Regehr, Hill, & Glancy, 2000; Zellars, Perrew, & Hochwater, 2000). These factors, in turn, influence job performance and satisfaction, and career longevity (Randall & Scott, 1988; Regehr, Hill, Knott, & Sault, 2003; Traut, Laursen, & Feimer, 2000). However, these factors have yet to be examined among firefighters by

researchers. Most of the research on burnout neglects to investigate arousal responses that may reflect a particular personality.

Nature of the Problem

The National Commission of Fire Prevention and Control states that firefighting is the single most hazardous occupation in the United States (Miller, 1995). Firefighting is not just physically hazardous; it is also psychologically hazardous. Firefighters experience arousal on a continuum from calm and in many instances boredom, to intense excitement or anxiety nearly every day. The effects of firefighting are also psychological in nature. On a daily basis, firefighters experience a variety of situations, such as severely sick or injured people, extreme fires, and horrible car wrecks, which involve intense psychological trauma. Some firefighters show no ill effects of years of working for the fire service, yet others succumb to the effects of the job in days or a few years. Firefighters often suffer from headaches, lower back pain, burnout, and post-traumatic stress disorder (PTSD: Beaton, Murphy, & Pike, 1996; Miller, 1995). Surprisingly, the psychological factors affecting firefighter's ability to cope with the demands of the job are largely unknown.

Firefighting is a high-stress public service occupation. Particular personalities seek particular occupations. One personality motive that has been studied among firefighters is sensation seeking. Sensation seeking is described as a personality motive characterized by a desire to participate in new, dangerous, and monumental risks in order to achieve a higher state of arousal (Zuckerman, 1979). Sensation seeking is divided into four distinct components: thrill and adventure seeking, experience seeking, disinhibition, and boredom susceptibility (Zuckerman, 1990). A high sensation seeker may enjoy the

thrill and challenge of fighting fire and not be affected by the variation in arousal states resulting in a lower susceptibility to burnout. An individual who scores high in sensation seeking may or may not show signs of dissatisfaction with the job or signs of burnout. Such an individual may become bored with the quiet times at the fire house or may enjoy the thrill of going to work and never knowing what might happen. In their study of 163 firefighters, Clarke and Innes (1983) found that the firefighters rated high on the sensation seeking scale and that the occupation may select out or keep certain individuals because of their personality. Other research has shown that the boredom scale, a component of sensation seeking, was positively related to burnout in firefighters (Palmer & Spaid, 1996).

Burnout is a common side effect of having a stressful job and having personality motives or characteristics that do not allow a person to cope with stress. Burnout is defined as the progression from emotional exhaustion to cynicism and then to inefficacy (Zellars, Perrewe, & Hochwater, 2000). Researchers have hypothesized that some of the moderating factors on stress and burnout are social support and network, locus of control, work-related stressors, and role stressors to name a few (Beaton, Murphy, Pike, & Corneil, 1997; Brown, Mulhern & Joseph, 2002; Revicki & Gershon, 1996; Zellars, Perrewe, & Hochwater, 2000). Vettor, Kosinski, and Frederick (2000) conducted a narrative review of several research articles and concluded that burnout can result in high job-turnover rates, increased absenteeism, and low morale.

Maslach (2003) defines job burnout as a prolonged response to chronic emotional and interpersonal stressors on the job. The three components of job burnout are emotional exhaustion, depersonalization (cynicism), and diminished personal accomplishment

(inefficacy). Emotional exhaustion is considered to be at the core of burnout for public service professionals, because they will give of themselves until their emotional resources are depleted (Vettor, Kosinski, & Frederick, 2000). As researchers began to recognize that a problem existed between public service occupations and burnout, they began to study job satisfaction, on the job injuries, job performance, and attendance. The more emotionally detached a person becomes to their job, the less they care about doing the job well or even doing the job at all. Firefighters are at a high risk of injury and as their level of burnout increases as they distance themselves from others and become more isolated may be at an even greater risk for injury. Some firefighters who are burned out may experience physical or mental complaints and call in sick, be injured on the job, perform poorly, or quit. Research has not yet linked job satisfaction, job performance, on the job injuries, and absenteeism to burnout or personality traits among firefighters. Burnout is a realistic and constant concern for firefighters. Although burnout has been linked to sensation seeking, it has no been examined along with job-related factors among firefighters.

Purpose of the Study

The purpose of this study was to determine the relationships of sensation seeking, burnout, and job-related factors among firefighters.

Hypothesis/ Exploratory Question

The following hypothesis was proposed for this study:

1. Firefighters who score high on sensation seeking will report lower levels of burnout than those who score low on sensation seeking.

The following exploratory question was also explored:

1. What are the interrelationships among sensation seeking, burnout, job satisfaction, on-the-job injuries, and absenteeism?

Operational Definitions

The following terms will be used throughout this study:

1. Sensation Seeking: A personality motive that is characterized by the need for varied, novel, and complicated sensations and experience, the willingness to engage in physical and social risks. (Zuckerman, 1979).
2. Burnout: A prolonged response to chronic emotional and interpersonal stressors on the job (Maslach, 2003). Consisting of three components; emotional exhaustion, depersonalization (cynicism), and diminished personal accomplishment (Zellars, Perrewe, & Hochwater, 2000).
3. Job Satisfaction: An employee's enjoyment associated with supervisors, coworkers, and work place environment, and the requirements of work.
4. Injury: Any physical complaint during the past 12 months that kept the firefighter out of work for at least one day or requires medical attention beyond icing, wrapping, and rest.

Limitations

The following factors may limit this study:

1. The participants are voluntary and may not represent the overall population.
2. The measures are subject to self-report and recall biases.
3. This study methodology is cross-sectional in nature.

4. The collection of the data was done mainly during the day and that may decrease the number of participants, as well as, change how the individuals respond to the questions.

Assumptions

The following assumptions were made for this study:

1. The measures are valid with this particular population.
2. The participants will respond honestly.

Delimitations

This study was delimited by the following factors:

1. Participants are between the ages of 19-56 years.
2. All participants are males.
3. The majority of participants are Caucasian.
4. The majority of participants are from Southeastern Louisiana.

CHAPTER II

REVIEW OF LITERATURE

Introduction

There is not one characteristic or trait that describes a firefighter, nor is there one moderating factor that prevents burnout. There may however be some relationships that help to explain firefighters and those that are resilient to the stress and heightened states of arousal and those that are not. The theoretical framework for this research begins with the firefighter and his/her personality at the core. A firefighter's personality may help to assist in explaining his/her susceptibility to burnout as a public service worker. Also, the firefighter's personality may reveal their susceptibility to an aroused state during a dual task experiment. Their burnout then leads to job satisfaction, job performance, absenteeism, and on the job injuries. These relationships may then help to explain a little more about the mental needs of firefighters.

Stress

Firefighting is not an occupation that many people understand or appreciate. The vicious cycle of changing arousal states in a matter of seconds does become hard to adjust to. Many new firefighters have the same adrenaline rush at home when the telephone rings because they have learned to respond to certain tones and are unable to stop the sympathetic nervous system response. Not only does the adrenaline rush wear on the body, but also the physical and mental demands of the occupation. Firefighters are exposed to various accident scenes and traumatic moments. Firefighters are called to the scene when something has gone terribly wrong and those images remain with the firefighter for years depending upon how deeply they were disturbed by the scene.

The National Commission on Fire Prevention and Control states that firefighting is the single most hazardous occupation in the United States (Miller, 1995). According to the Jobs Rated Almanac, firefighters rank fourth in the most stressful occupations, just behind taxi drivers, racecar drivers, and senior corporate executives (Krantz, 2002). Overall, a firefighter's occupation ranked 249 out of 250 jobs based on income, stress, physical demands, potential growth, job security, and environment (Krantz, 2002). A firefighter must have skill and courage to enter burning buildings and extinguish fires, assist in hazardous materials incidents, automobile extrication, and some medical emergencies.

Laurence Miller (1995) wrote that the stress firefighters have on a daily basis can take its toll. The chronic stress, not the incident-related stress, leads public service workers towards post-traumatic stress disorder, burnout, and somatic complaints. Regehr, Hill, Knott, and Sault (2003) found a linear relationship between years of experience and levels of traumatic stress and depression. The authors' study reflected that the longer a person was employed in the fire service, the higher their traumatic stress and depression. One of the worst complaints that a firefighter can begin to experience is an anxiety disorder, known as Post Traumatic Stress Disorder (PTSD). This disorder may not be the result from one call, but can result from years of working.

Stress can have detrimental affects on a person's physical health, as well as, mental health. There will always be debates on the idea that the longer a person stays in an occupation like firefighting then the more resilient they become to the stress; however, some will argue that these firefighters are slowly burning out. From the heightened

arousal states and subsequent lowered arousal states, the sights and sounds of various horrific scenes will plague the occupation of firefighting with stress.

Personality Profiles

Researchers then expanded on the hypothesis that stress and burnout may be related to an individual's personality. A few researchers have explored the relationship between a subject's hardiness to stress and predictability of burnout (Langemo, 1990; Rahim, 1990; Toscano & Ponterdolph, 1998). There has been little evidence to support or deny this relationship and should be studied further. Palmer and Spaid (1996) tried to determine if a relationship occurred between the personality of authoritarianism and burnout. These authors defined highly authoritarian individuals as those who prefer to be in charge of making decisions that affect their lives (Palmer & Spaid, 1996). There is the type-A versus type-B suggestion, or the authoritarian viewpoint suggested by Palmer and Spaid (1996), or the hardiness concept, or the five-factor model suggested by McCrae and associates, or the other various concepts that may very well explain why one personality prevails over another in the public service occupation (McCrae, Costa, & Busch, 1986; McCrae & John, 1992). There are a multitude of various names and scales to identify a personality. People are drawn to a particular occupation for various reasons, but some persons do not readily "fit" into that occupation and suffer from extraordinary amounts of stress and dissatisfaction. Some people find out during rookie fire school that they do not want to be firefighters, some work five years and then realize that firefighting is not the occupation for them, and still others never lose their love for fighting fire and serving mankind. Another viewpoint that gives researchers further insight into a personality is the personality motive sensation seeking.

Sensation seeking. The general populace makes statements about police officers, emergency medical technicians, and firefighters as “adrenaline junkies”. On average, most persons are running away from a burning building or any major emergency, but firefighters, emergency medical technicians, paramedics, and police are running into the situation. These individuals may not be classified as “adrenaline junkies”, but sensation seekers. Sensation seeking is divided into very distinct subscales as defined by Zuckerman (1990). These subscales are thrill and adventure seeking; experience seeking; disinhibition; and boredom susceptibility. A person who exhibits the traits of a boredom susceptible sensation seeker may be the one running into an emergency scene and not out.

Marvin Zuckerman (1979) has developed the idea of sensation seeking as a human trait that is characterized by the need for “varied, novel, and complex sensations and experience and the willingness to take physical and social risks for the sake of such experience”. Sensation seeking has been further classified into four subscales. The first subscale was thrill and adventure seeking and incorporates a person who was involved in risky physical activities or sports that provide unusual sensations. Experience seeking was the next subscale that reflects a person’s desire to seek new experiences through an unconventional life-style and travel (Zuckerman, 1990). The third subscale was disinhibition. Disinhibition was experienced through other people or partying, social drinking, and sex. Boredom susceptibility was the last subscale and was defined as an aversion for unchanging or unstimulating environments or persons (Zuckerman, 1990).

Palmer and Spaid (1996) tried to relate the sensation seeking scale to burnout in firefighter/paramedics. However, the only category that related to burnout was the

boredom scale. Levenson (1990) only considered firefighters to be pro-social risk-takers who are guided by altruistic beliefs and not self-stimulation and not sensation seekers. Levenson's idea does not explain the "adrenaline rush" or heightened arousal that most firefighters, emergency medical technicians, and police officers report of experiencing during an emergency situation and the subsequent satisfaction of having that "rush". Nor does Levenson explain how these same professionals are considered to be "adrenaline junkies". More research is needed to clearly determine if firefighters are indeed sensation seekers and what subscale they may fall under.

Zuckerman (1979-1990) spent years defining sensation seekers and much research has been drafted after this characteristic and how it may relate to a particular population. The four different subscales help to further define the term sensation seeker. Researchers are still debating over the thought that a firefighter can be defined as a sensation seeker. Boredom susceptibility may be one way in which to further explain a firefighter's personality. Sensation seekers need to be at a state of arousal to enjoy the experience, like fighting a fire. The Sensation Seeking Scale Form V (SSS) was used in this study because of its use in multiple studies with various populations and the ease in which it was obtained.

Burnout

Burnout is a common side effect of having a stressful job and having personality traits or characteristics that do not allow the person to appropriately cope with stress. Maslach (2003) defines job burnout as a prolonged response to chronic emotional and interpersonal stressors on the job. Burnout has been accepted as being composed of three-components (Zellars, Perrewe, & Hochwater, 2000). The three components are known as

emotional exhaustion, depersonalization (cynicism), and diminished personal accomplishment (inefficacy).

Emotional exhaustion is considered to be at the core of burnout because public service professionals will give of themselves until their emotional resources are depleted (Vettor, Kosinski, & Frederick, 2000). Maslach and Jackson (1981) reported that individuals who are emotionally exhausted feel used up, irritable, frustrated, and worn out. Depersonalization occurs when the worker no longer treats people as people and becomes cynical and detached. Depersonalization can be mirrored with the idea of work cynicism. Abraham (2000) defines work cynicism as a process that involves the rejection of humanity, failure to empathize, and cold disconnection of self from others feelings, emotions, and sensibilities. The last component of burnout is diminished personal accomplishment. This component reflects the feeling of decreased or insufficient progress in accomplishing his or her job or in interacting with others (Zellars, Perrewe, & Hochwater, 2000). There has been much research, as cited, to define burnout and its various components to better understand what public service personnel are experiencing. Researchers are able to discuss what burnout is and are better at assessing the problem with the use of various inventories, such as the Maslach Burnout Inventory and the Copenhagen Burnout Inventory.

Burnout in this study was assessed using the Maslach Burnout Inventory-General Survey (MBI-GS: Maslach & Jackson, 1986, 1981). This inventory measured the three burnout dimensions: nine items address emotional exhaustion, five items address depersonalization, and eight items address diminished personal accomplishment. An example of a statement that would reflect emotional exhaustion is “I feel used up at the

end of the work-day.” Cynicism is addressed with statements such as “I have become less enthusiastic about my work.” A statement such as, “In my opinion, I am good at my job.” would assess a person’s professional efficacy. Depending on how often the subjects have experienced a particular item, they respond using a seven point scale ranging from 0 (never) to 6 (every day). The items that measure diminished personal accomplishment should be reverse-coded so that higher numbers will demonstrate greater emotional exhaustion, depersonalization, and fewer personal accomplishments. A participant must score high on exhaustion and cynicism, as well as, low in personal efficacy to show burnout. MBI-GS has been used widely with various populations, but not with firefighters and this study may help to bridge a gap concerning the study of burnout.

Even though researchers know that burnout exists, the exact reasons or factors that may create burnout are not known. Researchers have hypothesized on the moderating factors of stress and burnout, such as, social support and network, locus of control, work-related stressors, and role stressors to name a few (Beaton, Murphy, Pike, & Corneil, 1997; Brown, Mulhern, & Joseph, 2002; Revicki & Gershon, 1996; Zellars, Perrewe, & Hochwater, 2000). Maslach, Shaufeli, and Leiter (2001) have presented a new framework for understanding burnout. They propose that there are six domains of the job environment that must be compatible with the employee. The less compatible the employee is with these domains then the greater the employee’s burnout may be. The six domains are work overload, lack of control, insufficient reward, breakdown of community, absence of fairness, and conflicting values (Maslach, Shaufeli, & Leiter, 2001). The result of these various moderating factors is a workforce that is overburdened and experiencing burnout.

Burnout is a term that can easily be defined and the progression can be described by exhaustion, cynicism, and inefficacy. To explain where burnout originates is not possible. To explain how all the moderating factors increase or decrease the likelihood of burnout is not possible. What is possible is to determine if a firefighter is experiencing burnout and how that may relate to his/her personality. As burnout increases then the firefighter will begin to show clear signs of distress, such as, not working well with others, dehumanizing others, and feeling exhausted.

Job Related Factors

Firefighters have a high stress job with few tangible rewards. As researchers began to recognize that a problem existed between public service occupations and burnout, they began to study job satisfaction, on the job injuries, job performance, and attendance. The more emotionally detached a person becomes to their job, the less they care about doing the job well or even doing the job at all. Firefighters are at a high risk of injury on a regular day; but as they begin to distance themselves from others and the less they care, the more dangerous they become. Some experience physical or mental complaints may just call in sick, get injured of the job, do a very poor job, or just become dissatisfied.

Job dissatisfaction occurs more when the employee does not like the job for a variety of reasons, such as pay, supervisors, attitudes of fellow coworkers, etc. Job dissatisfaction will be apparent by the workers behavior, performance, and attendance. Job performance that does not meet the standards of a supervisor is considered poor job performance. A workforce that is suffering from burnout and stress overload results in job dissatisfaction and poor performance (Randall & Scott, 1988). The job satisfaction or

dissatisfaction may be dependant on how long that firefighter has worked for a particular department. Traut, Larsen, and Feimer (2000) studied five aspects of job satisfaction of fire fighters. The five aspects of job satisfaction are satisfaction with the supervisor, satisfaction with agency relationships, satisfaction with job training, satisfaction with job content, and overall job satisfaction. These authors found that the most positive responses for all five aspects came from employees with three or less years in the department, the group with between four and ten years on the job were positive for the satisfaction with supervisor and overall job satisfaction aspects, no other group had statistically significant positive results. Those findings raise an interest as to what happens to the morale after ten years of experience on a fire department. Vettor, Kosinski, and Frederick (2000) reviewed several research articles and assessed burnout can result in high job-turnover rates, increased absenteeism and low morale.

Multiple studies use the Job Satisfaction Survey to measure a particular population's job satisfaction. (JSS: Spector, 1996) This is a 36 item questionnaire that contains nine different subscales; pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication. The survey depends on how the participant feels toward a statement with the responses of either disagree very much, disagree moderately, disagree slightly, agree slightly, agree moderately, or agree very much. This survey was used because of its wide use in various professions, such as, university staff, civil service employees, nurses, and educators to name a few. Over 8,000 people have participated in studies that used the JSS to determine job satisfaction and create the normative values (Blood, et al, 2002). This survey was used because of its wide use and ease in which it was obtained.

Research concerning on the job injuries of firefighters and how that may relate to various variables was not present. There are some links to on-the-job injuries of other public service occupations but none that have firefighters as their population. On-the-job injuries are a major concern to fire departments, not only because of the injury suffered by the firefighter, but because of the lost time and the expenses of treatment and rehabilitation for that firefighter. In 2002 there were over 80,000 firefighter injuries that occurred on the job as reported to the National Fire Protection Agency (Karter, M.J., Molis, J.L., 2003). 14,040 or 17.3% of those reported firefighter injuries occurred during on duty activities other than fire or non-fire emergencies. Based on the statistics from the NFPA report, strains, sprains, and muscular pain accounted for 55.1%, and wound, cut, bleeding, bruise accounted for 18.6% of all injuries (Karter, M.J., Molis, J.L., 2003). Other professions have been studied to determine if a link exists between on the job injuries and burnout. There is little to no research on this topic with reference directly to firefighters.

A questionnaire was adapted from previous research in order to assess the location, type, management, and treatment of on the job injuries. This study is more interested in major injuries that may have occurred and not the minor everyday bruise or minor abrasion. Major injuries are described as cuts, bruises, fractures, sprains, strains, burns, heat stress (heat exhaustion), and smoke or gas inhalation. These injuries would have kept that firefighter out of work for at least one day or required medical attention beyond icing, wrapping, and rest. The firefighter is asked to circle how many times he/she has had an injury. If an injury has been sustained the next questions ask the person

to make a mark on a picture of a human to show where the injury occurred, circle type, management, and treatment of that specific injury.

Job dissatisfaction appears to be reflected by poor performance and absenteeism. Job dissatisfaction for firefighters may be created by the amount of stress or as a result of burnout. A workforce that does not want to work, or does not show up for work, or is injured on the job because of lack of efficacy, or does not like the job anymore creates a problem for the organization to accomplish their goals. If the younger firefighters are more satisfied, then maybe our older firefighters are burning out and their needs should be addressed. Job dissatisfaction, injury on the job, absenteeism, and poor job performance can be signs of a much more serious problem.

Summary

The fire service attracts risk takers, but the definition of the type of risk taker whether sensation seeker or pro-social activist has not been resolved. Stress can be extreme for a firefighter considering what they do in a given day, but if his/her personality is able to cope then there may never be any psychological or physical complaints. Those that have a personality that does not allow them to cope with this stress, may develop problems, such as somatic complaints or PTSD. If a personality test helps to determine who will need more training in coping with stress and defeating burnout then that may result in less job dissatisfaction, poor job performance, absenteeism, and on-the-job injuries that cripple the fire service and the public that they serve each year.

CHAPTER III

METHOD

Design

This design was cross-sectional of the firefighters to assess the relationship between sensation seeking, burnout, and job related factors.

Participants

Career firefighters of a Southeastern Louisiana Fire Department were invited to participate in this study. A career firefighter is defined as a person who is paid for his/her full-time firefighting job. There were 93 (out of 95 possible) volunteers who participated. The two participants declined to participate for personal reasons. The participants ranged in age from 19-56 years. All of the subjects were male and represented several ethnic groups, though Caucasian made up the majority of participants.

Measures

Demographics. Participants completed a demographic questionnaire about their age, ethnicity, gender, marital status, family size, years in the fire department, rank in fire department, level of emergency medical training, and previous years of fire department service prior to joining current department (see Appendix B). Most of the information was forced choice, for example, ethnicity, gender, marital status, rank in fire department, and level of emergency medical training. The other questions were fill in the blank for particular questions, such as age, years in the fire department, previous years of fire department service prior to joining the current department.

Sensation seeking. Sensation seeking was assessed using the Sensation Seeking Scale, Form V (Zuckerman, 1979, see Appendix C). The SSS contained 40 items that

asked participants to select one of the two statements that best reflects their level of sensation seeking. An overall sensation seeking score was calculated, as well as, four subscale scores. The four subscales are disinhibition, boredom susceptibility, experience, and thrill. Questions concerning the thrill seeker addressed the preference for dangerous activities such as mountain climbing, jumping out of planes, or surf-board riding. The experience seeking subscale contained questions that determine if a person preferred exhibitionism in dress and behavior, use of marijuana or hallucinatory drugs. Disinhibition measured the desirability of heavy social drinking, promiscuity, and gambling. Questions concerning dislike for repetitive experiences, routine work, or boring people are linked to the subscale of boredom. The total possible score for this scale was 0 to 40. Those firefighters who scored 13 or above were classified as a high sensation seeker and those firefighters who scored 10 or below were classified as a low sensation seeker. The four subscales have their own possible scores. The high scores of each of the subscales were 10 for disinhibition, 10 for boredom susceptibility, 10 for experience, and 10 for thrill and adventure. Deditius-Island and Caruso (2002) determined that the mean score for reliability was .76 after reviewing 21 studies. The SSS was used because of the interest in this particular personality motive.

Burnout. Burnout was assessed using the Maslach Burnout Inventory-General Survey (Maslach & Jackson, 1981, 1986: see Appendix D). This inventory measured the three burnout dimensions: nine items addressed emotional exhaustion, five items addressed depersonalization, and eight items addressed diminished personal accomplishment. An example of a statement that would reflect emotional exhaustion is “I feel used up at the end of the work-day.” Cynicism was addressed with statements such

as “I have become less enthusiastic about my work.” A statement such as, “In my opinion, I am good at my job.” assessed a person’s professional efficacy. Depending on how often the subjects have experienced a particular item, they responded using a seven point scale ranging from 0 (never) to 6 (every day). An emotional exhaustion score for the MBI is broken into three levels of low, average, or high with scores of less than or equal to 16, between 17 and 26, and greater than or equal to 27, respectively. The scores for depersonalization subscale are broken into three levels of low, average, or high with scores of less than or equal to 6, between 7 and 12, and greater than or equal to thirteen, respectively. Personal accomplishment scores are broken up into the three levels as well, with greater than or equal to 39 indicating a low level, between 38 and 32 indicating a middle level, and less than or equal to 31 indicating a high level. Zellars, Perrewé, and Hochwarter (2000) found that the coefficient reliability estimates for the three dimensions were 0.92, 0.84, and 0.85, respectfully. All three dimensions are used to indicate burnout. A participant must score high on exhaustion and cynicism, as well as, low in personal efficacy to show burnout. MBI-GS has been used widely with various populations and in studies of emergency medical technicians and firefighters.

Job Satisfaction. Job satisfaction was assessed using the Job Satisfaction Survey (Spector, 1996: see Appendix E). This was a 36 item questionnaire that contains nine different subscales; pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication. The survey depended on how the participant feels toward a statement with the responses of either disagree very much, disagree moderately, disagree slightly, agree slightly, agree moderately, or agree very much. Disagree very much was coded with a score of 1,

whereas agree very much was coded with a score of 6. Several of the questions were reverse coded. The scores ranged from 36-216, with a normative mean of 136.5 and standard deviation of 12.1. The higher the score the more satisfied a person is with their job. This survey was used because of its wide use in various professions, such as, university staff, civil service employees, nurses, and educators to name a few. Over 8,000 people have participated in studies that used the JSS to determine job satisfaction and create the normative values stated above (Blood, et al, 2002). This survey was used because of its wide use and ease in which it was obtained.

Absenteeism. Self-reported (no work or other official records will be used). This survey only asked two open-ended questions (see Appendix F). The first question asked how many days they have not reported for duty for reasons other than scheduled holidays, vacations, or on the job injuries. The second question asked how many days they have not reported for duty because of an on the job injury in the past 12 months.

On-The-Job Injuries. Self-reported (no work or other official records will be used) on-the-job injuries during the past 12 months were more deeply assessed with this survey (see Appendix G). This study was more interested in major injuries that may have occurred and not the minor everyday bruise or minor abrasion. Major injuries are described as cuts, bruises, fractures, sprains, strains, burns, heat stress (heat exhaustion), and smoke or gas inhalation. These injuries would have kept that firefighter out of work for at least one day or required medical attention beyond icing, wrapping, and rest. The firefighter was asked to circle how many times he/she has had an injury. If an injury has been sustained the next questions asked the person to make a mark on a picture of a

human to show where the injury occurred, circle type, management, and treatment of that specific injury. At least five sets of these questions are provided in the survey.

Procedures

After UNO IRB approval and informed consent had been obtained by the investigator, participants were given a packet of questionnaires containing: demographic information, SSS Form V, MBI-GS, JSS, attendance survey, and on-the-job injuries survey. Three firefighters were given the packets as a pilot test to ensure the instructions for each questionnaire were specific and easy to understand. The packets were distributed to the seven fire stations starting at 8:30 am until about 1:00 pm each day. Each proctor was advised to express that this was voluntary so that the firefighters would not feel pressured into filling out the packets. Each questionnaire had specific instructions on how to fill the information out. Each questionnaire had a corresponding subject number in order to keep all the questionnaires together with the correct packet. The packets were collected by the various proctors and brought to the principal investigator. The fire department runs operations by splitting their work force into three duty groups, A, B, and C. This required the principal investigator to be present for three consecutive Sundays and then to return during the week in order to allow everyone an opportunity to participate. Once all packets are completed, the information was entered into the computer for data analysis.

Data Analysis

All data were reported anonymously or as group data with no specific identifying information. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) 12.0 software. Demographics and information was summarized using descriptive

data. The hypothesis for this study was analyzed using a factorial MANOVA examining the difference in burnout scores between high and low sensation seekers. The exploratory interrelationships among sensation seeking, burnout, job satisfaction, on-the-job injuries and absenteeism were analyzed using Pearson product-moment correlations.

CHAPTER IV

RESULTS

Introduction

Basic descriptives and frequencies were used to describe the data from the sample. Means and standard deviations were used to describe the ages and years at the current fire department. Race, marital status, number of children, emergency medical training, and rank were described using frequencies. The number of on-the-job injuries and absenteeism were also discussed. Injuries were further described by the type and number of times injured on the job. The SSS was described by a total score and the four subscales, and how many participants completed each of the various sections. The MBI was described by the means and standard deviations for the three dimensions. JSS was also described by the means and standard deviations for the total score, as well as, the nine components that are included in the survey. The reliability of each measure in the current study was also presented. The hypothesis was then examined using a MANOVA comparing the score of high and low sensation seekers on the three MBI dimensions. A between subjects effect was also conducted for each of the SSS subscales on the three MBI dimensions. Finally, the exploratory question was assessed using a series of Pearson product-moment correlations.

General Descriptive Data

The participants ranged from 19 to 56 years with a mean of 37.78 ($SD= 8.77$) years. All of the participants were male and the majority (92.5%, $n= 86$) of the participants were Caucasian. Six of the participants (6.5%) were African-American and one participant described himself as other (1.1%). Of the total participants, 82.8% ($n= 77$)

were married, 8.6% ($n= 8$) were single, and the remaining 8.6% ($n= 8$) were divorced. Only 77 participants reported having children with an average of 2.25 ($SD = .94$) children per participant. The average duration of employment at their current fire department was 11.7 years ($SD = 7.29$), with a range of 1 month to 29 years. Twenty-three participants reported having either worked or volunteered prior to employment with the current fire department ranging from a period of 1 to 9 years. Most (57%, $n= 53$) of the participants were certified first responders, 41% ($n= 38$) were certified emergency medical technicians-basic, and the remaining 2% ($n= 2$) were certified emergency medical technicians-paramedic. With regard to current employment rank 41.9% ($n= 39$) were currently a firefighter, 20.4% ($n= 19$) were operators, 25.8% ($n= 24$) were captains, 4.3% ($n= 4$) were fire inspectors and 6.5% ($n= 7$) were either district or deputy chiefs.

On-The-Job Injuries and Absenteeism Descriptives

Fifteen percent ($n= 14$) of the participants reported being injured at least once during the past 12 months. The highest reported number of injuries was three. Among the reported injuries were cuts, bruises, back strains, and burns. Only 8.6% ($n= 8$) of participants reported being ill on-the-job during the past 12 months. Among the reported illnesses were the flu, meningitis, and general malaise.

Thirty-eight percent ($n= 35$) of participants reported work absences for reasons other than holidays or vacations. The range of reported absences was from 1 to 90 days. Thirty-four percent ($n= 32$) of the participants indicated how many days since their last absence with a response of 3 days to 4 years.

Sensation Seeking Scale Descriptives

The mean for the total SSS among the 83 participants who completed the form was 16.5 ($SD = 5.22$). The range in this sample was 5 to 33, compared to a possible range of 0 to 40. Sixty-eight percent ($n= 64$) of the population was considered to be high (total score >13) in sensation seeking and 12.9% ($n= 12$) of the population was considered to be low (total score <10) in sensation seeking. The remaining 18% ($n= 17$) participants either scored between the ranges for high or low sensation seeking or did not report complete all SSS items properly.

As mentioned earlier, the SSS is divided into four subscales: (a) disinhibition, (b) boredom susceptibility, (c) experience seeking, and (d) thrill adventure seeking. The disinhibition subscale was completed by 87 participants with a range of 0 to 10 and a mean of 4.13 ($SD= 2.79$). Ninety-one participants completed the boredom susceptibility subscale with a range of 0 to 9 and a mean of 2.21 ($SD= 1.64$). The experience seeking subscale was completed by 88 participants with a range of 0 to 8 and a mean of 4.06 ($SD= 1.80$). The final subscale thrill adventure seeking was completed by 89 participants with a range of 0 to 10 and a mean of 5.94 ($SD= 2.52$). In the current study, the total SSS reliability (i.e., internal consistency) using Chronbach's Alpha was $\alpha= .73$. This result suggests that the SSS was moderately reliable among the current sample.

Maslach Burnout Inventory Descriptives

The MBI was assessed by summing the individual responses for each of the three dimensions: (a) emotional exhaustion, (b) depersonalization, and (c) personal accomplishment. Ninety-seven percent ($n= 90$) of the participants completed the questionnaire properly for emotional exhaustion and depersonalization. The personal

accomplishment section of the questionnaire was completed correctly by 96% ($n= 89$) of the participants. High levels of emotional exhaustion and depersonalization together with lower levels of personal accomplishment reflect burnout. In the sample, emotional exhaustion ranged from 0 to 49 with a mean of 12.93 ($SD= 10.87$), which reflects a generally low score. Depersonalization ranged from 0 to 21 with a mean of 6.52 ($SD= 4.71$), which also reflects a generally low score. The range for personal accomplishment was 10 to 47 with a mean of 33.08 ($SD= 8.85$), which reflects a more moderate or average level score than the other two factors. Together these findings indicate that the participants in the current study were low in burnout.

In the current study, the MBI reliability (i.e., internal consistency) for each of the three factors was: (a) emotional exhaustion, $\alpha= .92$; (b) depersonalization, $\alpha= .53$; and (c) personal accomplishment, $\alpha= .76$. Emotional exhaustion and personal accomplishment had good reliability, however, depersonalization has well below accepted standards for reliability. Consequently, any results involving depersonalization must be interpreted cautiously.

Job Satisfaction Survey Descriptives

A total score for the JSS was calculated by summing the scores for each of the 9 items in the survey. Ninety-one percent ($n= 85$) participants completed the entire survey. Scores ranged from a minimum of 82 to a maximum of 187. The mean was 141.78 ($SD= 20.96$) which reflects a generally high overall job satisfaction. The job satisfaction survey consists of the following nine components: (a) pay, (b) promotion, (c) supervision, (d) fringe benefits, (e) contingent rewards, (f) operating conditions, (g) coworkers, (h) nature of work, and (i) communication. Ninety-nine percent ($n= 92$) completed the pay, job

promotion, and supervision components of the survey; the mean were 12.08 ($SD= 4.32$), 14.03 ($SD= 3.38$), and 18.27 ($SD= 5.03$), respectively. Fringe benefits, contingent rewards and operating conditions were completed by 98% ($n= 91$); with means of 14.03 ($SD= 4.05$), 14.70 ($SD= 4.06$), and 16.05 ($SD= 3.11$), respectively. The coworkers and nature of work was completed in its entirety by all the participants with a mean of 18.12 ($SD= 3.08$) and a mean of 21.00 ($SD= 2.90$). The last component of the survey, communication, was completed by 98% ($n= 91$) of the participants with a mean of 13.85 ($SD= 4.33$). In the current study, the total JSS reliability was $\alpha= .87$. This result suggests that the JSS was reliable among the current sample.

Evaluation of Hypothesis and Exploratory Question

Hypothesis . This hypothesis was examined using a MANOVA comparing the scores of high and low sensation seekers on the three MBI dimensions. The results of this analysis (*Wilk's* $\lambda= .98$, $F [3, 68]= 0.51$, $p= .68$) suggested that high and low sensation seekers did not differ in any of the burnout dimensions. A review of the means and standard deviations from this analysis is presented in Table 1.

Because, there were so few participants who scored in the low sensation seeking group an additional MANOVA analysis was conducted using a larger low sensation seeking group. The new larger low sensation seeking group included all of the participants who scored 12 or lower on the SSS total. This resulted in an additional seven participants in the low sensation seeking group bringing the total to nineteen participants. The result of the subsequent MANOVA analysis (*Wilk's* $\lambda= .98$, $F [3, 75]= 0.61$, $p= .02$) was still non-significant, suggesting that high (total score ≥ 13) and low (total score ≤ 12) sensation seekers did not differ on the MBI dimensions.

Table 1. Means and SDs for High ($n= 64$) and Low ($n= 12$) Sensation Seeking on the Three Maslach Burnout Inventory Factors.

MBI Factor	Sensation		
	Seeking	Mean	SD
Emotional Exhaustion	High	11.83	10.58
	Low	12.67	7.84
Depersonalization	High	6.20	4.27
	Low	5.17	5.08
Personal Accomplishment	High	34.15	7.98
	Low	32.75	9.68

* $p < .05$

Further MANOVA analyses examining high and low groups (using a median split method) for each of the four SSS subscales on the three MBI dimensions were also conducted. Overall, the results indicated no significant full model differences between high and low sensation seekers for the SSS subscales on the three MBI dimensions: (a) disinhibition (*Wilk's* $\lambda = .99$, $F [3, 77] = 0.23$, $p = .88$), (b) boredom susceptibility (*Wilk's* $\lambda = .92$, $F [3, 80] = 2.46$, $p = .07$), (c) experience seeking (*Wilk's* $\lambda = .92$, $F [3, 78] = 2.16$, $p = .10$), and (d) thrill and adventure seeking (*Wilk's* $\lambda = .96$, $F [3, 79] = 1.09$, $p = .36$). However, the results for boredom susceptibility subscale and experience seeking subscale demonstrated between subjects trend in MBI scores.

Specifically, between subjects analyses ($F [1] = 5.14$, $p = .03$) indicated that the high boredom susceptibility group ($M = 8.12$, $SD = 4.97$) scored higher on the

depersonalization dimension than the low boredom susceptibility group ($M= 5.60, SD= 4.57$). Between subjects analyses ($F [1]= 6.49, p= .01$) also indicated that the high experience seeking group ($M= 36.24, SD= 6.98$) scored higher on the personal accomplishment dimension than the low experience seeking group ($M= 31.44, SD= 9.55$). No other differences were found in the other two dimensions of the MBI for the high and low groups for boredom susceptibility or experience seeking. The other two SSS subscales, disinhibition and thrill and adventure seeking, did not show any between subjects effects for the high and low groups of these two subscales on the three MBI dimensions. A summary of the means and standard deviations comparing high and low groups of the four SSS subscales on each of the three MBI dimensions is presented in Tables 2-5.

Table 2. Means and SDs for High ($n= 34$) and Low ($n= 47$) Disinhibition on the Three Maslach Burnout Inventory Factors.

MBI Factor	Sensation		
	Seeking	Mean	SD
Emotional Exhaustion	High	11.62	9.86
	Low	13.68	11.82
Depersonalization	High	6.12	4.15
	Low	6.60	5.33
Personal Accomplishment	High	33.82	8.44
	Low	33.51	8.63

* $p < .05$

Table 3. Means and SDs for High (n= 26) and Low (n= 58) Boredom Susceptibility on the Three Maslach Burnout Inventory Factors.

Boredom			
MBI Factor	Susceptibility	Mean	SD
Emotional Exhaustion	High	13.27	11.67
	Low	12.62	10.54
Depersonalization	High	8.11*	4.97
	Low	5.60*	4.57
Personal Accomplishment	High	31.84	7.93
	Low	34.05	9.15

* $p < .05$

Table 4. Means and SDs for High (n= 37) and Low (n= 45) Experience Seeking on the Three Maslach Burnout Inventory Factors.

Sensation			
MBI Factor	Seeking	Mean	SD
Emotional Exhaustion	High	11.24	10.67
	Low	13.47	9.75
Depersonalization	High	5.73	4.07
	Low	6.47	4.92
Personal Accomplishment	High	36.24*	6.98
	Low	31.44*	9.55

* $p < .05$

Table 5. Means and SDs for High (n= 42) and Low (n= 41) Thrill and Adventure Seeking on the Three Maslach Burnout Inventory Factors.

MBI Factor	Sensation		
	Seeking	Mean	SD
Emotional Exhaustion	High	13.26	11.85
	Low	11.49	8.06
Depersonalization	High	6.69	4.52
	Low	5.70	4.60
Personal Accomplishment	High	34.48	8.14
	Low	32.49	9.39

* $p < .05$

Exploratory Question . The exploratory question was assessed using a series of Pearson product-moment correlations (see Appendix I). As expected, most of the SSS factors were related to each other, as were all of the MBI factors. However, thrill adventure seeking was not related to disinhibition or boredom susceptibility, and boredom susceptibility was not related to experience seeking. Emotional exhaustion and depersonalization ($r = .60, p = .001$) were positively related to each other. Emotional exhaustion ($r = -.33, p = .001$) and depersonalization ($r = -.36, p = .001$) were negatively related to personal accomplishment.

Age was significantly related to several factors. Age had a negative relationship with boredom susceptibility ($r = -.28, p = .01$), personal accomplishment ($r = -.24, p = .02$), and job satisfaction ($r = -.27, p = .01$). Emotional exhaustion was positively related to age

($r = .32, p = .001$). The depersonalization dimension of the MBI was positively related to boredom susceptibility ($r = .27, p = .01$). The personal accomplishment dimension of the MBI was positively related to the experience seeking subscale of the SSS ($r = .25, p = .02$). As expected, the emotional exhaustion ($r = -.49, p = .001$) and depersonalization ($r = -.54, p = .001$) dimensions of the MBI were both negatively related to job satisfaction, whereas the personal accomplishment factor was positively related ($r = .43, p = .001$) to job satisfaction. Injuries were negatively related ($r = -.26, p = .02$) to job satisfaction. Absenteeism was not significantly related to any of the other factors.

Summary

This study included 93 participants who completed multiple questionnaires concerning demographics, SSS, MBI-GS, JSS, on-the-job injuries, and absenteeism. Descriptives and frequencies were conducted for each of the questionnaires and reported. The sample scored high in sensation seeking, low in burnout and high in job satisfaction. Overall, there were relatively low numbers of injuries, illnesses and absences related to work in this sample. No significant differences between high and low total sensation seekers on the MBI dimensions were found. Similarly, no significant differences were found between the high sensation seekers and the medium/low total sensation seekers on the MBI factors. Although the overall MANOVA models for the high and low SSS factor on the MBI were non significant, two between subjects effects for boredom susceptibility on depersonalization and experience seeking on personal accomplishment were supported. The Exploratory Question was assessed using Pearson product-moment correlations and multiple significant relationships were found among the factors included in the analysis.

CHAPTER V

DISCUSSION

Introduction

Sensation seeking may not be the only motive that attracts people to seek firefighting as an occupation, but a large percentage of this sample reported high scores in sensation seeking. Firefighters may have the personality motive for overall sensation seeking, but this does not appear to have any connection to injury or burnout. Age was related to many of the factors and might be of concern to the fire department administrative staff to ensure that the older firefighter's needs are still addressed. Fire departments might also be concerned with the overall job satisfaction of their employees based on the relationships found in this study.

General Discussion

Zuckerman and colleagues have spent over 30 years developing and researching the sensation seeking construct. With over two-thirds or 68.6% ($n= 64$) of this sample of firefighters scoring above a 13 on the SSS, this sample was comprised mainly of high sensation seekers. This finding is in contrast to the research of Clarke and Innes (1983), who found in a sample of 87 Australian firefighters that 50 were low in sensation seeking and 37 were high in sensation seeking. They also reported that their sample had a total mean score of 11.97 ($SD= 4.45$). More in line with the current findings, Palmer and Spaid (1996) reported a mean SSS total score of 17.7 ($SD= 6.31$) in their sample of 91 firefighters. This is similar to the 16.53 ($SD= 5.22$) reported in the current study. These equivocal findings suggest that firefighters might not represent the homogeneous personality types (i.e., sensation seeking) that popular culture would lead us to believe.

This finding also suggests that other factors may play a role in decisions to engage in firefighting as an occupational pursuit.

The lack of relationship between the subscales of the SSS might suggest that though the overall score reflects a sensation seeker in a broad sense, however, a participant may prefer thrill and adventure seeking and not have reflect any disinhibition or boredom susceptibility tendencies. The same can be said for the lack of relationship between boredom susceptibility and experience seeking. These findings are surprising, given the fact that the dimensions of the SSS are supposed to be factors representing an overarching sensations seeking personality motive. The findings in the current study may reflect the changing nature of thrill and adventure seeking as a more mainstream and accepted part of societal behavior, and possibly a distinct construct in and of itself.

Clarke and Innes (1983) speculated that sensation seekers were potentially selected out of the firefighting profession, yet the current study and others suggest that the opposite may be true (Palmer & Spaid, 1996). Sensation seeking and risk taking are traits that a positively related to each other (Zuckerman, 1979). Intuitively, one might speculate that firefighters are indeed risk takers and therefore, sensation seekers. A certain amount of risk is taken each time a firefighter responds to a fire, vehicle collision, or medical emergency. However, these calculated and accepted risks may not be the same as those reflected in the items of the SSS.

Firefighters are at risk of being injured and even killed while performing their jobs. These risks are purported to result in actual injuries. In the current study, 15% ($n=14$) of the sample were injured on-the-job in the past 12 months. However, the questionnaires in this current study did not ask participants how their injuries occurred or

in how many fires they had been involved in. The NFPA calculated statistics for our nation's firefighters in 2002 and concluded that 46.9% of the total injuries occurred on the fire ground, 17.3% occurred during other on-duty activities, and 18.7% occurred at non-fire emergencies (Karter & Molis, 2003). The NFPA chart shows that for a southern city with a population between 25,999 and 49,999, which this study included, had an average 0.6 injuries per 100 fires were reported (Karter & Molis, 2003).

With regard to burnout, this sample reflected low scores for emotional exhaustion and depersonalization and average scores for personal accomplishment. Vettor, Kosinski, & Frederick (2000) suggest that public service professionals will give of themselves until their emotional resources are depleted. The current results might suggest that this sample has the ability to cope with chronic emotional and interpersonal stressors on the job based on research by Maslach (2003). However, coping was not examined in the current study, leaving this conjecture open to future research. The depersonalization dimension had below acceptable internal reliability ($\alpha = .53$), which causes some trepidation in interpreting the result involving this dimension for burnout. This low internal reliability would suggest that this dimension did not assess what it was intended to assess.

Sensation seeking and the boredom susceptibility subscale have been positively related to burnout in firefighters in previous research (Palmer & Spaid, 1996). The current study reported no differences between high and low sensation seekers on the three MBI factors. Although, participants in the current study who scored high on the sensation seeking scale scored low on emotional exhaustion and depersonalization and average on personal accomplishment reflecting that they did not have signs of burnout, none of the findings were significant. Those participants who scored low on the sensation seeking

scale, also scored low on emotional exhaustion and depersonalization and average on personal accomplishment reflecting that they did not have signs of burnout, but again these findings were not significant. Based on the overall SSS data, the sensation seeking motive did not affect burnout.

When reviewing the analyses of the various subscales, the data were more in line with what was expected. However, given the lack of overall model significance and small sample size, these findings should be considered tentative. Those participants in the current study who scored high on boredom susceptibility also had a tendency to score higher on depersonalization than those low in boredom susceptibility. This result does not follow the hypothesis trend. Further support for this finding was provided in the correlational analyses, where the depersonalization dimension of the MBI was positively related to boredom susceptibility. These findings are similar to those of Palmer and Spaid (1996).

Researchers consider that increased depersonalization follows emotional exhaustion and would be a sign of burnout (Zellars, Perrew, & Hochwater, 2000). However, Maslach states that the three dimensions must be present in order to assess burnout with her survey (Maslach & Jackson, 1986). Two different analyses in the current study found significance between boredom susceptibility and the depersonalization dimension. Many of the questions for the boredom susceptibility subscale address interactions with exciting people and boring people. This could reflect that a person who ranks high on boredom susceptibility becomes bored with people easily and therefore began to depersonalize those that do not interest them. Another possibility could be that depersonalization is an effective way of coping for a boredom susceptible

firefighter. Depersonalization could be a way for firefighters to create a barrier between them and those that they come into contact with, and may decrease stress from traumatic situations. Another viewpoint may be that because firefighters have become depersonalized then they also become bored with situations. A note of caution must be paid to these findings regarding depersonalization because of its low internal reliability ($\alpha = .53$) for this study. This suggests that the statistical analyses involved with the depersonalization dimension of the MBI have little power because the dimension was not assessed reliably using these questions.

Those participants who scored high on experience seeking scored high on personal accomplishment and those participants who scored low on experience seeking scored low on personal accomplishment. This finding does follow the hypothesis trend that the experience sensation seekers are less likely to experience burnout. The experience sensation seeker has the desire to seek new experiences through an unconventional life-style and travel and would feel progress and increased accomplishment with his job or interacting with others based on this finding. However, it is important to note again that the hypothesis was not supported by the overall MANOVA models.

The correlational analyses revealed that age was related to several factors in this study. One relationship involved age and the boredom susceptibility subscale of the SSS ($r = -.28, p = .01$). This relationship might suggest that the older firefighters are less likely to become bored at work. Zuckerman and other researchers have shown that the younger (i.e., teenagers) populations have higher risk taking tendencies than older adults (Zuckerman, 1971; Ferguson, Valenti, and Melwani, 1991). Zuckerman (1971) further

stated that during the late teens and early twenties that sensation seeking peaks and then decreases with age.

Other relationships were found between age and two of the MBI dimensions. A positive relationship was found with emotional exhaustion ($r = .32, p = .001$) and a negative relationship was found with personal accomplishment ($r = -.24, p = .02$). Regerhr, Hill, Knott, and Sault (2003) found that levels of self-efficacy (i.e., personal accomplishment) were significantly lower in experienced firefighters than their younger counterparts. This data would suggest that a relationship exists between age and burnout in the fire service. A possible explanation could be that age and experience in the fire service decreased the sense of accomplishment and an increase in emotional exhaustion was present because of the traumatic events they have experienced.

Finally, age was related to job satisfaction in a negative manner ($r = -.27, p = .01$). The older firefighters were less satisfied with their jobs than the younger firefighters. The older firefighters may feel that they are stuck in a particular classification without the ability to move up prior to retirement. The younger firefighters may have a more idealized vision of the fire department and still find joy in their work, where as, the older firefighters may feel that the job has become routine or less enjoyable. Research has found the same relationship in other populations (Traut, Larson, Feimer, 2000). However, the overall job satisfaction score for this sample was relatively high suggesting that the older firefighters might have scored lower than younger firefighters, but they were still content with their job.

Not surprisingly, emotional exhaustion ($r = -.49, p = .001$) and depersonalization ($r = -.54, p = .001$) dimensions of the MBI were both negatively related to the overall JSS

score. The personal accomplishment ($r = .43, p = .001$) dimension was positively related to the overall JSS score. This can be interpreted to mean that the less burned out a participant is with low levels of emotional exhaustion and depersonalization and average to high levels of personal accomplishment the more likely they are to have high job satisfaction. Angerer (2003) reported similar negative correlations of .42 to .50 between job satisfaction and burnout in previous studies of general populations. These relationships could suggest that the more burnout a firefighter exhibits, then the more dissatisfied he is with his job. In contrast, it could suggest that the more dissatisfied the firefighter was with his job then the more burnout he may experience in the form of emotional exhaustion, depersonalization, and low personal accomplishment. Though the correlations were not high in magnitude, they a relationship between job satisfaction and burnout was apparent.

Also of interest, injuries were negatively related to job satisfaction ($r = -.26, p = .02$). This could mean that the participants who were more likely to have an injury on-the-job, the less satisfied he was with his job. However, an injury on-the-job could be the cause of the participant's dissatisfaction. On-the-job injuries were not related to any other factors. Other occupations have been studied for on-the-job injuries, but not firefighters.

Implications

Many fire departments across the nation have begun implementing new and more in depth screening processes and standards for new hires. Fire departments are more concerned about the psychological health and well being of their employees than in the past. The SSS might be another tool in fire departments' arsenal of employee assessment and help an employer develop better training and counsel for their employees. Because

two-thirds of the current sample scored high in sensation seeking, an awareness of sensation seeking and its effects on fire fighters might be beneficial.

Another source of information could come from the fire department having burnout assessments conducted in order to determine if burnout has occurred. Both injuries and job satisfaction were found to have relationships with burnout. Other classes could be conducted that address burnout in firefighting and ways to become engaged in their job, reduce injury, and becoming more satisfied with their job.

Age was a factor that had relationships with multiple factors. The relationships showed that the older firefighters had more feelings of burnout and were less satisfied with their job. Most employers are probably more interested in training the newer employees and assume that the older employees need less training. The fire department should adjust training, morale and other programs to address the different needs of younger and older firefighters.

Limitations

One of the limitations of this study was the sample size. Only 102 firefighters were employed at the fire department included in this study. Due to leave and other reasons, only 95 of these firefighters participated. A larger sample size may have helped to uncover real trends in the data that would be more generalizable to the larger population. Generalizing the results of this sample was also limited because this sample was mainly suburban, male, and white. Additionally, the firefighters who were on leave may have left the sample with only a healthy worker population. This may have resulted in a biased sample that did not reflect those workers who experience burnout and job dissatisfaction.

Another limitation was that several of the participants did not properly complete and fill out all questionnaires completely. Hence, some data were lost. Another potential limitation was that the participants were advised that the individual information would not be shared with any of their superior officers, the participants may have filled out the questionnaires so that they appeared to be good or 'angelic' to their superiors. This might have caused inflated scores on the SSS and JSS, and deflated scores on the MBI and injuries and absences. Moreover, given that the sample was male and involved in a stereotypical male occupation, participants may have responded to the questionnaires, particularly the SSS, so that they appeared more macho.

Summary

This population was high in sensation seeking, low in burnout, and high in job satisfaction. The occupation of firefighting may select for those high in sensation seeking. Sensation seeking as a whole, however, was not related to burnout. Those firefighters who were high in boredom susceptibility were more likely to depersonalize those they came into contact with than those who scored low in boredom susceptibility. Those firefighters who scored high in experience seeking were more likely to have increased feelings toward accomplishment than those who scored low in experience seeking.

Several relationships were found among the factors in this study. Older firefighters were more likely to have decreased boredom susceptibility, increased emotional exhaustion, decreased personal accomplishment, and lower job satisfaction. Job satisfaction was related to all three of the MBI dimensions, suggesting that job satisfaction and burnout are important factors to consider in the fire service for more content employees. Job satisfaction and injuries were negatively related, suggesting that

either those low in job satisfaction are more likely to be injured or those who are injured as less satisfied with their job. In summary, the factors in the current study deserve more attention and research in this population.

REFERENCES

- Abraham, R. (2000). Organizational cynicism: bases and consequences. *Genetic, Social, And General Psychology Monographs, 126*(3), 269-292.
- Beaton, R.D., Murphy, S.A., Pike, K.C. (1996) Work and nonwork stressors, negative affective states and pain complaints among firefighters and paramedics. *International Journal of Stress Management, 3*(4), 223-237.
- Beaton, R.D., Murphy, S.A., Pike, K.C., & Corneil, W. (1997). Social support and network conflict in firefighters and paramedics. *Western Journal of Nursing Research, 19*(3), 297-313.
- Blood, G.W., Ridenour, J.S., Thomas, E.A., Qualls, C.d., Hammer, C.S. (2002). Predicting job satisfaction among speech-language pathologists working in public schools. *Language, Speech, and Hearing Services in Schools, 33*, 282-290.
- Boudreaux, E., Mandry, C., Brantley, P.J. (1997) Stress, job satisfaction, coping, and psychological distress among emergency medical technicians. *Prehospital and Disaster Management, 12*(4), 242-249.
- Brown, J., Mulhern, G., Joseph, S. (2002). Incident-related stressors, locus of control, coping, and psychological distress among firefighters in northern Ireland. *Journal of Traumatic Stress, 15*(2), 161-168.
- Clarke, A., Innes, J.M. (1983). Sensation-seeking motivation and social-support moderators of the life stress/illness relationship: some contradictory and confirmatory evidence. *Personality and Individual Differences, 4*(5), 547-550.
- Deditiu-Island, H.K., Caruso, J.C. (2002). An examination of the reliability of scores from Zuckerman's sensation seeking scales, Form V. *Educational and*

- Psychological Measurement*, 62(4), 728-734.
- Ferguson, M.A., Valenti, J.M., Melwani, G. (1991). Communicating with risk takers: A public relations perspective. *Public Relations Research Annual*, 3, 195-224.
- Grundy, S.E. (2000). *Perceived work-related stressors, personality, and degree of burnout in firefighters*. University of the Pacific.
- Karter, M.J., Molis, J.L. (2003). U.S. Firefighter Injuries-2002. Fire Analysis and Research Division of the National Fire Protection Agency.
- Krantz, L. (Ed.). (2002). *Jobs Rated Almanac*. Fort Lee, N.J.:Barcade Books
- Langemo, D. (1990). Impact of work stress on female nurse educators. *Journal of Applied Behavioral Science*, 25, 131-132.
- Levenson, M.R. (1990). Risk taking and personality. *Journal of Personality and Social Psychology*, 58, 1073-1080.
- Maslach, C. (2003). Job burnout: new directions in research and intervention. *Current Directions in Psychological Science*, 12(5), 189-192.
- Maslach, C., & Jackson, S.E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2, 99-113.
- Maslach, C., Schaufeli, W.B., & Leiter, M.P. (2001). Job Burnout. *Annual Review of Psychology*, 52, 397-422.
- McCrae, R.R., Costa, P.T., & Busch, C.M. (1986). Evaluating comprehensiveness in personality systems: The California Q-set and five-factor model. *Journal of Personality*, 54, 430-446.
- McCrae, R.R., & John, O.P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, 60, 175-215.

- Miller, L. (1995). Tough guys: psychotherapeutic strategies with law enforcement and emergency services personnel. *Psychotherapy, 32*(4), 592-600.
- Palmer, R.G., & Spaid, W.M. (1996). Authoritarianism, inner/other directedness, and sensation seeking in firefighter/paramedics: their relationship with burnout. *Prehospital and Disaster Management, 11*(1), 11-19.
- Rahim, M. (1990). Moderating effects of hardiness and social support on the relationships of conflict and stress to job burnout and performance. Theory and Research in Conflict Management. 4-14
- Randall, M., & Scott, W.A. (1988). Burnout, job satisfaction, and job performance. *Australian Psychologist, 23* (3), 335-347.
- Regehr, C., Hill, J., Glancy, G.D. (2000). Individual predictors of traumatic reactions in firefighters. *Journal of Nervous & Mental Disease, 188*(6). 333-339.
- Regehr, C., Hill, J., Knott, T., & Sault, B. (2003). Social support, self-efficacy and trauma in new recruits and experienced firefighters. *Stress and Health, 19*, 189-193.
- Revicki, D.A. & Gershon, R.R. (1996). Work-related stress and psychological distress in emergency medical technicians. *Journal of Occupational Health Psychology, 1*(4), 391-396.
- Spector, P., (1996). *Job Satisfaction: Application, assessment, causes, and consequences*. Thousand Oaks, CA: Sage.
- Toscano, P. & Ponterdolph, M. (1998). The personality of buffer burnout. *Nursing Management, 29*, 32L-32R.
- Traut, C.A., Larsen, R., Feimer, S.H. (2000). Hanging on or fading out? *Public Personnel*

- Management*, 29(3), 343-352.
- Vettor, S.M., Kosinski, Jr., Frederick, A. (2000). Work-stress burnout in emergency medical technicians and the use of early recollections. *Journal of Employment Counseling*, 37(4), 216-229.
- Zellars, K.I., Perrewe, P.L., Hochwarter, W.A. (2000). Burnout in health care: the role of the five factors of personality. *Journal of Applied Social Psychology*, 30(8), 1570-1598.
- Zuckerman, M. (1971). Dimensions of sensation seeking. *Journal of Consulting and Clinical Psychology*, 36. 45-52.
- Zuckerman, M. (1979). *Sensation seeking, beyond the optimal level of arousal*. Hillsdale, NJ. Lawrence Erlbaum.
- Zuckerman, M. (1990). The psychophysiology of sensation seeking. *Journal of Personality*, 58(1), 313-345.

APPENDIX

APPENDIX A

**University Committee for the Protection
of Human Subjects in Research
University of New Orleans**

Campus Correspondence

Margaret Jensen
Anthony Kontos, Ph.D.
109 HPC

November 1, 2004

RE: An investigation of personality profiles, burnout, and arousal of firefighters

IRB# 07OCT04

The IRB has deemed that the proposed research project is now in compliance with current University of New Orleans and Federal regulations.

Be advised that approval is only valid for one year from the approval date. Any changes to the procedures or protocols must be reviewed and approved by the IRB prior to implementation. Use the IRB# listed on the first page of this letter in all future correspondence regarding this proposal.

If an adverse, unforeseen event occurs (e.g., physical, social, or emotional harm), you are required to inform the IRB as soon as possible after the event.

Best of luck with your project!

Sincerely,



Laura Scaramella, Ph.D.

Chair, University Committee for the Protection of Human Subjects in Research

APPENDIX C

Subject # _____

Sensation Seeking Scale- Form V

Directions: Each of the items below contain two choices, A and B. Please circle the letter which most describes your likes or the way you feel. In some cases you may find items in which both choices describe your likes or the way you feel. Please circle the letter of the statement which better describes your likes or feelings. In some cases you may find items in which you do not like either choice. In these cases circle the letter you dislike least. It is important you respond to all items with only one choice, A or B. We are interested only in your likes or feelings, not in how others feel about these things or how one is supposed to feel. There are no right or wrong answers as in other kinds of tests. Be frank and give your honest appraisal of yourself.

1. A. I like “wild” uninhibited parties.
B. I prefer quiet parties with good conversation.
2. A. There are some movies I enjoy seeing a second or even a third time.
B. I can’t stand watching a movie that I’ve seen before.
3. A. I often wish I could be a mountain climber.
B. I can’t understand people who risk their necks climbing mountains.
4. A. I dislike all body odors.
B. I like some of the earthy body smells.
5. A. I get bored seeing the same old faces.
B. I like the comfortable familiarity of everyday friends.
6. A. I like to explore a strange city or section of town by myself, even if it means getting lost.
B. I prefer a guide when I am in a place I don’t know well.

APPENDIX C CONTINUED

7. A. I dislike people who do or say things just to shock or upset others.
B. When you can predict almost everything a person will do and say he or she must be a bore.
8. A. I usually don't enjoy a movie or play where I can predict what will happen in advance.
B. I don't mind watching a movie or play where I can predict what will happen in advance.
9. A. I have tried marijuana or would like to.
B. I would never smoke marijuana.
10. A. I would not like to try any drug which might produce strange or dangerous effects on me.
B. I would like to try some of the new drugs that produce hallucinations.
11. A. A sensible person avoids activities that are dangerous.
B. I sometimes like to do things that are a little frightening.
12. A. I dislike "swingers".
B. I enjoy the company of real "swingers".
13. A. I find that stimulants make me uncomfortable.
B. I often like to get high (drinking liquor or smoking marijuana).
14. A. I like to try new foods that I have never tasted before.
B. I order the dishes with which I am familiar, so as to avoid disappointment and unpleasantness.
15. A. I enjoy looking at home movies or travel slides.
B. Looking at someone's home movies or travel slides bores me tremendously.
16. A. I would like to take up the sport of water-skiing.
B. I would not like to take up water-skiing.

APPENDIX C CONTINUED

17. A. I would like to try surf-board riding.
B. I would not like to try surf-board riding.
18. A. I would like to take off on a trip with no pre-planned or definite routes, or timetable.
B. When I go on a trip I like to plan my route and timetable fairly carefully.
19. A. I prefer the “down-to-earth” kinds of people as friends.
B. I would like to make friends in some of the “far-out” groups like artists or “hippies”.
20. A. I would not like to learn to fly an airplane.
B. I would like to learn to fly an airplane.
21. A. I prefer the surface of the water to the depths.
B. I would like to go scuba diving.
22. A. I would like to meet some persons who are homosexual (men or women).
B. I stay away from anyone I suspect of being “queer”.
23. A. I would like to try parachute jumping.
B. I would never want to try jumping out of a plane with or without a parachute.
24. A. I prefer friends who are exciting and unpredictable.
B. I prefer friends who are reliable and predictable.
25. A. I am not interested in experience for its own sake.
B. I like to have new and exciting experiences and sensations even if they are a little frightening, unconventional or illegal.
26. A. The essence of good art is in its clarity, symmetry of form and harmony of colors.
B. I often find beauty in the “clashing” colors and irregular forms of modern painting.

APPENDIX C CONTINUED

27. A. I enjoy spending time in the familiar surroundings of home.
B. I get very restless if I have to stay around home for any length of time.
28. A. I like to dive off the high board.
B. I don't like the feeling I get standing on the high board (or I don't go near it at all).
29. A. I like to date members of the opposite sex who are physically exciting.
B. I like to date members of the opposite sex who share my values.
30. A. Heavy drinking usually ruins a party because some people get loud and boisterous.
B. Keeping the drinks full is the key to a good party.
31. A. The worst social sin is to be rude.
B. The worst social sin is to be a bore.
32. A. A person should have considerable sexual experience before marriage.
B. It's better if two married persons begin their sexual experience with each other.
33. A. Even if I had the money I would not care to associate with flighty persons like those in the "jet set".
B. I could conceive of myself seeking pleasure around the world with the "jet set"
34. A. I like people who are sharp and witty even if they do sometimes insult others.
B. I dislike people who have their fun at the expense of hurting the feelings of others.
35. A. There is altogether too much portrayal of sex in movies.
B. I enjoy watching many of the "sexy" scenes in movies.
36. A. I feel best after taking a couple of drinks.
B. Something is wrong with people who need liquor to feel good.

APPENDIX C CONTINUED

37. A. People should dress according to some standards of taste, neatness, and style.
B. People should dress in individual ways even if the effects are sometimes strange.
38. A. Sailing long distances in small sailing crafts is foolhardy.
B. I would like to sail a long distance in a small but seaworthy sailing craft.
39. A. I have no patience with dull or boring persons.
B. I find something interesting in almost every person I talk with.
40. A. Skiing fast down a high mountain slope is a good way to end up on crutches.
B. I think I would enjoy the sensations of skiing very fast down a high mountain slope.

APPENDIX D

MBI-GS

This is a 22-item questionnaire scored on a seven point scale; where 0 is never and 6 is daily. High scores in exhaustion and cynicism and low scores in professional efficacy are indicative of burnout.

Maslach Burnout Inventory Christina Maslach Ph.D.								
PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.		Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day
1	I feel emotionally drained from my work.	0	1	2	3	4	5	6
2	I feel used up at the end of the workday.	0	1	2	3	4	5	6
3	I feel fatigued when I get up in the morning and have to face another day on the job.	0	1	2	3	4	5	6
4	I can easily understand how my recipients feel about things.	0	1	2	3	4	5	6
5	I feel I treat some recipients as if they were impersonal objects.	0	1	2	3	4	5	6
6	Working with people all day is really a strain for me.	0	1	2	3	4	5	6
7	I deal very effectively with the problems of my recipients.	0	1	2	3	4	5	6
8	I feel burned out from my work.	0	1	2	3	4	5	6
9	I feel I'm positively influencing other people's lives through my work.	0	1	2	3	4	5	6
10	I've become more callous toward people since I took this job.	0	1	2	3	4	5	6
11	I worry that this job is hardening me emotionally.	0	1	2	3	4	5	6
12	I feel very energetic.	0	1	2	3	4	5	6
13	I feel frustrated by my job.	0	1	2	3	4	5	6
14	I feel I'm working too hard on my job.	0	1	2	3	4	5	6
15	I don't really care what happens to some recipients.	0	1	2	3	4	5	6
16	Working with people directly puts too much stress on me.	0	1	2	3	4	5	6

APPENDIX D

	PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day
17	I can easily create a relaxed atmosphere with my recipients.	0	1	2	3	4	5	6
18	I feel exhilarated after working closely with my recipients.	0	1	2	3	4	5	6
19	I have accomplished many worthwhile things in this job.	0	1	2	3	4	5	6
20	I feel like I'm at the end of my rope.	0	1	2	3	4	5	6
21	In my work, I deal with emotional problems very calmly.	0	1	2	3	4	5	6
22	I feel recipients blame me for some of their problems.	0	1	2	3	4	5	6

APPENDIX E

Subject #: _____

<p align="center">JOB SATISFACTION SURVEY Paul E. Spector Department of Psychology University of South Florida Copyright Paul E. Spector 1994, All rights reserved.</p>							
<p align="center">PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.</p>		Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
1	I feel I am being paid a fair amount for the work I do.	1	2	3	4	5	6
2	There is really too little chance for promotion on my job.	1	2	3	4	5	6
3	My supervisor is quite competent in doing his/her job.	1	2	3	4	5	6
4	I am not satisfied with the benefits I receive.	1	2	3	4	5	6
5	When I do a good job, I receive the recognition for it that I should receive.	1	2	3	4	5	6
6	Many of our rules and procedures make doing a good job difficult.	1	2	3	4	5	6
7	I like the people I work with.	1	2	3	4	5	6
8	I sometimes feel my job is meaningless.	1	2	3	4	5	6
9	Communications seem good within this organization.	1	2	3	4	5	6
10	Raises are too few and far between.	1	2	3	4	5	6
11	Those who do well on the job stand a fair chance of being promoted.	1	2	3	4	5	6
12	My supervisor is unfair to me.	1	2	3	4	5	6
13	The benefits we receive are as good as most other organizations offer.	1	2	3	4	5	6
14	I do not feel that the work I do is appreciated.	1	2	3	4	5	6
15	My efforts to do a good job are seldom blocked by red tape.	1	2	3	4	5	6
16	I find I have to work harder at my job because of the incompetence of people I work with.	1	2	3	4	5	6
17	I like doing the things I do at work.	1	2	3	4	5	6
18	The goals of this organization are not clear to me.	1	2	3	4	5	6

APPENDIX E CONTINUED

<p style="text-align: center;">PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.</p> <p style="text-align: center;">Copyright Paul E. Spector 1994, All rights reserved.</p>		<p style="text-align: center;">Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much</p>					
		1	2	3	4	5	6
19	I feel unappreciated by the organization when I think about what they pay me.						
20	People get ahead as fast here as they do in other places.						
21	My supervisor shows too little interest in the feelings of subordinates.						
22	The benefit package we have is equitable.						
23	There are few rewards for those who work here.						
24	I have too much to do at work.						
25	I enjoy my coworkers.						
26	I often feel that I do not know what is going on with the organization.						
27	I feel a sense of pride in doing my job.						
28	I feel satisfied with my chances for salary increases.						
29	There are benefits we do not have which we should have.						
30	I like my supervisor.						
31	I have too much paperwork.						
32	I don't feel my efforts are rewarded the way they should be.						
33	I am satisfied with my chances for promotion.						
34	There is too much bickering and fighting at work.						
35	My job is enjoyable.						
36	Work assignments are not fully explained.						

APPENDIX F

Attendance Survey

Subject #: _____

How many days have you not attended work other than when scheduled, such as holidays or approved vacations? _____

The last time that you did not attend work for reasons other than holidays or approved vacations was how many days ago? _____

APPENDIX G

On- The-Job Injuries Survey

Subject # _____

This survey is to assess any physical complaint during the past 12 months that kept you out of work for at least one day or required medical attention beyond icing, wrapping, and rest. Major injuries consist of broken bones, sprains/strains, serious cuts, burns, heat related stress (heat exhaustion), smoke or gas inhalation, and head, eye, or dental injuries. Major illnesses consist of back pain, headaches, continuous cold symptoms, extreme lack of sleep, or being tired all of the time. Please indicate if you have had any major illnesses/injuries **in the past 12 months**. These injuries/illnesses would have kept you out of the next day's work or physical activities.

1. Have you been injured/ill during the past 12 months? YES NO
 (Please check the appropriate box)

If you answered NO to Item #1, you are done with this form. If you answered YES to Item #1 go to Item #2.

2. How many times have you been injured on-the-job in the past 12 months? (circle a number)

1 2 3 4 5 more than 5

3. How many times have you been ill as it relates to your job in the past 12 months? (circle a number)

1 2 3 4 5 more than 5

4. Please check the location, type, management, and treatment for each injury that you have had during the past 12 months? If the complaint was an illness please describe the illness. (please look at the example before completing the information).

EXAMPLE #1 **How many days not at work?** _____
 Location(put an X) Type(circle one) Management(circle all that apply) Treatment(circle one)

General(cuts, bruises)	Hospitalized	Surgery
Fracture	EMS (ambulance)	Cast, splint, sling, brace
Sprain	Doctor	Crutches
Strain	Spouse	Soft wraps
Burn	None	Stitches
Heat stress	Other _____	Fluid therapy by IV
Smoke or gas inhalation		
Other _____		

APPENDIX G CONTINUED

Injury #1**How many days not at work?** _____

Location(put an X) Type(circle one) Management(circle all that apply) Treatment(circle one)

General(cuts, bruises)	Hospitalized	Surgery
Fracture	EMS (ambulance)	Cast, splint, sling, brace
Sprain	Doctor	Crutches
Strain	Spouse	Soft wraps
Burn	None	Stitches
Heat stress	Other _____	Fluid therapy by IV
Smoke or gas inhalation		
Other _____		

Injury #2**How many days not at work?** _____

Location(put an X) Type(circle one) Management(circle all that apply) Treatment(circle one)

General(cuts, bruises)	Hospitalized	Surgery
Fracture	EMS (ambulance)	Cast, splint, sling, brace
Sprain	Doctor	Crutches
Strain	Spouse	Soft wraps
Burn	None	Stitches
Heat stress	Other _____	Fluid therapy by IV
Smoke or gas inhalation		
Other _____		

Injury #3**How many days not at work?** _____

Location(put an X) Type(circle one) Management(circle all that apply) Treatment(circle one)

General(cuts, bruise)	Hospitalized	Surgery
Fracture	EMS (ambulance)	Cast, splint, sling, brace
Sprain	Doctor	Crutches
Strain	Spouse	Soft wraps
Burn	None	Stitches
Heat stress	Other _____	Fluid therapy by IV
Smoke or gas inhalation		
Other _____		

Injury #4**How many days not at work?** _____

Location(put an X) Type(circle one) Management(circle all that apply) Treatment(circle one)

General(cuts, bruises)	Hospitalized	Surgery
Fracture	EMS (ambulance)	Cast, splint, sling, brace
Sprain	Doctor	Crutches
Strain	Spouse	Soft wraps
Burn	None	Stitches
Heat stress	Other _____	Fluid therapy by IV
Smoke or gas inhalation		
Other _____		

APPENDIX G CONTINUED

Injury #5

How many days not at work? _____

Location(put an X) Type(circle one) Management(circle all that apply) Treatment(circle one)

- | | | |
|-------------------------|-----------------|----------------------------|
| General(cuts, bruises) | Hospitalized | Surgery |
| Fracture | EMS (ambulance) | Cast, splint, sling, brace |
| Sprain | Doctor | Crutches |
| Strain | Spouse | Soft wraps |
| Burn | None | Stitches |
| Heat stress | Other _____ | Fluid therapy by IV |
| Smoke or gas inhalation | | |
| Other _____ | | |

Illness #1

How many days not at work? _____

Illness #2

How many days not at work? _____

Illness #3

How many days not at work? _____

Illness #4

How many days not at work? _____

Illness #5

How many days not at work? _____

APPENDIX H

Participant Assent Form

1. Title of Research Study

An Investigation into the Personality Profile, Burnout, and Job Related Factors of Firefighters.

2. Project Director

Margaret Ann Jensen- Graduate Student

Anthony P. Kontos, Ph.D.- Faculty Advisor- phone- 504-280-6420

3. Purpose of the Research

The purpose of this study is to look at your personality and burnout in your job. A second purpose of this study is to see how your personality affects your ability to deal with stress like you experience on the job. This information may assist firefighters in dealing with stress and burnout and help to promote a healthier work environment.

4. Procedures for this Research

This study will ask you to complete several questionnaires about you, your personality, burnout, and how you feel about your job as a firefighter. This information will not be shared with anyone, except the researchers at any time. After these questionnaires are completed, you might be contacted for the second part of the study.

5. Potential Risks of Discomforts

There is minimal risk to you as a participant. You may feel frustration or fatigue from completing the questionnaires. If you wish to discuss these or any other discomforts you may experience, you may call the Faculty Advisor listed in #2 of this form.

6. Potential Benefits to You or Others

There are several benefits to being part of this study. You will learn about your personality and if you have symptoms of burnout. Also, the information may help other firefighters deal with burnout and the job. There will be a short meeting at the end of the study to answer any questions you might have about the study.

7. Alternative Procedures

Your participation in this study is voluntary and you may withdraw consent and quit participation at any time without penalty

APPENDIX H CONTINUED

8. Protection of Confidentiality

Do not put your name on any questionnaire in this study. You will be provided a subject number instead. The data from this study will be kept in a secure location in the faculty advisor's (see #2 above) office to insure confidentiality. All data collected for this study will be anonymous and will be reported as group results. Your contact information (used to call you back for part two of the study) will be kept separately from your questionnaires in a secure location and will be destroyed when the study is over.

9. Signatures

I have been fully informed of the above-described procedure with its possible benefits and risks and I have given permission of participation in this study.

Signature of Subject

Name of Subject (Print)

Date

**Signature of Person
Obtaining Consent**

**Name of Person Obtaining
Consent (Print)**

Date

APPENDIX I

Correlation Matrix for Various Factors from the Study

Factor	Age	Disinhibition	Boredom Susceptibility	Experience	Thrill and Adventure	Emotional Exhaustion	Depersonalization	Personal Accomplishment	Job Satisfaction	Injury	Absenteeism
Age	<i>r</i>										
	<i>p</i>	-									
	<i>n</i>										
Disinhibition	<i>r</i>	-.14									
	<i>p</i>	.19	-								
	<i>n</i>	86									
Boredom Susceptibility	<i>r</i>	-.28**	.41*								
	<i>p</i>	.01	.001	-							
	<i>n</i>	90	87								
Experience	<i>R</i>	.02	.27*	.15							
	<i>p</i>	.88	.02	.16	-						
	<i>n</i>	87	84	88							
Thrill and Adventure	<i>r</i>	-.18	.01	-.12	.34*						
	<i>p</i>	.10	.96	.25	.01	-					
	<i>n</i>	88	85	89	87						
Emotional Exhaustion	<i>r</i>	.32**	-.01	-.03	-.10	-.01					
	<i>p</i>	.01	.99	.81	.34	.97	-				
	<i>n</i>	89	86	89	86	87					
Depersonalization	<i>r</i>	.05	.05	.27*	-.14	.02	.60**				
	<i>p</i>	.64	.63	.01	.21	.86	.001	-			
	<i>n</i>	89	85	89	86	88	87				
Personal Accomplishment	<i>r</i>	-.24*	-.08	-.08	.25*	.19	-.33**	-.37*			
	<i>p</i>	.02	.49	.48	.02	.08	.002	.001	-		
	<i>n</i>	88	84	88	86	86	87	86			
Job Satisfaction	<i>r</i>	-.27*	-.21	-.14	.20	.19	-.49**	-.54*	.43**		
	<i>p</i>	.01	.06	.19	.07	.09	.001	.001	.001	-	
	<i>n</i>	85	80	84	82	83	84	82	82		
Injury	<i>r</i>	-.12	-.05	.12	.03	.19	.19	.17	-.08	-.26*	
	<i>p</i>	.28	.62	.26	.77	.07	.08	.10	.48	.02	-
	<i>n</i>	92	87	91	88	89	90	90	89	85	
Absenteeism	<i>r</i>	-.09	.04	-.18	.08	.19	-.09	.08	.03	.01	-.05
	<i>p</i>	.39	.70	.08	.48	.07	.40	.44	.75	.93	.62
	<i>n</i>	92	87	91	88	89	90	90	89	85	93

* $p < .05$; ** $p < .001$

VITA

I have had a very interesting and varied life so far. After graduating from Louisiana State University, Baton Rouge, I attended and completed Louisiana State University Rookie Fire Academy. I was then employed by a local fire department, where I became more interested in emergency medicine. This interest led me to paramedic school, where I obtained the knowledge and skill to help those in need of emergency medical care. I then moved to New Orleans and worked as a paramedic, but again something was lacking. I began my next challenge of obtaining a masters of arts at the University of New Orleans. In 2004, I found a wonderful man to marry and have moved back to my farm in Clinton, Louisiana. I have my own little piece of heaven on earth and as many animals as can fit on twenty acres, but again something is lacking. The next challenge facing me is to obtain a Ph.D. in basic sciences and a D.V.M. I enjoy new challenges and love my family.