Identifiable Demographics Related to the Levels of Law Enforcement Operational and Organizational Stress

by

Trevor O. Wilkins

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The Undersigned Faculty Committee

Approves the Dissertation of

Dr. Trevor O. Wilkins

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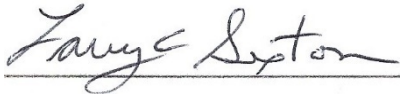
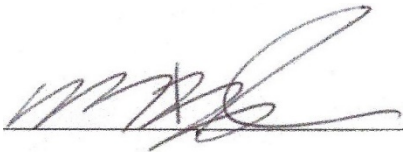
Dr. Gary Patton

UC School of Counseling



Dr. Larry Sexton

UC School of Counseling



Dr. Sara Bender

Central Washington University

March 25, 2019

Approval Date

ABSTRACT

Law enforcement officers deal with a high level of stress while protecting communities, and the profession is considered one of the most stressful jobs in history. Understanding the causes and levels of stress within law enforcement officers is vital to ensuring the mental health of these police officers. The research within this study identified specific relationships between high levels of stress to the organizational and operational areas of law enforcement. Specifically, this study identified police officer's age, years of service, agency size, current assignment, and the availability of mental health services at their agency. Levels of operational and organizational stress were identified with the use of the Operational and Organizational Police Stress Questionnaires. Multiple quantitative analysis identified evidence that the decrease in operational stress during the course of an officer's 25-year career averages 24.74 points on a possible 120-point scale. The increase in organizational stress during the course of an officer's 25-year career averages 67.95 points on a possible 120-point scale. Analysis further identified evidence that an increase in agency size and increased level of organizational stress is strongly related, that investigation assignments have the highest level of operational stress, that administrative assignments have the highest level of organizational stress, and that the presence alone of mental health services available to a police officer does not significantly change the level of either types of stress.

Keywords: police stress, organizational stress, operational stress, police assignment, years of service, patrol, investigations, police mental health.

Dedication

This study is dedicated first to my wife, Danie, who not only stood beside me through a long law enforcement career, but through years of academia so I can now serve others in a different capacity. The support from you and our two beautiful daughters does not go unnoticed.

The study is further dedicated to the men and women of law enforcement. Some of the best and worst moments of my life occurred in my policing career. I will forever respect and serve those that continue to stand The Thin Line.

Acknowledgements

Many individuals were integral to the completion of this study. Many friends and family members continued to support and remind me that this process furthers my ability to serve the men and women that keep us safe.

To my parents, Tom and Jan, I always feel that I was already on third base before I hit a triple because of the education and dedication you provided in my life.

To my committee, Dr. Gary Patton your dedication to public safety mental health made this project feel worth the struggle. To Dr. Larry Sexton, your patients and guidance in statistical research greatly improved the amount of evidenced discovered in this study which will continue to serve law enforcement mental health. To Dr. Sara Bender, your guidance through all of my doctoral studies and ability to calm down the angry officer will always be important to me.

To the individuals that helped at different times of this study. Dr. Richard Balkin, your guidance and passion for statistics will continue to drive my interest in quantitative research. Jordan Sparks, your guidance and ability to explain quantitative research is clearly your passion. Josh Ernst of the Kentucky Department of Criminal Justice Training, thank you for taking the time out of your busy schedule to extensively guide me through your academy.

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Chapter One – Introduction

Law enforcement officers deal with a high level of stress while protecting communities, and the profession is considered one of the most stressful jobs in history (Johnson, Cooper, Cartwright, Donald, Taylor, & Millet, 2005). The stress levels of law enforcement officers and the traumatic situations in which they are involved are linked to a rate of posttraumatic stress disorder that is double that national average (Maia et al., 2007). Understanding the causes and levels of stress within law enforcement officers is vital to ensuring the mental health of these police officers. The research within this study identified specific patterns of the relationship between high levels of stress to the organizational and operational areas of law enforcement.

Due to the high level of stress, officers often have difficulties in processing the difficult emotions that come from regular observation of traumatic incidences (Marchand, Nadeau, Beaulieu-Prevost, Boyer & Martin, 2015). Understanding how stress affects law enforcement officers is important to the effectiveness of law enforcement agencies and how stress can affect individual officer performance (Dantzker & Surrette, 1997). This study seeks to understand the role that individual police demographics relate to levels of stress. This study's author used police specific inventories to measure the level of stress indicated by law enforcement officers and attempted to understand how the levels of stress are related to law enforcement specific demographic information.

This chapter will outline the necessity and scope of the research conducted on law enforcement officers to understand the relationship between officer demographics and the levels of both organizational and operational stress within the career. The chapter will identify the background of previous studies related to this research and the clear lack of

currently identifiable information that remains with the previously completed literature. The chapter will outline the problem of law enforcement stress and how the study attempts to identify factors related to that problem. This chapter will also identify the research questions, assumptions, limitations, delimitations, and definitions of the current study.

Background

Stress within the law enforcement career creates a heavy mental health burden on the individual officer (Pendleton, Stotland, Spiers, & Kirsch, 1989) and the public expects the members of law enforcement to deal with the stress in a manner that does not affect the officer's future decision making (Papazoglou, 2012). In contrast, law enforcement stress regularly causes negative cognitions, such as cynicism and burnout, that often affect the work-ethic and decision-making skills of the officer (Lumb & Breazeale, 2002). Stress among law enforcement officers categorizes as either operational or organizational stress. Organizational stress comes in the form of difficulties in dealing with the administration and rules of the profession (Tuckey, Winwood, & Dollard, 2012), while the physical dangers of law enforcement and difficult encounters with the public are operational stressors (Brandl & Stroshine, 2003).

Previous studies of police stress lack concrete items within the law enforcement profession correlated with operational and organizational stress. While there are previous studies about police stress, a void in the literature continues to be the lack of tangible demographic items that can be used to develop programs that will allow law enforcement administrators to understand where an officer may be at a higher risk of stress. This study will measure the relationship of stress within the areas of career demographics that

can be a greater area of focus for the law enforcement administrators that are concerned about employees' stress levels. This study attempts to fill the gap of the needed information about police career demographics and stress by obtaining information about the levels of both organizational and operational stress within the individual officer's career and obtains specific information about the officer to be analyzed. The goal of the analysis is to identify any statistically significant relationship between stress and the collected career demographics.

Problem Statement

The problem examined in this study is the need to understand what variables of a law enforcement officer's career indicates a relationship to the organizational and operational stress of the public safety officer. Among the many dangers of not studying law enforcement stress includes the inability of police agency administrators to take leadership actions that would reduce the levels of stress, burnout, PTSD, and suicide among police officers. This study investigates the relationship between identified stress within law enforcement and factors that may affect the level of identified stress. Specifically, the study analyzes the relationship between stress and job assignment, stress and age, stress and years of active service, stress and the size of the law enforcement agency, and stress with the availability of mental health services within the law enforcement agency. This study divides the self-reported stress into operational and organizational stressors that are self-identified as difficulties for the individual police officer.

Purpose

The purpose of this study of law enforcement officers is to understand identifiable demographics in a law enforcement officer's career that may correlate to the individual's level of work stress, which may impact the frequency of burnout, suicides, or PTSD. Finding possible avenues to reduce law enforcement officers stress will also assist in reducing mental health issues, improving work performance, and prolonging the career of the individual officer (Bakker & Heuven, 2006). Understanding the relationship between career variables and the officer's level of stress will allow for an understanding of where a police administrator may begin to make positive changes to the mental health of subordinates.

The quantitative nature of the study is designed to investigate the relationship between self-reported stress levels in law enforcement officers and information about the officer's current demographics within the police career. The specific information obtained from the quantitative outcome will allow police administrators to understand specific demographics that can be affected, such as the officer's current duty assignment or availability of mental health services within the police agency, and to have a more specific measure of self-reported stress that does not rely on a simple model of the administrator hoping that they will observe any signs of stress disorder among the police agency.

In this study, administration of the measurement tools and demographic questionnaires are provided to police officers with a wide range of law enforcement experience. Utilizing the wide range experience of police officers in training at the Kentucky Department of Criminal Justice Training (KYDOCJT), the availability exists

for providing the measurement and demographic tools to classes of police recruits with less than one year of experience, and to in-service training classes that provided measurement results from officers ranging from 1 to 20+ years of experience. The use of the KYDOCJT also provides agency sizes that range from one total employee to the largest agencies within Kentucky comprising of over 1,200 police officers.

Research Questions

The underlying research questions for the study is: What identifiable variables in a law enforcement officer's career have a relationship with higher levels of organizational or operational stress? The following specific questions answer the underlying research question:

- RQ1: What relationship is there between stress and the officer's current work assignment?
- RQ2: What relationship is there between stress and the officer's years of service in law enforcement?
- RQ3: What relationship is there between stress and the officer's age?
- RQ4: What relationship is there between stress and the size of the respondent's agency?
- RQ5: What relationship is there between stress and the availability of mental health services at the officer's agency?
    - Hypothesis 1**.** There is not a significant difference in operational stress levels between the officer's current work assignments.
    - $H1_a$: There is a significant difference in operational stress levels between the officer's current work assignments.

- Hypothesis 2. $H2_0$: There is not a significant difference in organizational stress levels between the officer's current work assignments.
- $H2_a$: There is a significant difference in organizational stress levels between the officer's current work assignments.
- Hypothesis 3. $H3_0$: There is not a significant difference between the operational stress levels of each officer's availability of mental health services.
- $H3_a$: There is a significant difference between the operational stress levels of each officer's availability of mental health services.
- Hypothesis 4. $H4_0$: There is not a significant difference between organizational stress levels of each officer's availability of mental health services.
- $H4_a$: There is a significant difference between organizational stress levels of each officer's availability of mental health services

Assumptions to the Study

Assumptions in this study include the high probability that the police officer participants will answer the surveys truthfully, that the findings are representative of the law enforcement officer career, and that all participants are active law enforcement officers. Reinforcing the high probability that the research participants will answer truthfully is ensuring the anonymity and confidentiality of the individual participants. Further assuring the anonymity of the survey participants is the lack of demographic questions that identify gender or ethnicity. Ethnic minorities make up less than 10

percent of officers in Kentucky law enforcement, and women make up less than 10 percent of Kentucky law enforcement with 47 percent of Kentucky agencies comprised of an all-male force (Kentucky Commission on Human Rights, 2006). There is not a request for ethnic and gender identifiers during the demographic survey for this study as the small number of minority respondents may lead to worry about that lack of anonymity in responses. The documentation provided to the law enforcement officer participants include the designed consent forms that indicate the information will remain confidential and anonymous.

Reinforcing the assumption that all participants are active law enforcement officers is the use of the Kentucky Department of Criminal Justice Training (KYDOCJT) as the location of the study. KYDOCJT trains approximately 11,000 police officers per year including recruit officers with no experience and active officers returning for advanced training. The individual officers must be employed and sponsored by a law enforcement agency to attend training. KYDOCJT conducts both recruit training for newly hired officers and in-service training for law enforcement officers that are currently serving within the Commonwealth. (Commonwealth of Kentucky, 2017). The utilization of the KYDOCJT as the location of the study reinforces that assumption that the study is representative of the law enforcement officers career. KYDOCJT continually trains law enforcement officers currently employed across the entire Commonwealth of Kentucky and that work within agencies sized from a single officer to agencies with over 500 law enforcement officers on staff (Commonwealth of Kentucky, 2017).

Limitations

The limitation of the research study is the small amount of time for the administration of measurement tools and demographics surveys to the participants. While the administration of the measurement tools and demographic surveys occur within one calendar week, the usage of KYDOCJT proved the most proper location to gather information from a wide variety of officers with differing years of service. This limitation, while representative of law enforcement officers at the time it was completed, will not account for any changes in the stress of the law enforcement profession over a given period. The information recorded in the measurement tools and demographic surveys is a snapshot of stress and demographics at the time of their completion.

Delimitation

The delimitation of the research study includes the usage of officers only employed within the Commonwealth of Kentucky. While the study is representative of the entire law enforcement profession, the limitation to the use of the Commonwealth of Kentucky may be affected by state-wide or regional issues about law enforcement that may not apply to all law enforcement officers in the United States. Utilizing the study design across multiple regions within the United States during a later research program identifies the regionally affected issues and extends the scope of this study.

Definitions

The following term is defined as used for this research:

Demography – The utilization of the term demographics within this research is the scientific study of the law enforcement population to include, but not limited to, age,

work environment, availability of services within a police agency, and years of service as a law enforcement officer (Population Reference Bureau, 2018).

Summary

This chapter outlines the necessity and scope of the research conducted on law enforcement officers to understand the relationship between officer demographics and the levels of both organizational and operational stress within the career. The chapter identified the background of previous studies related to this research and the clear void that remains with the previously completed literature. The chapter outlined the problem of law enforcement stress and how the study attempts to identify factors related to that problem. This chapter also identified the research question, assumptions, limitations, delimitations, and definitions of the current study.

Chapter Two - Review of the Literature

Introduction

This chapter provides a review of the relevant literature to form a rationale for the primary question of this study: What identifiable variables in a law enforcement officer's career have a relationship with higher levels of organizational or operational stress? Additionally, the secondary purpose of this chapter is to substantiate a conceptual basis for the need for a study of this type and to ensure that the study is not simply a repeat of previously discovered information.

The review of literature chapter is designed in a multi-sectional framework to group similar studies together. The outline of the chapter framework is:

1. Stress.
2. Police Stress.
3. Law enforcement suicide.
4. Police burnout.
5. Identifying factors related to the reduction of stress symptoms.
6. Summary.

Stress

To identify stress within the law enforcement profession, it is important to have a basic understanding of the causes, consequences, and dangers of stress. Physicists first introduced the origin of stress terminology as the strain placed upon physical objects with the probable danger that the object may break (Lazarus, 1993). Similarly, this study will seek to identify factors of strain that relate to the overall stress of a police officer. Once the terminology of stress applies to the biological sciences, sociological and

psychological researchers began to identify the concept of stress as the stimulus of an event that disrupted daily functioning (Lazarus & Folkman, 1984).

Stress occurs when the demands of an individual's environment are greater than the individual's resources to handle the demands. The accompanying emotions and physiological changes that occur are identified as stress (Lazarus & Folkman, 1984). The lack of resources to handle the growing environmental demands leads to negative affective states including anxiety, depression, hostility, dread, irritation, anger, grief, and a loss of production in the workplace or home settings (Janis & Leventhal, 1968; Motowidlo, Packard, & Manning, 1986). Stress described by other terms such as anxiety, tension, frustration, anger responses, conflict, worry, uneasiness, angst, and apprehension. While these terms are regularly used in psychological verbiage and are not the stressor themselves, the terms are synonymous with the responses of stress (Lazarus & Folkman, 1984).

Stress also occurs when something causes an individual to rely solely on the responses of fight, flight, or freeze (Fontana, 1989). Subjective responses to stress are affected by the frequency and intensity of the danger, a fear of causing a negative evaluation in both work or personal lives, Type-A patterns of behavior, and the conditions of the workplace (Motowidlo, Packard, & Manning, 1986). Type-A patterns of behavior identify as an individual's higher levels of a lack of patience, aggressiveness, competitiveness, and an overwhelming sense of urgency (Ivancevich & Matteson, 1984). Higher levels of work overload, a tendency to cause more stress, conflicts in roles within the workplace, and greater pressures of timelines also identify Type-A personalities (Ivancevich, Matteson, & Preston, 1982).

Causes of stress can come in many forms including a chronic noise in an environment (Raffaello & Mass, 2002) or repetitive exposure to dangerous situations such as the battlefields of war (Neria & Litz, 2004). Stress can also come from a lack of sleep and can directly affect cognitive functioning with as little as missing one cycle of sleep (Baranski, 2007) or in the case of sleep deprivation for over 38 hours (Heon-Jeong, Lee, & Kwang-Yoon, 2003). A lack of sleep is responsible for more than twenty percent of all transportation accidents which can increase stress overall stress levels (Akerstedt, 2000).

Cumulative levels of stress cause problems within an individual's physical health and the perception of the individual's environment, and can have dangerous effects upon the brain (Franke, Ramey, & Shelley, 2002; Garner, 2008; Schwartz, Pickering, & Landsbergis, 1996;). The body's ability to remain in homeostasis, or regulation, relies on the changes in blood flow, hormone levels, and the bodies temperature. The ability to remain in this regulated stage is interrupted by high levels of stress, and the environments demands on the individual become greater than the body can regulate quickly (Cannon, 1939; Lazarus & Folkman, 1984; Selye, 1976). A higher prevalence of coronary heart disease, earlier mortality, chronic inflammation, gastrointestinal problems, elevated blood pressure, and a decrease in effectiveness of the immune system is caused by a chronic increase in stress (Dong et al., 2004; Franke, Ramey, & Shelley, 2002; Galobardes, Smith, & Lynch, 2006; Garner, 2008; McQuade, 1972; Miller, Chen, & Parker, 2011; Schwartz, Pickering, & Landsbergis, 1996;).

High levels of stress, and specifically Post Traumatic Stress Disorder, are significantly associated with problems in the responder's nervous system, diseases in

musculoskeletal system, problems in the digestive system, and hypertension. The increase of nervous system and musculoskeletal diseases are nearly two-fold the average of individuals that do not work in a stressful environment. An increase in stress and PTSD may foreshadow an increase in lifespan morbidity and the use of healthcare to combat these stress-related symptoms (Anderson, Wade, Possemato, & Ouimette, 2010).

Simply continuing to work in a high-risk environment while unwell with stress has a negative effect on the workers physical health and mental well-being. Continuing to work while unwell, called "presenteeism," leads to errors in judgment and an increase in anxiety for the worker (Niven & Ciborowska, 2015). Sickness presenteeism correlates to lower work performance, reduced psychological wellbeing, and a reduction in the belief that a worker's company is committed to them (Collins, Cartwright, & Cowlishaw, 2018).

Continuing to work within challenging environments can cause an individual to live with increased levels of anxiety by constantly anticipating stressful events (Ditzen et al., 2007; Kirschbaum, Pirke, & Hellhammer, 1993;). The term Continuous Traumatic Stress is used to identify the presence of a realistic threat of continued danger, rather than stress from past traumatic exposures (Straker & The Sanctuaries Counselling Team, 1987). Studies of anticipatory and continuous traumatic stress indicate that the worry of negative events is stronger than the coping mechanisms designed to mitigate high levels of stress caused by the constant anticipation (Neupert, Ennis, Ramsey, & Gall, 2016). The constant worry about the possibility of high-risk situations occurring causes a higher level of stress than not having to anticipate danger or difficult events.

Effects of Stress on the Brain

Continued stress causes physiological changes in the brain that can affect both the individual's perceptions of the environment and how the individual makes decisions. One byproduct of continued stress, chronic or acute, is the ongoing need for the brain to adapt to the ongoing stressful environment which allows for a proper response to future arousals. This continued attempt at equalization, also known as allostasis, occurs through behavioral and physiological changes within the brain due to the continued stress in the individual's environment (Copstead & Banasik, 2013; Sterling & Eyer, 1988). Allostasis is the ability to create stability through change and the need for the body to constantly adapt to an environment. Allostasis allows for the most efficient type of psychological regulation by using past experiences to anticipate upcoming challenges (Sterling & Eyer, 1988).

In contrast to physical homeostasis, the path to physiological and psychological allostasis begins in the core emotional centers of the brain (Ganzel, Morris, & Wethington, 2010). The discovery of the emotional centers of the brain in leading change towards allostasis began with brain scans that indicated that these emotional centers exhibit the greatest amount of long-term structural and functional changes following adaptation to environmental changes (Ganzel, Morris, & Wethington, 2010). Allostatic load is the amount of adaptation that is being required for physiological allostasis to occur in an environmental change and is affected by individual factors observed in daily life. Factors that cause a higher level of allostatic load include negativity from family members, negativity from spouses, and a lack of contact with friends or social supports. Lower levels of allostatic load, in a similar change in the

environment, are found in relationships with higher levels of spousal support (Brooks, Gruenewald, Karlamangla, Hu, Koretz, & Seeman, 2014).

When exposed to chronic and acute levels of stress, the limbic system of the brain begins to change to adapt to the continually dangerous environment. The limbic system is directly responsible for the learning and remembering of senses related to events that occur (Brodal, 1992). Although some researchers disagree that the limbic system is a complete structure in the brain, due to the lack of the individual parts meeting the definition of anatomical entity, for purposes of this study of stress the limbic system is the hypothalamus, thalamus, hippocampus, amygdala, septum, caudate nucleus, mesencephalon, and cingulate gyrus (Brodal, 1980; Brodal, 1992; LeDoux, 1992; Walsh, 1987).

According to Goleman (1995) and Reiser (1994), the primary parts of the brain that are specific to stress comprise of the amygdala and hippocampus. The hippocampus begins the interpretation of incoming sensory information from the neocortex and transmits the information into the amygdala and other relevant parts of the limbic system. The hippocampus is responsible for remembering and interpreting the facts of incoming information and is the area of the brain that can quickly determine the difference between emergency and non-emergency situations. The hippocampus, when acting optimally, also differentiates between an emergency being a present concern or a memory about the past. Studies indicate that when a traumatic experience occurs to an individual that the hippocampus begins to have difficulties in remembering important events, specifically for the three-years after the occurrence of the trauma. (Goleman, 1995; Reiser, 1994). This onset of retrograde amnesia explains the difficulties with short-term memory that

many psychotherapy clients indicate as a present symptom following high levels of stress or traumatic experiences (Bloom & Lazerson, 1988; Walsh, 1987).

The amygdala, a cluster of structures located at the top of the brain stem, provide the central junction for all senses and supplies emotional meaning to the incoming information. The amygdala is where the senses connect with the experience and thoughts of specific events and are remembered for future use by the rest of the brain (Reiser, 1994). When the senses interpret an unknown or confusing signal, it is the amygdala that scans through previous experiences to determine if the new sense is an indicator of danger (LeDoux, 1986). It is the responsibility of the amygdala, when an emergency is detected, to begin the sequence of bodily changes that prepare for quick action. The amygdala sends signals to the adrenal gland and the vagus nerve to identify the need for epinephrine and norepinephrine to prepare the body for the emergency (Goleman, 1994). While the quick actions of the amygdala are helpful in times of real emergency, any overaction and over-frequent usage of the emergency state of the limbic system causes unnecessary hypervigilance and a maladaptive emotional charge.

The overreaction and over-frequent usage of this emergency state system occur when unprocessed, or maladaptively processed, memories of trauma and stress leave the limbic system unable to decipher if the amygdala's interpretation of danger is accurate (Shapiro, 2017). The repetitive overstimulation of the amygdala also causes improper functioning of the hippocampus and inhibits cognitive functioning (van der Kolk & van der Hart, 1989). The inhibition of the hippocampus and cognitive function begins to perpetuate a constant emergency state within an individual. With the overaction and over-frequent use of the amygdala, emergency signals become hyperactive and the

sections of the brain that are designed to slow the emergency state become inhibited (van der Kolk, 1994). This constant state is physically exhausting, mentally exhausting, and leaves the individual with a high level of perpetual stress. The perpetual level of stress begins to cause a feeling of helplessness; the brain begins to undergo allostatic re-equilibration, and the change in state can begin symptoms of posttraumatic stress disorder (Goleman, 1995, Kolb, 1987).

Stress can lead to a lack of motivation, lack of appetite, a negative perception of the world, a negative perception of other people, sleep problems, social isolation, decreased sex drive, depression, hypervigilance, and irritability. Sleep is the primary healer of stress, and the healer is often interrupted when an individual is not sleeping well (Lansing, 2012). The role of the brain during sleep is to extract memories from the day, identify what worked or did not work during the day, and use the discoveries to foster insight into how to make future decisions. The dream portion of sleep helps the brain to integrate memories together and to imagine possible outcomes for future decisions (Stickgold & Wamsley, 2010).

The basal ganglia works to ensure highly skilled movements, such as the skill of tactically safe maneuvers while working with the cerebellum. When working normally the basal ganglia also controls unwanted body movements and helps control a sense of pleasure by processing dopamine. The basal ganglia and amygdala are the areas of the brain that also cause panic attacks when an individual with increased traumatic stress encounters a trigger of the initial traumatic or stressful event. Additionally, the basal ganglia can induce a symptom during stress, when it is the most overreactive, that causes

the individual to feel overwhelmed and convinces them that they cannot physically or mentally handle the current stressful situation (Lansing, 2012).

According to Lansing (2012), when the amygdala senses high levels of stress or danger it abbreviates the stress evaluation system and only processes information from the sensory thalamus, ignoring further cognition or evaluation of the situation. The amygdala then makes a rapid decision based on this limited information. During these times of high stress and perceived emergencies, the amygdala does not take the time to evaluate cognitive information from the prefrontal cortex that would likely provide for a systematic evaluation of the current problem. During high levels of stress, the amygdala does not have sufficient time to wait on a comprehensive evaluation of the situation from the prefrontal cortex nor have time to wait for the hippocampus to attempt to record the information for further evaluation. When a stress reaction occurs in the amygdala, it can create an exaggerated response that leaves the individual always working at "Defcon 5" (Lansing, 2012). High levels of stress cause long-term changes in the way the brain makes decisions and perceives the environment. Identifying high levels of stress in this study, and when the stress is greatest in a law enforcement officers' career, will assist future law enforcement leaders in understanding when the aforementioned difficulties in the brain are the most prevalent in a police officer's career.

Police Stress

Understanding stress related to specific occupations provides a greater understanding of models formed to deal with the occupational strain (Dollard, Dormann, Boyd, Winefield, & Winfield, 2003). Studies designed to gather information about occupation-specific stressors provide more specific and valid predictors of the causes of

stress and the preventative measures installed to mitigate the stress (Gillespie, Walsh, Winefield, Dua, & Stough, 2001). Studying the stress within sub-groups of individual occupations, the focus of the present study provides an even greater understanding of the possible causes of the stress that is specific to the individuals of the subgroups (Johnson, Cooper, Cartwright, Donald, Taylor, & Millett, 2005). Understanding the stressors within the individual sub-groups provides greater information to allow for designing preventative factors to assist with the possible reduction of the high levels of stress.

Law enforcement officers deal with a large amount of stress and strain related to the high-risk profession. While there is a constant level of stress present in the occupation, the top 5 stressors in police work are (a) killing someone in the line of duty, (b) the death of a fellow police officer, (c) a physical attack against the officer, (d) calls for service that involves injured children, and (e) high speed vehicle pursuits (Violanti & Aron, 1994). Also, police officers also face a constant stream of routine stress from difficult organizational policies, lack of support from administrators, an overload of work hours and demands, and poor communication within the agencies (Brown & Campbell, 1994). Despite the education and preparation of how to deal with stress for police officers, individuals in public safety do not have an infinite ability to handle the difficulties caused by the stress (Flannery & Everly, 2000).

Law enforcement officers deal with a higher level of stress than individuals in occupations that also provide governmental services. When compared to government employees serving in a role other than law enforcement, but within the same city employer, police officers have a higher level of stress and greater job strain (Pendleton,

Stotland, Spiers, & Kirsch, 1989). Simply working with the public or in a governmental service does not have the same comparable levels of stress as the law enforcement role.

Creating greater stress, police officers are often expected by the public to deal with the stressors of the law enforcement career in a manner that does not negatively impact the officer's decision-making skills or personal mental health (Papazoglou, 2012). Officers often deal with negative stress symptoms before a dangerous or difficult incident begins. Officers will often have an anticipatory response to trauma occur before an officer even begins contact with the public on a law enforcement call (Van der Kolk, McFarlane, & Weisacth, 1996). The anticipatory response to stress will impact the law enforcement officer's decision-making skills and personal mental health. A higher level of anxiety can cause strained relationships between police officers, community members, and the officer's families (Lipp, 2009).

Law enforcement stress leads to negative conditions that routinely affect the attitude of the police officer. Cumulative work stress increases levels of substance abuse, cynicism, health problems, divorce, apathy, negative attitudes, and burnout (Carter & Radelet, 1999; Lumb & Breazeale, 2002;). Identifying the stress indicators allows for the beginning of an intervention into the officer's mental health. Achieving a decrease in the negative conditions with the individual officer will be a combined effort of the police officer and police administrators.

Stress levels among law enforcement officers are increased by the personal life difficulties that are caused by the rigors of the profession. In simply changing from a civilian career to a career as a law enforcement officer, the individual often loses friends and family relationships due to the required shift work, deals with the resentment of

family members because of the time spent on the profession, and struggles with the abuse by the public (Anshel, 2000). These social types of stressors not only affect the mental health of the law enforcement officer but can cause the decline of the physical health and overall wellbeing of the individual (Marmar et al., 2006)

Law enforcement officers must also deal with the reality that they face physical dangers within the profession. Any increase in violence from the public against police officers also raises the level of stress in the individual. Continuous exposure to the killing or felonious injury of other officers can act as a constant reminder that the law enforcement profession is physically unsafe and that injuries and deaths can occur while performing duties related to the profession (Crank, 1998; Crank and Caldero, 1991).

The physical dangers of law enforcement are regularly studied to ensure proper training provided to police officers attempts to mitigate or prepare for the dangers. One such study began after a shooting occurred in which an armed individual was shot in the back. The public's perception was that the individual was running away after firing a handgun at a law enforcement officer. A study at The Force Institute discovered that an individual in a standing position while facing the officer with their arms down could draw a weapon, fire a weapon, turn 180 degrees away from the officer and begin to run with an average of 42/100ths of a second (Lewinski, 2000).

While critical incidents within the law enforcement profession can contribute to types of post-traumatic stress, as detailed later within this chapter, continued exposure to the stress of law enforcement causes an increase in the stress level of the officer and an increase in aggressive responses by the officer. Bernard (1990) asserts with The Angry Aggression Theory that individuals that deal with a chronic level of stress arousals tend

to believe that threats are more frequently occurring than those that do not deal with the chronic levels of arousals. The theory also states that individuals that deal with the chronic levels of stressful arousals tend to respond to stress in more aggressive ways. If the individual is not able to respond directly to the cause of that stress, then the anger often transfers to other people that may not be related to the original stressor (Bernard, 1990).

Accumulation of stress in law enforcement is a contributing factor to the negative impact that the police officer will have on the agency and when dealing with the public. Within individual agencies, 2% of police officers are responsible for 50% of the complaints made by citizens. Also, 90% of the difficulties identified by police chiefs as caused by officers within the agency, are traced to 10% of the members of the entire police force (Walker, Alpert, & Kenney, 2001).

False accusations and internal investigations that change the way the officer responds to the public may cause high levels of police stress. Long-term criminal and internal affairs investigations cause four stressors that are very distinct to the law enforcement profession. First, forced isolations by the agency occur when the officer is placed on suspension from their regular duties and disconnected from the daily support they would normally find within the ranks of law enforcement. Isolation during an investigation proves as detrimental to the mental health of the officer (Lansing, 2012).

Second, unlike the mantra of the criminal court system of "innocent until proven guilty," the law enforcement officer is often assigned guilt based on a lack of investigation or poor use of scientific theory during the investigation (Lansing, 2012). As identified in the previous section of the effects on the brain due to stress, many criminal

and internal investigations involving police officers fail to apply the discoveries of science that identify why officers often find it difficult to remember details of a critical or stressful incident. The lack of application of the science of the brain in critical incidents often causes investigators to accuse the individual of lying about the incident or in purposefully withholding important information (Artwhol, 1997). During critical and stressful incidents, that distortions of perception and gaps of memory are extremely common (Campbell, 1992; Klinger, 2006; Solomon & Horn, 1986).

Third, a loss of financial security for the officer can occur during a long investigation (Lansing, 2012). Officers placed on administrative leave, paid or unpaid, are unable to earn an additional salary by working overtime or off-duty positions that require the use of their law enforcement credentials. Additionally, an officer under investigation faces the concern of a loss of their pension to provide for their family in the long term. The lack of primary funds, additional funds, and the possibility of the loss of a retirement pension are factors that increase the stress level of the officer that is already facing an investigation.

Fourth, an officer under criminal or internal investigation faces the possibility of a loss of their reputation and the change of a sense of their integrity among the officers they work with (Lansing, 2012). Police officer's integrity can be damaged if the individuals of the officer's agency question their moral responsibility even if professions within the general public do not highly value that responsibility. For example, the necessity for fellow police officers to trust the responsibility of the individual's physical courage is vital to the law enforcement profession. If the individual's fellow officers do not trust

them to have physical courage when needed, due to an ongoing or completed investigation, then the integrity of the officer is damaged (Miller 2010).

Post Traumatic Stress in law enforcement, detailed later in this chapter, continues to be a contributing factor to poor health, burnout, and difficulties in maintaining employment in the police career (Maia et al., 2007). While stress related to the individual traumatic occurrence is not the specific topic of this study, understanding the literature related to the increase of stress related to the prevalence of PTSD is important to help identify the need to reduce overall identified stress within the profession. Higher levels of acute stress syndrome and intensity of previous stress symptoms are found to increase the risk of PTSD (Marchand, Boyer, Beaulieu-Prevost, Martin, 2015).

Organizational Stress

Every agency has organizational factors that create and contribute to the climate and culture of working conditions. Organizational components include administrative decision-making, intra-agency communication, personal developments of employees, and motivation for members of an agency (Bedeian, Armenakis, & Curran, 1981). When organizational procedures are communicated to members of an agency and followed as communicated, stress reduction occurs for the members of the organization. An increase in work stress occurs when there is a poor working relationship in an agency, roles and responsibilities are ambiguous, and the organizational climate is chaotic (Revicki & Curran, 1989).

Further, organizations components that lead to agency member's stress include a lack of organizational support and clarity, lack of administrative rationality, and agency objectivity and rationality (Cummings & DeCotis, 1973). The stress from difficult

organizational components increases when an individual is a non-supervisory employee (Drory, 1993; Karasek, 1979). Much of the stress among employees of lower rank occurs due to the non-supervisory lack of control that the individual believes decreases their ability make positive changes in the organization (Drory, 1993; Karasek, 1979). Many of the organizational decisions from higher levels of administration are often perceived by lower-level employees as expressions of the plans of the organization and not necessarily helpful for the individual employee (Levinson, 1965).

Organizational difficulties that come from the individual officer's administration increases stress upon the officer (Gershon, Barocas, Canton, Li, & Vlahov, 2009). Organizational stressors within the law enforcement setting include a lack of provided equipment, little promotional advancement, harassment, difficult communication styles, difficult supervision styles, and a lack of support when citizen complaints are received (Dick, 2000; Garner, 2008; Gershon, Barocas, Canton, Li, & Vlahov., 2009; Liberman, Best, Metzler, Fagan,; Waters & Ussery, 2007; Weiss, & Marmar, 2002).

Organizational stress can minimize with a perceived level of support from law enforcement administrators. Police officers that perceive that their administration is welcoming and supportive of mental health support will often identify with lower levels of work stress and are more likely to seek out mental health counseling (Carlan & Nored, 2008). Further investigation into the opportunities for mental health support within law enforcement agencies is one area of stress reduction examined in this study.

Tuckey, Winwood, and Dollard (2012) conducted focus groups with police officers, used interviews with individual police officers, and accepted 17 spontaneously written submissions about organizational police stress. The authors identified that the

reoccurring theme with the organizational stress experienced by the police officers resulted in a collective belief that police administrators fail at providing adequate training or resources for the care of the mental health of the law enforcement officers. The authors identified that the collective theme of the organizational stress included the administration's inability to identify or care for routinely faced levels of stressors upon law enforcement personnel. This inability to assist the law enforcement officers increased the levels of stress and burnout within the police agency.

Operational Stress

Operational factors of careers increase stress due to the possible daily occurrence and activities that employees must deal with related to their career. Operational stressors within law enforcement include having to deal with difficult events, back pain from the long-term donning of a duty belt, fatigue, contact with angry members of the public, shift work, and a change in the individual's social life due to the law enforcement career (McCreary & Thompson, 2006; Symonds, 1970).

Shift work alone causes an increase in health concerns and increased errors in judgment (Simpson & Richbell, 2000). Working regularly on an overnight shift causes problems in the functional areas of performance, cognitive function, motor function, and general mood (Cochrane, 2001). Unusual shift work is an operational stress that respondents for this study can indicate as a level of increased difficulty in their occupation.

The necessity for professional paperwork and the demands of the officer's agency about an excessive amount of paperwork required is an additional example of occupational stress. Trials for arrested individuals can occur long after the arrest, and the

necessity to professionally document the accusations of crime is of paramount importance. Initial report writing training for law enforcement officers focuses heavily on the professional necessity of grammar, one important area of documentation, but does not focus on the content of the documentation that prosecuting attorneys highly request (Truxillo, Paronto, Collins, & Sulzer, 2004). The content of law enforcement report writing is important when measured through the understanding that memories of events will fade from the officer's memory with time. Officers often remember facts associated with the events that are most closely related to the point of threat (Beehr, Ivanitskaya, Glaser, Erofeev, & Canali, 2004). If an officer is unable to recall important details that are not associated with the threat, and since forgotten, defense attorneys will often attempt to inflate the memory loss as a lack of professionalism by the officer (Beehr, Ivanitskaya, Glaser, Erofeev, & Canali, 2004).

The physical dangers in the law enforcement profession cause an operational type of difficulty that increases police officer stress. Brandl and Stroshine (2003) completed a study of the physical dangers that are prevalent in the daily operation of the law enforcement professional. The authors completed an analysis of the injuries and physical dangers that occurred within a municipal police department over one year while the officers served a town of approximately 600,000 citizens. Analysis of the injuries identified a range of physical dangers in the police profession from felonious assaults, accidental injuries, contact with infectious diseases, to health problems related to the physical exertion caused by the requirements of the profession. These operational dangers of police work also caused mental stress resulting in injury reports for psychological treatment.

Prevalence of Traumatic Stress in Law Enforcement

While the focus of this study is not solely on traumatic stress, but on a broader and encompassing idea of police stress, it is important to identify how traumatic stress affects the law enforcement officer. Traumatic stress identified within the law enforcement career as is that of Post-Traumatic Stress Disorder (PTSD). To properly identify PTSD, it is vitally important to understand the identifiable symptoms and indications. PTSD begins with an articulable stressful event that occurs in an individual. The stressful event can come from a sexual assault, death or the danger of a serious physical injury that happened either to the individual or observed by the individual. The diagnosis of PTSD then requires the occurrence of symptoms that cause difficulty in the life of the individual. The symptoms can come from flashbacks, a difficulty in forgetting the initial incident or even the difficulty of dealing with stimuli that directly remind the individual of the original incident (American Psychological Association, 2014).

Once that difficulty with the stimuli is occurring, the avoidance of reminders of the incident becomes a significant part of the individual's life. The avoidant behavior can occur by either avoiding the location of the original incident or the people involved because of the pain it causes through the memory. The individual may suffer great social, educational or vocational difficulties because of the avoidance of any stimuli related to the incident. Accompanying the avoidance of stimuli can also be a change in mood or the cognitions of everyday life. The cognitions can include not only a misunderstanding of self but of situations that are occurring. The individual may show a lack of any emotion about life or occurrences, and there may be a complete lack of care

for close relationships or care for pleasured previously enjoyed (American Psychological Association, 2014).

With PTSD, symptoms can include angry outbursts in situations that the emotion or reaction is not warranted. Observation of these overreactions is due to a difficulty in the emotional regulation of the individual since many situations are related to the original trauma by difficult cognitions. PTSD can cause insomnia and include both a distressing sleep or oversleeping to the point that it is causing difficult life changes (American Psychological Association, 2014).

For the diagnosis of PTSD, the symptoms are required to be occurring for over a month and causing difficulties in the life of an individual. These difficulties may be observed in social, educational or vocational settings and indicated a need for change in the individual. Finally, it is important that the individual is not taking a substance that is the reason for the symptoms attributed to this disorder (American Psychological Association, 2014).

A relevant examination of current PTSD statistics and literature helps understand the prevalence and severity of PTSD symptoms within the members of law enforcement. Kilpatrick, Resnick, Milanak, Miller, Keyes, and Friedman (2013) completed sampling of 2,953 adults in the United States to determine the presence of PTSD symptoms in participants of the self-reported survey. The authors found that 8.3% of the individuals surveyed reported any symptoms of PTSD within their lifetime. Additionally, the participants' prevalence of PTSD symptoms increased with each exposure to a traumatic event.

Maia et al. (2007) completed a study about the prevalence of PTSD symptoms within the ranks of a Brazilian elite police unit. Following the questionnaire-based study, the authors determined a high percentage of the presence of PTSD and PTSD-symptoms within the ranks of the experienced police officers. The study results indicated a statistic of 8.9% of the officers demonstrating sufficient symptoms to substantiate a diagnosis of PTSD and the presence of PTSD symptoms within 16% of the respondents. As it further relates to police stress, the authors discovered that the officers with full PTSD had a rate of divorce that was five times greater than that of officers without PTSD, indicated at 21.6% with PTSD symptoms and 4.3% without symptoms. The officers with full-PTSD indicated that they were in poorer health than their counterparts without PTSD, indicated at 64.3% versus 6%. Of great concern to law enforcement was the indicated level of suicidal ideation within the officers with PTSD, at 35.7%, in contrast to the 5.2% of officers with suicidal ideation of officers that did not meet criteria for a PTSD. The Maia et al. (2007) study indicates the presence of a greater amount of concerns with the officers that have symptoms that could lead to a diagnosis of PTSD.

Related to the direct exposure of police officers to trauma, Schwarzer, Cone, Li, and Bowler (2016) completed a 10-year study with 2,204 initial responders to the World Trade Center attack on 09/11/2001. The authors used a 17 item PTSD checklist to find a mean statistic of prevalent symptoms and used the identified mean to research the change in symptoms levels over the 10-year period. The authors correlated that initial exposure to trauma has a direct relation to the long-term presence of PTSD symptoms levels. The literature also indicated that the level of PTSD symptoms remained the same in the 10-year follow up of the individual officers (Schwarzer et al., 2016). The lack of any

changes in PTSD symptoms is directly related to understanding the way trauma stressors continue to persist in an individual, and that there is no evidence that they lessen over time. This lack of a reduction of symptoms is important when understanding that a police officer will continue their exposure to traumatic events despite any reduction of symptoms from previous events.

Manguen et al. (2009) completed a one-year study examining the exacerbation of PTSD symptoms in a police officer's first year of employment. The authors studied surveys of PTSD symptoms of a new class of 180 police cadets in the training academy and re-evaluated 82% of the same officers one year later. The authors concluded that there were items outside of traumatic observations that caused the officers a great deal of stress, and were directly related to the impact of their PTSD symptoms. The non-traumatic factors included stressful relationships with coworkers and administration, the lack of proper equipment, and daily police operations as greatly contributing factors to the officer's presence or persistence of PTSD. As traumatic incidents are not the only factors contributing to the levels of PTSD, measuring the additional factors is an important part of police mental health literature.

Types of incidents that officers deal with, and the complexity of the knowledge base required of an officer in those roles, is an important key to understanding the biopsychosocial demands placed upon the individual. Included in the understanding of the roles needed to be a professional police officer, therapists must understand how the roles affect the officer's family outside of the job. Today, law enforcement officers are called upon to better the community, be an integral part of his/her children's lives, and ensure that he/she remains strong in marriage. The difficulty with these important roles

is that they often run counter to the requirements needed for the job as a law enforcement officer (Wester & Lyubelsky, 2005). Wester and Lyubelsky (2005) also noted that the law enforcement society rewards traits that include an ability to refrain from making emotional decisions, independence, physical toughness, and the ability to make split-second decisions during high-stress situations. The authors found that psychological stress in police work is best understood in the context of their finding of a typically male gender role of law enforcement. The norm in male roles, as in police work, included the belief that showing fear to fellow officers would indicate weakness and an inability to perform the job. The authors also indicate that police officers often refuse to seek out psychological services, as the need for mental health therapy will cause a weak appearance and that the therapist may report to the agency that the officer is unfit for duty.

Types of critical incidences that police officers are involved in play a role in the recovery from PTSD. Chopko, Palmieri, and Adams (2017) studied 192 law enforcement officers and compared critical incidents that involved the threat of life of a civilian versus a threat of life against the individual officer. The authors found that threats against the life of the officer correlate to a better mental health recovery rate, opposed to the mental health stress that an officer deals with when he/she experiences the threat of life against another individual. The level of PTSD symptoms identified as higher in the officers that witness the threat of life to another individual. Additionally, the literature revealed that the level of personal relationship stress within the individual officer's life is directly related to a higher presence of PTSD symptoms. When the brain is traumatized, it hyper-

focuses on the most disturbing aspects of the critical incident to the near exclusion of everything else (Lansing, 2012).

Additional predictors of police-related PTSD include pretraumatic, peritraumatic, and posttraumatic factors associated with the individual officer's actions and their life before a law enforcement career. Marchand, Nadeau, Beaulieu-Prevost, Boyer, and Martin (2015) completed a yearlong study on police officers involved in critical incidents. The authors then assessed the officers at repeated intervals following events, ranging from five days, six months, and one year following the incident. The authors found that pretraumatic factors that reduced the likelihood of PTSD symptoms in the officers included the lack of any children in the home and in training the officer to use emotional coping skills before the incident. The emotional coping skills, recognized by the authors as helpful, included applied relaxation, breathing training, and problem-solving. Peritraumatic indicators of the likelihood of PTSD symptoms, following a critical event, included a correlation between the length of the event to the predictive presence of symptoms that were present in the affected officer. Finally, the authors found that posttraumatic factors for the reduction of PTSD symptoms included the actions of the police officer seeking psychological help between the first and fifteenth day following the critical event. 60-70% of those that meet criteria of Acute Stress Disorder will have PTSD within 24 months of the event (Brier & Scott, 2006).

Police Suicide

Police suicides occur at an average of 17 per 100,000 people which is higher than the national civilian average of 11 per 100,000. The level of law enforcement suicide is quickly approaching the levels of suicide by military members at 20 per 100,000 (O'Hara

& Violanti, 2009). In a study of law enforcement suicides by Kaputsa et al. (2010), numerous factors discovered represent a pattern of similarities in the completed suicides studied. Although the number of police officer suicides in this study greatly resemble the rates of suicides by non-law enforcement officers in the community, the rate of suicide by firearm is much greater among police officers when compared to the same general population. Most police suicides were committed with the use of the law enforcement officer's assigned duty weapon, and the authors indicate that the officer's familiarity with firearms was a greater contributing factor to gun use than the general availability of a firearm.

The law enforcement officer suicides studied indicate an average service career near 20 years at the time of the death. The high average of experience for the officers in the study indicate that stressful job exposure is likely a contributing factor to the mental health issues that lead to PTSD and suicide among law enforcement officers. The primary limitation of the study includes the inability for the authors to study the traumatic incidents that have occurred within the career of the officers that committed suicide.

The study of the levels of PTSD and depression with relationship to age provides a finding that may contribute to the police suicide average occurring at a higher level of time in the police profession. Darensburg, Andrew, Hartley, Burchfield, Fekedulegn, and Violati (2006) identified a relationship between the age of the officer and the higher rate of traumatic stress. In police officers that are age 50 or over, the rate of individuals with PTSD rises to 40% higher than officers under the age of 40. The authors contend that the long-term exposure to stress that officers deal with contributed directly to the higher rate of PTSD found at the age of 50 or greater.

While warning signs of police suicide are not always visible, observing contributing mental health factors of depressive symptoms may provide a key to suicidal ideations. Violanti et al. (2009) completed a study with significant indicators of the commonality of depressive symptoms and suicidal ideations. Within the study of 105 randomly selected police officers, each standard deviation of depressive symptoms increased the presence of suicidal ideation by 63% in men and 73% in women. This large increase in ideation by depressed officers may provide a key to being able to watch for indications, within the law enforcement ranks, of tell-tale signs that officers with symptoms of depression may be in real trouble. The significant increase in suicidal ideation by a depressed officer, combined with the increased risk of suicide previously mentioned, are direct indicators of the possible need for professional counseling for law enforcement officers to reduce depression, and likely, suicides.

One alarming discovery in police suicide literature includes the possibility of law enforcement officers committing suicide by having their fellow-officers end his/her life. While the nomenclature of "suicide by cop" has become more popular in media and law enforcement, on-duty police officers are not immune to having to take the life of one of their own. Arias et al. (2008) completed a case study on two such incidents. In both incidents, the off-duty police officers had provided those around them with no previous indication of suicidal ideations but had provided supervisors and friends with the fact that they were struggling with difficult life events. In one of the cases, the recently retired police officer was shot and killed by three of the officers that considered him a friend. While offenders purposefully committing suicide at the hands of the police officer is rarer than the rate of individual suicide, the case study indicates that even officers trained and

experienced in suicide investigations are not immune from the stressors that caused them to end their life at the hand of a fellow officer.

Education plays a major role in the prevention of police suicide. Mishara and Martin (2012) completed a 12-year program, with the Montreal Quebec Police Department, which produced significant results in the reduction of police officer suicides during the study. All 4,178 officers of the Montreal Police Department participated in the Together for Life program, which included the modalities of training for officers, supervisors, and union members attached to the agency. The program also set up a volunteer help-line for officers in need of immediate assistance and completed a publicity campaign about the effects of stress on police suicide. During the 12-year program, the Montreal Police Department suicide rate decreased by 79%, while other Quebec police officer suicides increased by 11%. This valuable change in the suicide rate directly relates to the need for pre-suicide education and better mental health services.

Involvement in traumatic emergency scenes can increase the suicidal ideation of officers during the years following the incident. Violanti, Castellano, O'Rourke, and Patton (2006) completed a study of reports of suicidal ideation by police officers following the three years after the 9/11 terrorist attack and compared them to the reports of suicidal ideation by officers in the years preceding the incident. The authors used information from the Cop 2 Cop program, a New Jersey phone number provided to officers and their families to deal with stressors of the profession, and used the information to search for a statistically significant increase in calls of law enforcement officers calling about suicidal ideations. During the three years after the terrorist attacks, the high-risk suicidal calls increased 1.65 times from the years preceding the response to

9/11. In the wake of a large traumatic event, officers have difficulty in dealing with the stress, and the literature indicates an increase in self-reports of suicidal ideation among law enforcement professionals.

Police Burnout

One of the dangers of a high level of stress within law enforcement is the officer's lack of care for an important career that he/she once enjoyed and was willing to endure sacrifice to continue to serve. This career burnout can quickly become troublesome to the facets of the police officer's life both inside and outside of the job. The dangers of burnout can include a detriment to physical health, detriment to mental health, a higher turnover rate for an agency, and poor job performance (Burke & Richardson, 1993). This burnout, described as a response to chronic high stress within a job, can also endanger the integrity of a police agency due to a high staff turnover rate and officers that may purposefully act out inappropriately because of their loss of trust for the administration (Burke & Richardson, 1993).

One of the greatest causes of police burnout is due to the low amount of personal rewards that come from the job of law enforcement, as compared to the high demands of the profession. Euwema, Kop & Bakker (2004) studied the effect that high stress and low reward have on law enforcement officers, and used a combination of survey and direct observation of officers that were currently working in the community. The authors' observations were used to successfully conclude that the officers reported a greater amount of career burnout when there was a greater imbalance between job stress and job reward.

Related to the imbalance of stress versus rewards, and in direct relation to the type of stress-relief for officers that this study hypothesizes to offer, the reward for stressful

police work may not need to be a financially related. Bakker (2003) studied the job resources that can contribute to the reduction in burnout of career employees. The literature positively indicated the belief that a lack of available job resources causes a decline in the motivation of the individual career employee, which contributes greatly to job burnout. The lack of employee resources, such as job feedback and the autonomy to make a decision, was reported to be a contributing factor to general fatigue and overall demoralization when job stress was high among the employees within the study.

The high nature of stress when interacting with the public also has a direct correlation to police burnout. Bakker and Heuven (2006) identified that the nature of the police contacts with the public, in which the officer is expected to express their viewpoints in an emotionally detached way, causes greater stress than in many other professions. The authors examined 101 police officers and found a direct connection between the emotional disconnection that the public safety members must portray and cynicism within their career. The portrayal to the public of the officer's emotional disconnection, which is in direct opposition to their true emotions, directly leads to the depletion of the energy sources of the public safety member. The Bakker and Hueven (2009) study found that the lack of energy sources is directly related to burnout and poor job performance. The emotional demands of the job caused exhaustion and detachment from a career that the officer once found pleasurable.

Career burnout among law enforcement officers can also come from the difficult observations they must deal with on stressful call. This type of burnout, often called *compassion fatigue,* is a secondary type of reaction to the initial observable trauma (Figley, 1995). Compassion fatigue can also cause law enforcement officers to have a reduction in

empathy for the story of the victim of a crime (Figley, 2002). Compassion fatigue is found to have a high prevalence among law enforcement personnel (Cicognani, Pietrantoni, Palestini, & Prati, 2009)

Reduction in Stress Symptoms

Law enforcement officers often begin learning stress coping skills during their academy training. The coping and stress management skills learned early in the police career can have a significant impact on how trauma may affect the officer during a long career. Patterson (2016) used the Ways and Coping Questionnaire to measure the levels of stress perceived by academy recruits during the different portions of training. The literature indicates that, as the recruits continue to learn stress management skills during the academy training, they began to self-report less perceived stress levels. Patterson's (2016) analysis and discussion indicate that the growth of coping skills caused the recruits to perceive less stress in the training and home lives because of the newly acquired ability to not respond as severely to stressors. The limitation of the study is in the use of academy recruits for the analysis. While academy recruits certainly undergo a new type of stress in the new learning environment, the stress of the academy does not equate to dealing with traumatic stress while on patrol (White, 2008).

Increased levels of training in stress management and coping skills can provide police officers with abilities that increase the ability to deal with trauma. Oliver and Meier (2009) completed a study of the self-reported levels of anxiety and stress among police officers in West Virginia towns of a population of less than 50,000 that completed 8-hour training on stress management. Multiple surveys were used to measure the levels of stress before and after the training period, and the post-test provided at differing

intervals between 1 and 18 months after the training. Analysis of the test indicated that the police officers self-reported lower levels of anxiety and perceived stress after the training period. Oliver and Meier (2009) also observed that the greater the time between training and the post-survey, a higher level of anxiety and perceived stress persisted. The findings indicate that specifically in the thirteen to eighteen-month period following training, that the learned coping skills began to diminish in helpfulness. The secondary findings indicate that annual updates of stress management are needed to continue the care for the officer's mental health needs. The greatest hindrance to the interpretation of the findings in the study is the lack of a control group that did not participate in the stress training. Furthermore, there is no evidence that a shorter or longer stress management class may influence the officers retaining the learned information.

Post-trauma occurrences have a strong determination on the type and severity of PTSD symptoms that the officer will handle. Ellrich and Baier (2017), studied 681 police officers that were previously involved in assaults against them during their professional duties. The authors identified that the primary mitigating factor to a severe level of PTSD symptoms is the presence of regular follow-up and preparatory sessions surrounding the traumatic assault. Ellrich and Baier (2017) also discovered two primary factors that caused an increase in the severity of PTSD symptoms within the assaulted officers. The concern about the officer losing their employment, as well as the possibility of pending court litigation actions, caused a significantly greater amount of stress in the individuals. The possibility of legal action caused such an increase in traumatic symptoms that the authors indicated observations of secondary victimization in addition to the original assault.

Possibilities of coping strategies continue with peer-supported informal treatment to reduce the need for formal professional counseling treatment. Powell, Cassematis, Benson, Smallbone, and Worthey (2014) completed a study to understand the coping mechanisms that were assisting a highly stressful police unit. In the study, the authors interviewed 32 specialized investigators of internet child exploitation about the manners in which they cope with the traumatic visualizations they see regularly. Despite the difficult nature of their positions, only 2 of the 32 officers identified having lasting difficulty due to the career requirements. The primary coping skill used by the remaining 30 officers is the use of informal debriefings following an investigation. The informal debriefings including the sharing of personal stories combined with individual experiences during the investigations. While the study indicates that informal debriefings may be a current skill used by police agencies, not studied is the officers' willingness to participate in other types of therapy sessions.

In addition to the discovery of the importance of informal debriefings, Powell et al. (2017) discovered indications of why the highly specialized officers declined to work with the agency assigned psychologist. The officers reported a lack of a therapeutic relationship with the psychologist due to his/her discomfort with hearing information about difficult cases, and his/her inability to relate to the difficulties faced by the specialized investigators. The officers indicated that the psychologist was unable to identify when members of the unit were using the psychological services to simply transfer out of the specialized unit. Finally, the officers reported that the psychologist, for unknown reasons, was either unable or unwilling to treat some officers that were clearly struggling from the specialized work.

One coping skill that is common in the law enforcement career, although detrimental to the resiliency of traumatic symptoms, is the use of distancing or escape-avoidance coping. These passive coping skills, which primarily include refraining from dealing with the reminders or feelings of the initial trauma, are a maladaptive way to deal with a critical incident. Pole, Kulkarni, Bernstein, and Kaufmann (2006) completed a literature study on retired police officers. The study focused on the mental health resiliency of the former law enforcement officers and sought to discover the individual factors that caused a greater amount of resiliency. During the study, the authors observed that the use of distancing and escape-avoiding coping skills were detrimental to the overall mental health of the retired public safety members. The coping skills, being used by the officers, was found to help with short-term stress relief, but causing the maladaptive condition of a lack of long-term resilience in coping with stress. The authors concluded that the use of the maladaptive coping mechanisms, learned during the time the police offices were actively serving, were such a strong indicator of a lack of later resilience that law enforcement agencies should immediately discontinue teaching the coping skills.

Failure of a police agency to set up mental health services before needed, which would fall into the previous organizational stress category, is not the only reason for the lack of mental health usage. Police officer's stigma related to the utilization of mental health services often causes a stereotype that an officer may not be fit to perform their duties (Baker & Baker, 1996; Britt, 2000; Gould, Greenberg, & Hetherton, 2007; Hoge et al. 2004). The stereotype for the specific concern for an officer being fit for duty while dealing with a mental health issue increases with the emphases placed on the perceived

necessity of toughness, resilience, and strength required to complete daily tasks within law enforcement in the perception in the military (Tucker, 2015). Military members, required to be as tough are resilient as law enforcement members, often do not seek mental health counseling because they do not want to the perception as weak or unable to complete their mission (Hoge et al., 2004).

The beliefs within the culture of law enforcement cause difficulty in obtaining mental health services during a time of stress. Rees and Smith (2008) studied the effects of the police culture upon the inability of a law enforcement officer to heal from PTSD symptoms. The authors discovered that the social culture of law enforcement is built upon long-standing beliefs of "defensiveness, lack of emotion, and a resistance to change" (p. 277). The defensiveness and lack of emotion have long been a coping mechanism, among police ranks, to refrain from reliving the traumatic horrors observed on the job. The authors found that the lack of ability to express emotion about the events, while working as a police officer, often manifested as the officer having a negative view of the world outside his/her profession. The authors discovered that this negative view of civilians resulted in a tendency for the officer to be cynical and aggressive.

Rees and Smith (2008) also concluded that it is the police agency member's unwillingness to change that often leads to a lack of mental health services that are provided by the agency. Direct reasons that were noted for a failure to have counseling services included the officer's feeling of suspicion and the need to keep a macho appearance among fellow officers. The authors interviewed officers about his/her willingness to attend therapy provided by the agency, and were met with exclamations that therapy was only "for wimps" and "for those that couldn't cope with the job," as well

as therapy being “not something for real men” (p. 277). Rees and Smith (2008) based the primary solution as the need to first normalize mental health symptoms and therapy among members of law enforcement. It is only with this normalization, per the authors, that currently provided mental health services will be used and helpful.

When working with law enforcement officers in the therapy setting, Wester and Lyubelsky (2005) discovered that some non-traditional counseling tactics are needed to treat law enforcement officers successfully. Counselors that work with police officers will need to be comfortable with being challenged and need to have a willingness for openness and self-disclosure with their clients. Therapists will also gain more trust from their clients if their therapy techniques are more goal oriented. Law enforcement officers are taught to be task-oriented and mission-minded and will respond well to understanding the path the counselor is taking for the result. The authors also indicate that the counselor must be willing to take a directive approach, regardless of the level of directness that is within his/her theoretical orientation.

An additional area of understanding that would be helpful to the counselor includes the possibility of the officer’s history surrounding his/her upbringing in the law enforcement tradition. Wester and Lyubelsky (2005) indicate that many law enforcement officers are just one in a line of law enforcement officers in his/her family. Many officer’s fathers or grandfathers served in law enforcement, and the current officer may have been raised to hear stories of bravado and excitement about the police profession. Officers also learn honor associated with the police profession, from the family of officers, and how his/her family members may have handled a situation in a manner that is different than is currently accepted. Knowing the family tradition of law enforcement,

may assist the counselor in understanding the client's initial socialization into the professional, and can paint a picture of the core beliefs of the client about law enforcement decisions.

Simmons (2014) studied the effectiveness of the use of pre-employment screening to predict any psychological problems that may arise during the career of the officer. Literature into the possibilities of finding links to police suicides was completed to increase the likelihood of identifying behavioral health issues that may lead to instability in the police career. However, the author's literature indicates that pre-employment screening is not enough to indicate any difficulties with mental health, as the outcomes of the pre-employment screening were inconsistent and varied from department to department. Kaputsa et al. (2010) discovered that the average length of service for a police officer that commits suicide is 20 years, drawing great doubt upon the possibility of finding the likelihood of suicide in a pre-employment screening that occurs 20 years before the average suicide date.

The most common pre-employment assessment test for law enforcement officers is the Minnesota Multiphasic Personality Inventory (MMPI). Simmers, Bowers, & Ruiz (2003) indicated that the use of the MMPI, although helpful for indicating future job performance as a law enforcement officer, does not indicate how the future officer may handle stress. The MMPI, per the authors, is a much better fit for accurately depicting the work habits and professionalism of the future employee. While some psychological examinations may prove better at determining the ability for the future officer to handle stress, the most commonly used MMPI is not of assistance in understanding how the law enforcement officer will deal with traumatic events 20 years into his/her career.

An additional current practice, used by police departments to reduce stress symptoms, is the use of critical incident debriefings within 72 hours of the event. Law enforcement agencies have long believed that dealing quickly with the effects of a traumatic event will reduce the stress responses and PTSD later in the officer's career (Black, 2001). In direct opposition to the belief, studies of the effects of debriefings have indicated that the practice can cause worse symptoms among the attendees. Rose, Bisson, Churhill, and Wesley (2002) completed a study of the change in PTSD symptoms, measuring just after a critical incident, with follow-up literature at the four months, 13 months, and 3-year marks after a critical incident. The authors, utilizing the Impact of Event Scale, discovered no significant reduction in symptoms following a psychological debriefing, or at any of the follow-up dates. However, the authors did discover that symptoms of PTSD increased in severity with some of the individuals. The authors concluded that a psychological debriefing has no evidenced basis for reducing PTSD symptoms after a traumatic event, and called for the immediate evaluation of debriefing programs nationwide.

Addis and Stephens (2008) conducted a similar study that compared the traumatic symptoms of police officers directly after a critical incident, compared with his/her level of symptoms five years later. The authors find no reduction in symptoms in the 57 officers examined. The authors expressed such a concern for the possible exacerbation of PTSD symptoms which they also suggest an immediate evaluation of police debriefing programs.

Understanding pertinent literature about PTSD is a primary step for identifying avenues for treating officers with PTSD symptoms. Plat et al. (2013) completed a study

that examined the helpfulness of Brief Eclectic Psychotherapy during the outpatient treatment of 121 police officers with PTSD symptoms. Brief Eclectic Psychotherapy was specifically designed for PTSD and combines cognitive-behavioral with psychodynamic approached to healing. During the beginning of the treatment phase, only half of the 121 police officers were still able to perform their duties, as evidenced by his/her previously returning to work after a critical incident. The other half of the officers suffered from PTSD symptoms with an intensity high enough to cause the extended use of a sick-leave from the police department. Upon completion of the 16-week outpatient program, 90% of the officers originally studied were working in their original law enforcement capacity and indicated a reduction of PTSD symptoms. The Plat et al. (2013) study indicates a strong correlation between Brief Eclectic Psychotherapy and a reduction of PTSD symptoms in law enforcement.

Summary

In this study, the most prevalent types of literature include many items learned during the chapter formation. First, the law enforcement career accompanies a high level of stress. Second, organizational and operational types of stress accompany the law enforcement profession. Third, the rate of suicide among law enforcement officers is higher than the public, that the symptoms are commonly hidden by police officers, and are a byproduct of stress. Fourth, mental health therapy can assist an officer in reducing their levels of stress, but many officers and administrators are timid to initiate mental health therapy. Fifth, further research is needed to understand the relationship between police stress and the observable relationships of an individual's law enforcement career.

Chapter 3 – Methods

Introduction

This chapter's purpose is to identify the structural framework utilized to investigate the data, to identify the research questions and hypothesis, to identify the sample size and population, to indicate the instruments used for examination of the research, to identify the sampling and data examination procedure, and to finally to describe the statistical plan to test the hypothesis. The literature review identified the presence of a level of stress and posttraumatic stress disorder (PTSD) in law enforcement that is twice the national average, that suicides by law enforcement officers occur most frequently at approximately the 20 years of service mark, and that further research is needed to understand the stress within the law enforcement career. The research focus of the study is to identify the differing levels of stress, in both organizational and operational categories, and examine the relationship of the stress with the length of service of the officer, the current type of work assignment for the officer, the age of the respondent, the size of the officer's agency, and to the availability of mental health services at the agency level.

Research Paradigm – Quantitative

This study will utilize two inventories proven to measure the operational and organizational stress of law enforcement officers and will compare the indicated stress levels among different demographic factors. These demographic factors include years of law enforcement service, current assignment within law enforcement, availability of mental health assistance within the agency, age, and size of the agency. The recognition of a relationship between the levels of stress and the collected demographics will allow

for a post-positivist evaluation of any possible relationship based on a statistical outcome (Prasad, 2015).

The inventories utilized to gather the information on stress will report the conclusions in a numerical output of the sum of 20 questions with answers provided in a 1 to 7 Likert scale. The numerical output of the inventories, combined with the demographic survey, will provide for a statistical analysis evaluation utilizing the ANOVA or regression analysis as indicated in the analysis section below. The use of quantitative research design allows for post-positivist evaluation (Creswell & Creswell, 2018). As the target of the sample is specific to a profession, convenience sampling is utilized to ensure that all participants are full-time law enforcement officers. A priori analysis, utilizing the parameters of a .05 alpha and a power of .80, requires a minimum of 119 total participants to reduce the type II error. Participants in the study are expected to exceed 150 police officers due to the location of the participants which is explained below.

The correlational design of the study will allow for a report of the possible relationship between the levels of occupational or organizational stress with the gathered demographics. Identification of any relationships indicate that the possibility exists for utilization of the information in future stress-reduction or counseling therapy design for police officers. The outcome of examining a possible relationship will allow for the identification of an association between the types of stress and the variable of the measured demographics.

Participants

The participants for the research are police officers involved in training at the Kentucky Department of Criminal Justice Training (KYDOCJT). KYDOCJT is the primary training facility for law enforcement officers in the Commonwealth of Kentucky, regularly training 11,000 students each year. KYDOCJT conducts both recruit training for newly hired officers and advanced training for law enforcement officers that are currently serving within the Commonwealth. Staffing KYDOCJT is 85 full-time law enforcement training instructors and an administrative staff of 70. In 2003, KYDOCJT became the first public safety training academy in North America to become accredited by the Commission on Accreditation on Law Enforcement Agencies. The accreditation signifies that KYDOCJT is current in nationally accepted training methods, and greatly increases the assistance in any future litigation about police training that occurs at the academy (Commonwealth of Kentucky, 2017). Collecting the data from the officers at KYDOCJT allows for data to have come from a wide variety of years of experience and agency sizes among the participants.

Instruments

Operational Police Stress Questionnaire

The Operational Police Stress Questionnaire (PSQ-Op) is a 20-item inventory used to measure the stress level of individual tasks found in the law enforcement career. The PSQ-Op obtains the information from the law enforcement officer using a 7-point Likert-type scale, measuring from 1 representing “no stress at all” to 7 representing “a lot of stress.” Types of stress identified by the PSQ-OP include “working alone at night” and “paperwork.” The PSQ-Op is proven to be reliable and demonstrates contrastive validity

in the measurement of correlations between perceived stress and frequency of that stress. The PSQ-Op is also proven to demonstrate discriminant validity when compared with general life stressors, and concurrent validity when compared with job satisfaction measures (McCreary & Thompson, 2006). Usage of the PSQ-Op and the Organizational Police Stress Questionnaire presented later, allows the stressors upon the law enforcement officer to be separated into two distinct areas from the actual tasks of the job to the difficulties of dealing with the administrative difficulties faced in the career. Use of the PSQ-Op will allow the researcher to identify specific stressors within the high-risk occupation of police work. The appendices of this study provide the PSQ-Op.

Organizational Police Stress Questionnaire

The Organizational Police Stress Questionnaire (PSQ-Org), created by the same authors, measures the stress on individual police officers that is caused by the administration and bureaucracy of the profession. The 20-item inventory focuses on the stressors found within the law enforcement profession that are not related to the physically operational needs. The PSQ-Org measures information in a 7-point Likert-type scale, with 1 representing “no stress at all” and 7 representing “a lot of stress.” Types of stress identified by the PSQ-Org include “bureaucratic red tape” and “inconsistent leadership style” (McCreary & Thompson, 2006). Use of the PSQ-Org will allow the researcher to identify specific stressors within the high-risk occupation of police work. The appendices of this study provide the PSQ-Org.

Validity and Reliability

Determining the validity and reliability of the PSQ-Op and PSQ-Org is four different studies specifically constructed for the measurement instruments. In four

separate studies conducted by McCreary and Thompson (2006), utilizing active duty law enforcement officers, the measurement tools were compared with focus groups and previously validated stress measurement instruments to ensure that the PSQ-Op and PSQ-Org correctly measured police stress. Following the four studies, the use of a combination of t-test and Cronbach's alpha reliability coefficients indicated average results of the Cronbach's alpha returning at .93 for the PSQ-Op and .92 for the PSQ-Org. The corrected item totals for the individual measurements returned as .39 to .70 for the PSQ-Op and .43 to .71 for the PSQ-Org. The combined results indicate that sufficient internal reliability exists for the usage of the measurements.

Demographic Information

Demographic information gathered with the inventories will be utilized to investigate the possible relationship between the demographics and the types of stress indicated by the law enforcement officer. Demographic information will include the number of years the officer has worked in law enforcement, the type of assignment to which officer is currently assigned, age, the availability of mental health services within the respondent's agency, and the size of the officer's agency. The types of assignment to which the officer is currently assigned delineate into patrol versus non-uniform roles. The size of the agency will include the actual number of police officers that are currently working within the respondent's agency. The type of mental health services available within the officer's agency will measure the understanding of the individual respondent in their present knowledge of access to services.

Research Questions

The underlying research questions for the study is: What identifiable variables in a law enforcement officer's career have a relationship with higher levels of organizational or operational stress? Utilization of the following questions answer the underlying research questions:

- RQ1: What relationship is there between stress and the officer's current work assignment?
- RQ2: What relationship is there between stress and the officer's years of service in law enforcement?
- RQ3: What relationship is there between stress and the officer's age?
- RQ4: What relationship is there between stress and the size of the respondent's agency?
- RQ5: What relationship is there between stress and the availability of mental health services at the officer's agency?

Hypothesis

Due to the categorical output of the demographics for current police assignment and the availability of mental health services, hypotheses are utilized with an ANOVA analysis for the specific questions to determine that statistical significance of the categories to stress levels.

Hypothesis 1**.** There is not a significant difference in operational stress levels between the officer's current work assignments.

$H1_a$: There is a significant difference in operational stress levels between the officer's current work assignments.

Hypothesis 2. $H2_0$: There is not a significant difference in organizational stress levels between the officer's current work assignments.

$H2_a$: There is a significant difference in organizational stress levels between the officer's current work assignments.

Hypothesis 3. $H3_0$: There is not a significant difference between the operational stress levels of each officer's availability of mental health services.

$H3_a$: There is a significant difference between the operational stress levels of each officer's availability of mental health services.

Hypothesis 4. $H4_0$: There is not a significant difference between organizational stress levels of each officer's availability of mental health services.

$H4_a$: There is a significant difference between organizational stress levels of each officer's availability of mental health services

Data Collection and Management

Following approval for the specific research from the Institutional Review Board of the University of the Cumberlands, data was collected at the aforementioned Kentucky Department of Criminal Justice Training (KYDOCJT). Two recruit training classes, consisting of newly hired individuals that are receiving their initial police training, and three in-service classes, consisting of current law enforcement officers of differing lengths of service, were provided with the inventories and a demographic questionnaire. The usage of the members of the recruit training classes with little experience will assist in explaining the possibilities of correlation that may exist about the years of service, age, and assignment. The inventories and questionnaires accompany an informational document informing the individual respondent that participation in the research is

voluntary and will provide the individual respondent with the expected use of the information gathered.

While the scoring of the stress inventories occurs in the aforementioned Likert scale, the demographic information consists of a small set of possible answers that are chosen by the respondent officer. Years of service as a police officer was answered in a free-form blank allowing the officer to write the correct digit. Current assignment in law enforcement is indicated by choice of selecting "patrol," "dedicated traffic unit," "investigator," "administration," or "community resource assignment." Respondent's age was answered in a free-form blank allowing the officer to write the correct digit. Respondent's agency size was answered in a free-form blank allowing the officer to write the correct digit.

The type of mental health services available within the officer's agency range in selected response possibility from "no help at all," to "I believe there is some help, but I am not aware of how to access it," to "I know how to access mental health assistance at my agency," to "I have a specific individual available that I can contact for immediate help." The variety of selectable answers will allow for analysis of a relationship between services available and law enforcement stress.

Data Analysis Procedures

The inventories and demographic information collected were then utilized to measure the relationship between law enforcement levels of stress and the variable demographics. The utility of determining the existence of a relationship between types of stress and the examined demographics will allow for a further understanding of the way the individual levels impact and may continue to be useful. The statistical tests utilized

for examination of the gathered data was predetermined as based on the independent variable of each research question. For the analysis in which the independent variable is discreet or categorical (i.e., assignment location), and one continuous dependent variable is used, the ANOVA statistical test will be utilized to determine the existence of a statistically significant relationship. For the research questions in which the independent variable is continuous (i.e., years of service) a canonical correlation analysis, multiple regression analyses, and simple regression analyses statistical test will be utilized to determine the strength of the correlations.

Ethical Considerations

Ethical considerations for the research include the importance of ensuring that the individual law enforcement officer's careers are not affected by the data. The law enforcement officers participating in the study provided sensitive individual information about levels of stress within his/her respective law enforcement agency. To ensure the greatest level of comfort for the respondent officers to answer truthfully, careful consideration is given to complete the research away from any individual police agency. It is important to ensure that individual agency administrators will never have access to the levels of stress for each respondent officer. As the Kentucky Department of Criminal Justice Training works with over 11,000 police officers in a single year, the anonymity of respondents will be much easier to ensure (Commonwealth of Kentucky, 2017).

Summary

This chapter presented the theoretical framework for the accompanying study, and specifically outlined the structural framework that was utilized to investigate the data, to identify the research questions and hypothesis, to identify the sample population, to

indicate the instruments used for examination of the research, to identify the sampling and data collection procedure, and to describe the statistical plan to test the research questions.

Chapter 4 – Results

Introduction

The purpose of this study of law enforcement officers is to understand identifiable demographics in a law enforcement officer's career that may correlate to the individual's level of work stress, which may impact the frequency of burnout, suicides, or PTSD. The quantitative nature of the study is designed to investigate the relationship between self-reported stress levels in law enforcement officers and information about the officer's current demographics within the police career. Following informed consent, participants were asked to complete demographic information including their current law enforcement assignment, age, years of service in law enforcement, agency census size, and the availability of mental health services to each law enforcement officer. The participants were also asked to complete the Operational Police Stress Questionnaire (Op-PSQ) and the Organizational Police Stress Questionnaire (Org-PSQ) (McCreary & Thompson, 2006).

Participants

A total of 197 participants agreed to complete the survey after reading the provided informed consent. Seven of the participants returned a blank survey without explanation. Of the 190 completed surveys, one individual failed to indicate their current law enforcement assignment, two failed to indicate their total years of service, 43 individuals failed to indicate the size of their agency, and 10 failed to indicate the availability of mental health services at their respective agency. 11 individuals omitted at least one answer on the Op-PSQ and nine individuals omitted at least one answer from the Org-PSQ.

Data Analysis

Descriptive Statistics for Demographic Answers

Among the total participants, 189 individuals answered the demographic question for their current law enforcement assignment. The possible answers are assigned a value of 1 for patrol, 2 for a dedicated traffic unit, 3 for investigations, 4 for administration, and 5 for a community service position. The mode for the current assignment is 132 indicating a patrol position. Among the total participants, 188 individuals answered the demographics for their total years of service. The years of service range was 1 to 51 with a mean of 10.66 (SD=11.31). Among the total participants, 186 individuals answered the demographics for their current age. The ages ranged from 21 to 69 with a mean of 35.58 (SD=13.19).

Among the total participants, 146 individuals answered the demographic question for their individual agency size. Agency size ranged from 1 to 1250 with a mean of 106.41 (SD=243.19). Among the total participants, 180 individuals answered the demographics for the availability of mental health services at their agency. The possible answered were assigned a value of 1 for "no help at all," 2 for "I believe there is help but do not know how to access it," 3 for "I know how to access mental health services for me at my agency," and 4 for "I have a specific individual that is always available that I can contact for emergency help." The mode for mental health availability is 79 individuals answering "I know how to access mental health services for me at my agency."

Descriptive Statistics for the Op-PSQ and Org-PSQ

Among the 181 completed Op-PSQ inventories, the possible range of total stress level is 20 through 140 if all questions were answered. The indicated minimum of the

reported scores was 19 and a maximum of 119. The mean of the Op-PSQ total stress level was a 65.06 (SD=24.14). Among the 181 completed Org-PSQ inventories, the possible range of total stress level is 20 through 40 with an indicated minimum of 20 and a maximum of 130. The mean of the Org-PSQ total stress level was a 56.78 (SD=24.83).

Statistical Analysis Results

The following table identifies the predictor and criterion variables used for statistical analysis and the respective instruments utilized to measure the variables.

Table 1 - List of Variables

Variables	
Predictor Variables	Instrument
Current Police Assignment	Demographics Inventory
Age	Demographics Inventory
Years of Service	Demographics Inventory
Agency Manpower	Demographics Inventory
Availability of Mental Health Services	Demographics Inventory
Criterion Variables	Instrument
Operational Police Stress	Operational Police Stress Questionnaire
Organizational Police Stress	Organizational Police Stress Questionnaire

Canonical Correlation Analysis

A Canonical Correlation Analysis was completed to determine the existing relationship between the predictor values of age, years of service, agency manpower, and both criterion variables. The predictor values of the individual's current police assignment and the availability of mental health services were excluded due to the nominal output of the data. The two canonical correlations identified corresponded to the two pairs of linear combinations of the two canonical variates. The simultaneous testing of both canonical variates identifies any relationship between the entire sets of predictor and criterion variables. The analysis yielded two functions with squared canonical

correlations of .205 and .001. Collectively, the full model across all functions was statistically significant using the Wilks' $\lambda = .794$ criterion, $F(6, 260.00) = 5.30$, $p<.001$. Since Wilks' λ represents the variance unexplained by the model, $1 - \lambda$ yields the full model effect size in an r^2 metric. Thus, for the set of two canonical functions, the r^2 type effect size was .206, indicating that the full model explained a medium portion at approximately 21%, of the variance shared between the variable sets.

The dimension reduction analysis tests the hierarchal arrangement of function in relation to statistical significance. As previously noted, the full model was statistically significant, but function 2 did not explain a statistically significant amount of shared variance between the variable sets, $F(2, 131) = .096$, $p = .908$. Only the first function was interpreted for analysis due to the lack of statistical significance and a R^2 of .001.

Table 2 represents the standardized canonical coefficients and the correlations between dependent and canonical variables for Function 1. Table 2 Function 1 identifies the factor loadings for the correlates as .53 for the variable of the operational levels of police stress and .95 for the variables of the organizational levels of police stress. The table identified the unstandardized beta weights as -.02 for the operational levels of police stress and .05 for the organizational levels of police stress. The table identified the standardized beta weights as -.47 for the operational levels of police stress and 1.31 for the organizational levels of police stress as correlated to the canonical variate.

Table 2 also identified the factor loadings and beta weights for the predictor variables as correlated to the canonical variate. The analysis identified the factor loading of age at .83, size of the officer's agency as .70, and the total years of service at .69. The

beta weights were identified as .62 for age, .55 for agency size, and .13 for total years of service.

Table 2 - Canonical Correlation Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Years of Service	144	0	51	10.19	11.222
Age	144	21	69	35.26	12.174
Agency Size	144	1	1250	107.55	244.677
Operational Stress	138	19.00	119.00	63.9638	23.60670
Organizational Stress	140	20.00	130.00	56.7357	25.25171
Valid N (listwise)	135				

Canonical Correlation Analysis

Effect .. Within Cells Regression

Test	Value	Approximate F	Hypothesis DF	Error DF	Significance of F
Pillais	.20631	5.02254	6.00	262.00	.000
Hotellings	.25908	5.57027	6.00	258.00	.000
Wilks	.79399	5.29781	6.00	260.00	.000
Roys	.20484				

Note. F statistic for Wilks' Lambda is exact.

Eigenvalues and Canonical Correlations

Root No.	Eigenvalue	%	Cumulative %.	Canonical Correlation	Square Correlation
1	.25761	99.43255	99.43255	.45259	.20484
2	.00147	.56745	100.00000	.03831	.00147

Dimension Reduction Analysis

Roots	Wilks Lambda	F	Hypothesis DF	Error DF	Significance of F
1 to 2	.79399	5.29781	6.00	260.00	.000
2 to 2	.99853	.09630	2.00	131.00	.908

Raw canonical coefficients for DEPENDENT variables

Variable	1	2
Operational Stress	-.01965	.06232
Organizational Stress	.05128	-.03241

Standardized Canonical Coefficients for Dependent Variables

Variable	1	2
Operational Stress	-.46575	1.47734
Organizational Stress	1.30942	-.82757

Correlations Between Dependent and Canonical Variables

Variable	1	2
Operational Stress	.53426	.84532
Organizational Stress	.95373	.30067

Standardized Canonical Coefficients for Covariates

Covariate	1	2
Years of Service	.13258	-1.54547
Age	.62176	1.25560
Agency Size	.56167	.01948

Correlations Between Covariates and Canonical Variables

Covariate	1	2
Years of Service	.68395	-.58305
Age	.83100	.07799
Agency Size	.69906	.05129

Multiple Regression Analyses

A multiple regression analysis was conducted on the relationships between the predicter variables of years of service, age, and agency size with the criterion variable of operational stress. The predictor values of the individual's current police assignment and the availability of mental health services were excluded due to the nominal output of the data. An alpha level of .05 was utilized. The N of 138 identifies the total number of surveys in which all questions were answered for the measured variables. The analysis

output is reported in Table 3. There was a statistically significant relationship with the predictor variables of years of service, age, and agency size with the criterion variable of operational stress, $F(3,147) = 3.068$, $p = .030$. Correlation outcomes for the predictor values for years of service were .163, age was .215, and agency size was .172. A small effect size was noticed with approximately 6.4% of the variance accounted for in the model, $R^2 = .064$. Examination of the coefficients identifies that none of the individual predictor variables are statistically significant when together and all three predictors provide a small amount of variance to the model with years of service $sr^2 = <.001$, age $sr^2 = .02$, and agency size $sr^2 = .02$.

Table 3 - Multiple Regression for Operational Stress

Descriptive Statistics

	Mean	Std. Deviation	N
Operational Stress	63.9638	23.60670	138
Years of Service	9.94	11.104	138
Age	35.00	12.020	138
Agency Size	108.11	249.307	138

Correlations

		Operational Stress	Years of Service	Age	Agency Size
Pearson Correlation	Operational Stress	1.000	.163	.215	.172
	Years of Service	.163	1.000	.772	.132
	Age	.215	.772	1.000	.185
	Agency Size	.172	.132	.185	1.000
Sig. (1-tailed)	Operational Stress	.	.028	.006	.022
	Years of Service	.028	.	.000	.061
	Age	.006	.000	.	.015
	Agency Size	.022	.061	.015	.
N	Operational Stress	138	138	138	138
	Years of Service	138	138	138	138
	Age	138	138	138	138
	Agency Size	138	138	138	138

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.254[a]	.064	.043	23.08958	1.769

a. Predictors: (Constant), Agency Size, Years of Service, Age
b. Dependent Variable: Operational Stress

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4907.563	3	1635.854	3.068	.030[b]
	Residual	71439.256	134	533.129		
	Total	76346.819	137			

a. Dependent Variable: Operational Stress
b. Predictors: (Constant), Agency Size, Years of Service, Age

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	49.412	7.385		6.691	0.000	34.806	64.018
	Years of Service	-0.008	0.279	-0.004	-0.029	0.977	-0.561	0.545
	Age	0.378	0.260	0.193	1.452	0.149	-0.137	0.893
	Agency Size	0.013	0.008	0.137	1.608	0.110	-0.003	0.029

	Correlations			Collinearity Statistics	
	Zero-order	Partial	Part	Tolerance	VIF
(Constant)					
Years of Service	0.163	-0.003	0.002	0.404	2.474
Age	0.215	0.124	0.121	0.397	2.518
Agency Size	0.172	0.138	0.134	0.965	1.036

A multiple regression analysis was conducted on the relationships between the predictor variables of years of service, age, and agency size with the criterion variable of organizational stress. The predictor values of the individual's current police assignment and the availability of mental health services were excluded due to the nominal output of the data. An alpha level of .05 was utilized. The N of 140 identifies the total number of surveys in which all questions were answered for the measured variables. The analysis output is reported in Table 4. There was a statistically significant relationship with the

predictor variables of years of service, age, and agency size with the criterion variable of operational stress, $F(3,136) = 10.59$, $p = <.001$. Correlation outcomes for the predictor values for years of service were .297, age was .366, and agency size was .302. A medium effect size was noticed with approximately 18.9% of the variance accounted for in the model, $R^2 = .189$. Examination of the coefficients identifies that the individual predictors of age and agency size are statistically significant at .021 and .003 respectively. All three predictors provide a small amount of variance to the model with years of service $sr^2 = <.001$, age $sr^2 = .03$, and agency size $sr^2 = .05$

Table 4 - Multiple Regression for Organizational Stress

Descriptive Statistics			
	Mean	Std. Deviation	N
Organizational Stress	56.7357	25.25171	140
Years of Service	10.23	11.149	140
Age	35.22	12.125	140
Agency Size	109.84	247.767	140

Correlations

		Organizational Stress	Years of Service	Age	Agency Size
Pearson Correlation	Organizational Stress	1.000	.297	.366	.302
	Years of Service	.297	1.000	.777	.141
	Age	.366	.777	1.000	.199
	Agency Size	.302	.141	.199	1.000
Sig. (1-tailed)	Organizational Stress	.	.000	.000	.000
	Years of Service	.000	.	.000	.048
	Age	.000	.000	.	.009
	Agency Size	.000	.048	.009	.
N	Organizational Stress	140	140	140	140
	Years of Service	140	140	140	140
	Age	140	140	140	140
	Agency Size	140	140	140	140

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.435[a]	.189	.171	22.98462	1.914

a. Predictors: (Constant), Agency Size, Years of Service, Age
b. Dependent Variable: Organizational Stress

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16785.433	3	5595.144	10.591	.000[b]
	Residual	71847.789	136	528.293		
	Total	88633.221	139			

a. Dependent Variable: Organizational Stress

b. Predictors: (Constant), Agency Size, Years of Service, Age

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant	32.001	7.294		4.387	0.000
	Years of Service	0.087	0.278	0.038	0.314	0.754
	Age	0.601	0.258	0.288	2.327	0.021
	Agency Size	0.024	0.008	0.239	3.039	0.003

	95.0% Confidence Interval for B		Correlations		
	Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	17.576	46.426			
Years of Service	-0.462	0.637	0.297	0.027	0.024
Age	0.090	1.111	0.366	0.196	0.180
Agency Size	0.009	0.040	0.302	0.252	0.235

a. Dependent Variable: Organizational Stress

Linear Regressions

A simple linear regression was conducted on the relationships between years of service and operational stress. An alpha level of .05 was utilized. The N of 179 identifies the total number of surveys in which all questions were answered for the measured variables. Descriptive statistics are reported in Table 5. Operational stress scores were normally distributed. Standardized residuals were also normally distributed. Scatterplots were analyzed, and no curvilinear relationships between the criterion

variable and the predictor variables or heteroscedasticity were evident. There was a statistically significant relationship between years of service and operational stress, $F(1,177) = 8.892$, $p = .003$. A correlation of .219 was identified. A small effect size was noticed with approximately 5.1% of the variance accounted for in the model, $R^2 = .051$.

Table 5 - Linear Regression for Years of Service and Operational Stress

Descriptive Statistics

	Mean	Std. Deviation	N
Operational Stress	65.1341	24.02349	179
Years of Service	10.28	11.222	179

Correlations

		Operational Stress	Years of Service
Pearson Correlation	Operational Stress	1.000	.219
	Years of Service	.219	1.000
Sig. (1-tailed)	Operational Stress	.	.002
	Years of Service	.002	.
N	Operational Stress	179	179
	Years of Service	179	179

Model Summary[b]

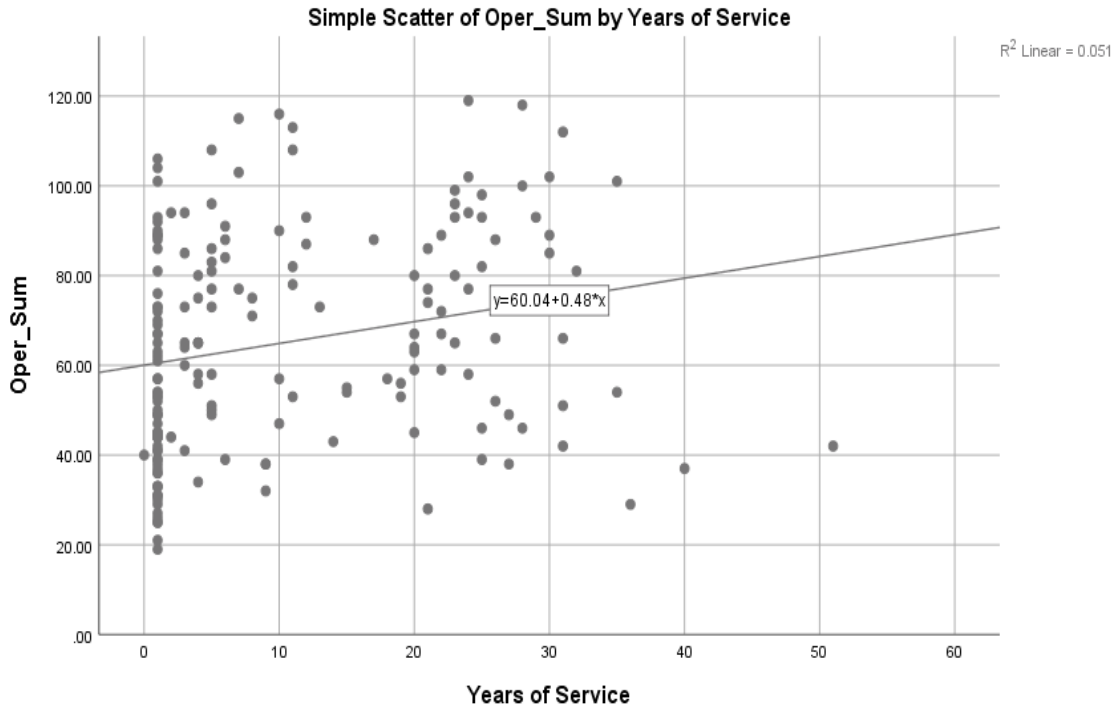
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.219[a]	.048	.042	23.50803

a. Predictors: (Constant), Years of Service
b. Dependent Variable: Operational Stress

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4913.728	1	4913.728	8.892	.003[b]
	Residual	97815.054	177	552.627		
	Total	102728.782	178			

a. Dependent Variable: Operational Stress
b. Predictors: (Constant), Years of Service

Figure 1 – Scatter Plot of Years of Service and Operational Stress



A simple linear regression was conducted on the relationships between the officer's age and operational stress. An alpha level of .05 was utilized. The N of 177 identifies the total number of surveys in which all questions were answered for the measured variables. Descriptive statistics are reported in Table 6. Operational stress scores were normally distributed. Scatterplots were analyzed, and no curvilinear

relationships between the criterion variable and the predictor variables or heteroscedasticity were evident. There was a statistically significant relationship between the officer's age and operational stress, $F(1,175) = 10.750$, $p = .001$. A correlation of .241 was reported. A small effect size was noticed with approximately 5.8% of the variance accounted for in the model, $R^2 = .058$.

Table 6 - Linear Regression for Officer's Age and Operational Stress

Descriptive Statistics

	Mean	Std. Deviation	N
Operational Stress	64.7288	23.96719	177
Age	35.50	12.580	177

Correlations

		Operational Stress	Age
Pearson Correlation	Operational Stress	1.000	.241
	Age	.241	1.000
Sig. (1-tailed)	Operational Stress	.	.001
	Age	.001	.
N	Operational Stress	177	177
	Age	177	177

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.241[a]	.058	.052	23.32967

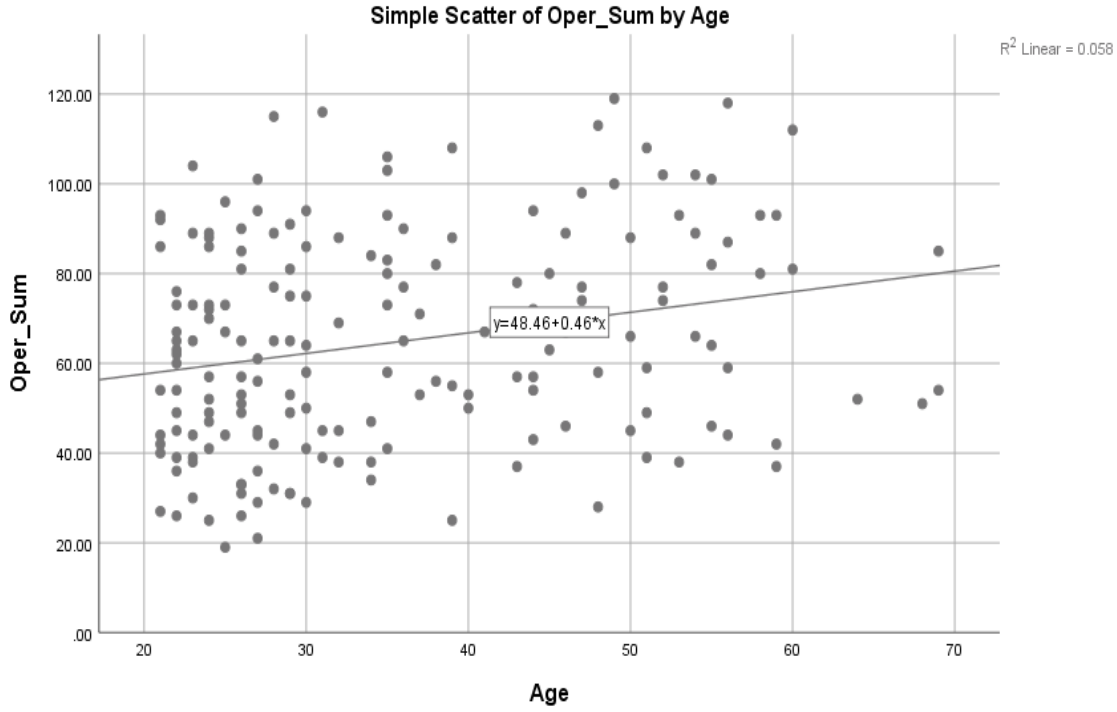
a. Predictors: (Constant), Age
b. Dependent Variable: Operational Stress

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5851.136	1	5851.136	10.750	.001[b]
	Residual	95247.847	175	544.273		
	Total	101098.983	176			

a. Dependent Variable: Operational Stress
b. Predictors: (Constant), Age

Figure 2 - Scatter Plot of Officer's Age and Operational Stress



A simple linear regression was conducted on the relationships between the size of the officer's agency and operational stress. An alpha level of .05 was utilized. The N of 140 identifies the total number of surveys in which all questions were answered for the measured variables. Descriptive statistics are reported in Table 7. Operational stress scores were normally distributed. Scatterplots were analyzed, and no curvilinear relationships between the criterion variable and the predictor variables or heteroscedasticity were evident. There was not a statistically significant relationship between the size of the officer's agency and operational stress, $F(1,138) = 3.81$, $p = .05$. A correlation of .164 was returned. A small effect size was noticed with approximately 2.7% of the variance accounted for in the model, $R^2 = .027$.

Table 7 - Linear Regression for Size of Agency and Operational Stress

Descriptive Statistics

	Mean	Std. Deviation	N
Operational Stress	64.3786	23.69272	140
Agency Size	106.91	247.716	140

Correlations

		Operational Stress	Agency Size
Pearson Correlation	Operational Stress	1.000	.164
	Agency Size	.164	1.000
Sig. (1-tailed)	Operational Stress	.	.026
	Agency Size	.026	.
N	Operational Stress	140	140
	Agency Size	140	140

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.164[a]	.027	.020	23.45649

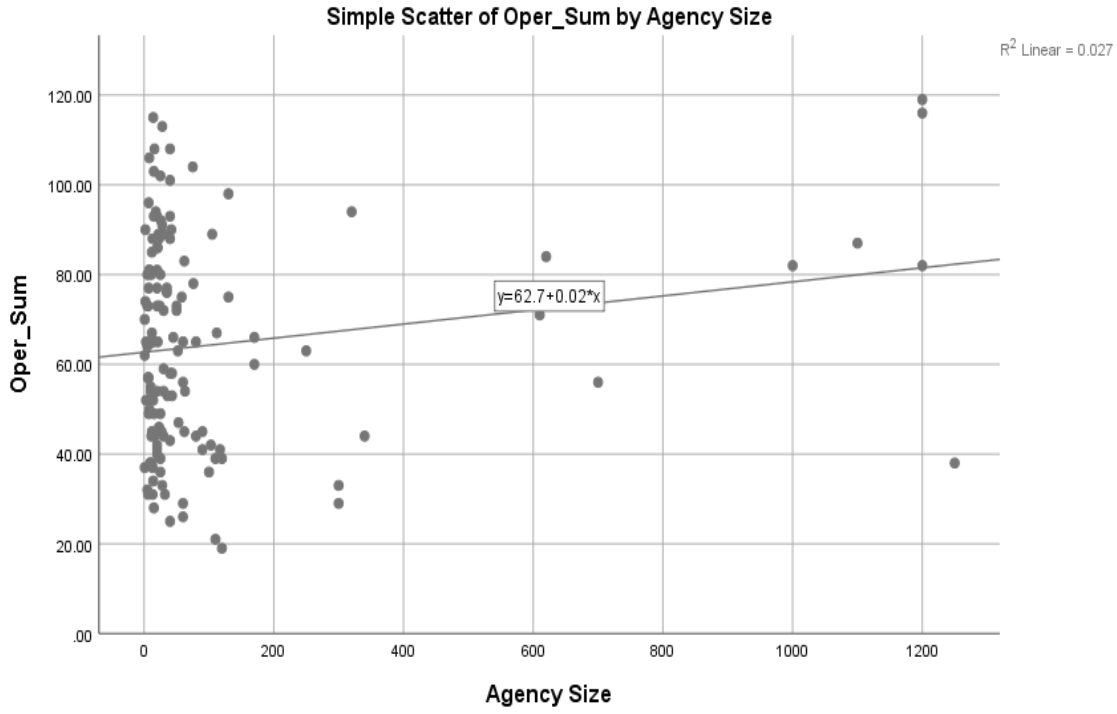
a. Predictors: (Constant), Agency Size
b. Dependent Variable: Operational Stress

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2098.376	1	2098.376	3.814	.053[b]
	Residual	75928.560	138	550.207		
	Total	78026.936	139			

a. Dependent Variable: Operational Stress
b. Predictors: (Constant), Agency Size

Figure 3 - Scatter Plot of Agency Size and Operational Stress



A simple linear regression was conducted on the relationships between years of service and organizational stress. An alpha level of .05 was utilized. The N of 179 identifies the total number of surveys in which all questions were answered for the measured variables. Descriptive statistics are reported in Table 8. Organizational stress scores were normally distributed. Standardized residuals were also normally distributed. Scatterplots were analyzed, and no curvilinear relationships between the criterion variable and the predictor variables or heteroscedasticity were evident. There was a statistically significant relationship between years of service and organizational stress, $F(1,177) = 16.00$, $p = <.001$. A correlation of .288 was identified. A small effect size was noticed with approximately 8.7% of the variance accounted for in the model, $R^2 =$

.083. The null hypothesis was rejected and it was concluded that there is a relationship between years of service and organizational stress.

Table 8 - Linear Regression for Years of Service and Organizational Stress

Descriptive Statistics

	Mean	Std. Deviation	N
Organizational Stress	56.6927	24.81257	179
Years of Service	10.56	11.245	179

Correlations

		Organizational Stress	Years of Service
Pearson Correlation	Organizational Stress	1.000	.288
	Years of Service	.288	1.000
Sig. (1-tailed)	Organizational Stress	.	.000
	Years of Service	.000	.
N	Organizational Stress	179	179
	Years of Service	179	179

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.288[a]	.083	.078	23.82887

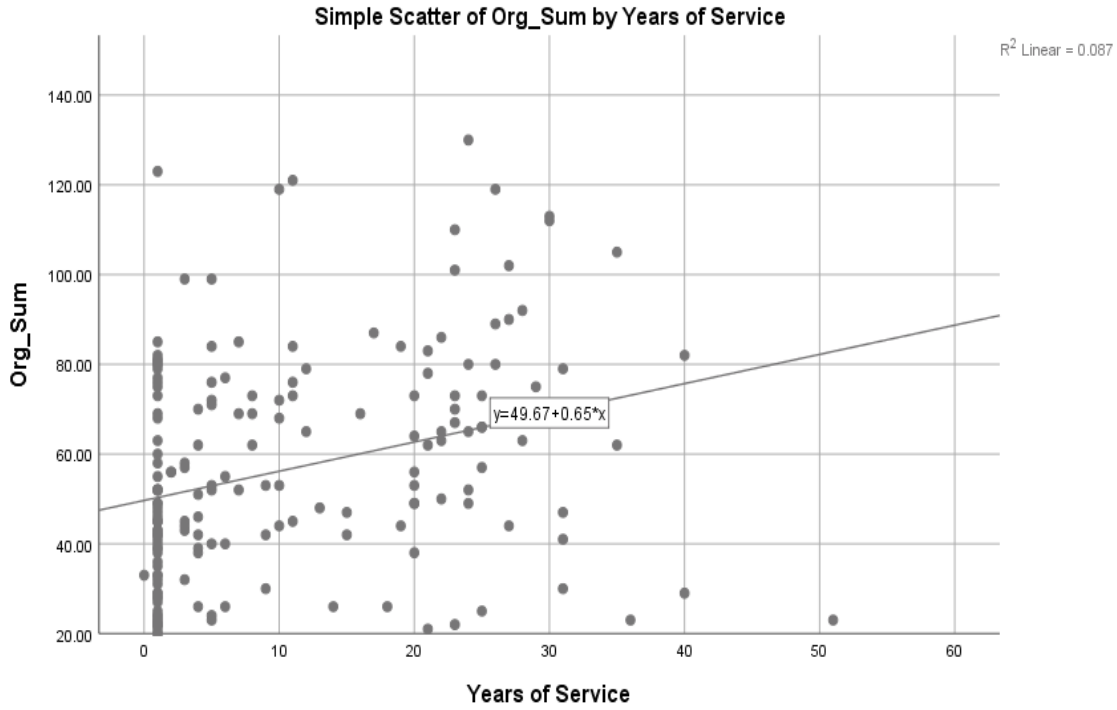
a. Predictors: (Constant), Years of Service
b. Dependent Variable: Organizational Stress

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9084.812	1	9084.812	16.000	.000[b]
	Residual	100503.288	177	567.815		
	Total	109588.101	178			

a. Dependent Variable: Organizational Stress
b. Predictors: (Constant), Years of Service

Figure 4 - Scatter Plot of Years of Service and Organizational Stress



A simple linear regression was conducted on the relationships between the officer's age and organizational stress. An alpha level of .05 was utilized. The N of 177 identifies the total number of surveys in which all questions were answered for the measured variables. Descriptive statistics are reported in Table 9. Organizational stress scores were normally distributed. Scatterplots were analyzed, and no curvilinear relationships between the criterion variable and the predictor variables or heteroscedasticity were evident. There was a statistically significant relationship between the officer's age and organizational stress, $F(1,175) = 18.414$, $p = <.001$. A correlation of .309 was returned. A small effect size was noticed with approximately 9.5% of the variance accounted for in the model, $R^2 = .095$.

Table 9 - Linear Regression for Officer's Age and Organizational Stress

Descriptive Statistics

	Mean	Std. Deviation	N
Organizational Stress	56.4294	24.51082	177
Age	35.84	12.765	177

Correlations

		Organizational Stress	Age
Pearson Correlation	Organizational Stress	1.000	.309
	Age	.309	1.000
Sig. (1-tailed)	Organizational Stress	.	.000
	Age	.000	.
N	Organizational Stress	177	177
	Age	177	177

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.309[a]	.095	.090	23.38139

a. Predictors: (Constant), Age
b. Dependent Variable: Organizational Stress

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10066.709	1	10066.709	18.414	.000[b]
	Residual	95670.658	175	546.689		
	Total	105737.367	176			

a. Dependent Variable: Organizational Stress
b. Predictors: (Constant), Age

Figure 5 - Scatter Plot of Officer's Age and Organizational Stress

A simple linear regression was conducted on the relationships between the size of the officer's agency and organizational stress. An alpha level of .05 was utilized. The N of 142 identifies the total number of surveys in which all questions were answered for the measured variables Descriptive statistics are reported in Table 10. Organizational stress scores were slightly positively skewed. Standardized residuals were also normally distributed. Scatterplots were analyzed, and no curvilinear relationships between the criterion variable and the predictor variables or heteroscedasticity were evident. There was a statistically significant relationship the size of the officer's agency and organizational stress, $F(1,140) = 13.47$, $p = <.001$. A correlation of .296 was returned. A

small effect size was noticed with approximately 8.8% of the variance accounted for in the model, $R^2 = .088$.

Table 10 - Linear Regression for Size of Agency and Organizational Stress

Descriptive Statistics

	Mean	Std. Deviation	N
Organizational Stress	57.0423	25.24093	142
Agency Size	108.63	246.219	142

Correlations

		Organizational Stress	Agency Size
Pearson Correlation	Organizational Stress	1.000	.296
	Agency Size	.296	1.000
Sig. (1-tailed)	Organizational Stress	.	.000
	Agency Size	.000	.
N	Organizational Stress	142	142
	Agency Size	142	142

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.296[a]	.088	.081	24.19393

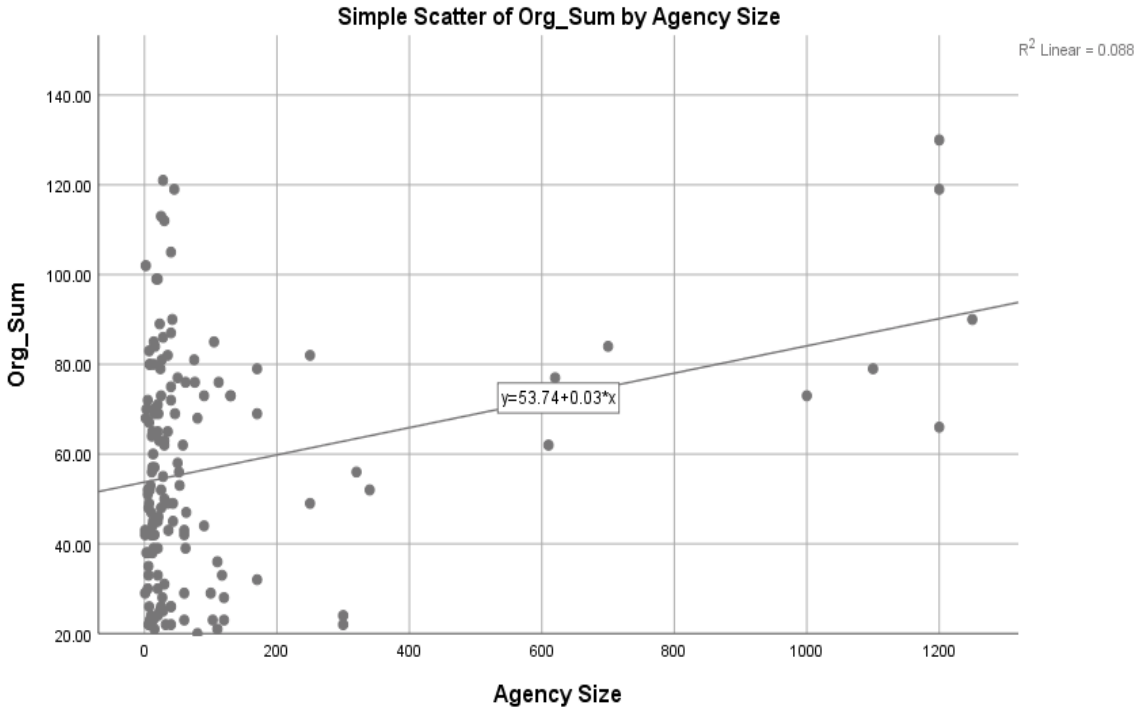
a. Predictors: (Constant), Agency Size
b. Dependent Variable: Organizational Stress

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7883.302	1	7883.302	13.468	.000[b]
	Residual	81948.444	140	585.346		
	Total	89831.746	141			

a. Dependent Variable: Organizational Stress
b. Predictors: (Constant), Agency Size

Figure 6 - Scatter Plot of Agency Size and Organizational Stress



ANOVA

Due to the nominal nature of the output for the individual's current assignment, hypotheses were formed to interpret the outcome of each ANOVA utilized to identify the relationship between the levels of stress and the predictor of assignments.

Hypothesis 1. $H1_0$: There is not a significant difference in operational stress levels between the officer's current work assignments.

$H1_a$: There is a significant difference in operational stress levels between the officer's current work assignments.

A one-way ANOVA was conducted to investigate the possibility of a statistically significant relationship between the individual's current work assignment and their level of operational stress. There was a statistically significant relationship between the

current work assignment and operational stress, $F(3,172) = 4.67$, $p = .004$. Post hoc comparisons using the Tukey HSD indicated that the stress levels between the assignments of Patrol and Investigations were significantly different (± 20.37, p = .02) with the operational level of stress higher for investigative current assignments than for patrol current assignments. All other comparisons were not significant as indicated in table 11. The current assignment of Dedicated Traffic Unit was omitted from the post hoc test as only one individual indicated it as their current assignment. The null hypothesis was rejected and it was concluded that there is a significant difference between the levels of operational stress of each officer's current assignments.

Table 11 - ANOVA of Current Assignment and Operational Stress

Descriptives
Operational Stress

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Patrol	125	60.8000	23.94348	2.14157	56.5612	65.0388	19.00	119.00
Investigator	12	81.1667	20.36857	5.87990	68.2251	94.1082	42.00	118.00
Administration	17	73.2353	19.48246	4.72519	63.2183	83.2522	29.00	102.00
Community Resource Assignment	22	72.1364	23.56409	5.02388	61.6886	82.5841	38.00	113.00
Total	176	64.8068	24.02302	1.81080	61.2330	68.3806	19.00	119.00

ANOVA
Operational Stress

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7608.115	3	2536.038	4.671	.004
Within Groups	93385.316	172	542.938		
Total	100993.432	175			

Multiple Comparisons
Dependent Variable: Operational Stress
Tukey HSD

(I) Current Assignment	(J) Current Assignment	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Patrol	Investigator	-20.36667*	7.04190	.022	-38.6356	-2.0977
	Administration	-12.43529	6.02337	.169	-28.0619	3.1913
	Community Resource Assignment	-11.33636	5.38725	.156	-25.3126	2.6399
Investigator	Patrol	20.36667*	7.04190	.022	2.0977	38.6356
	Administration	7.93137	8.78535	.803	-14.8607	30.7234
	Community Resource Assignment	9.03030	8.36205	.702	-12.6636	30.7242
Administration	Patrol	12.43529	6.02337	.169	-3.1913	28.0619
	Investigator	-7.93137	8.78535	.803	-30.7234	14.8607
	Community Resource Assignment	1.09893	7.52439	.999	-18.4218	20.6196
Community Resource Assignment	Patrol	11.33636	5.38725	.156	-2.6399	25.3126
	Investigator	-9.03030	8.36205	.702	-30.7242	12.6636
	Administration	-1.09893	7.52439	.999	-20.6196	18.4218

*. The mean difference is significant at the 0.05 level.

Hypothesis 2. $H2_0$: There is not a significant difference in organizational stress levels between the officer's current work assignments.

$H2_a$: There is a significant difference in organizational stress levels between the officer's current work assignments.

A one-way ANOVA was conducted to investigate the possibility of a statistically significant relationship between the individual's current work assignment and their level of organizational stress. There was a statistically significant relationship between the current work assignment and organizational stress, $F(3,172) = 4.190$, $p = .007$. Post hoc comparisons using the Tukey HSD indicated that the stress levels between the assignments of Patrol and Administration were significantly different (± 19.6, p = .008) with the organizational level of stress higher for administrative current assignments than for patrol current assignments. All other comparisons were not significant and are displayed in table 12. The current assignment of Dedicated Traffic Unit was omitted from the post hoc test as only one individual indicated it as their current assignment. The null hypothesis was rejected and it was concluded that there is a significant difference between the levels of organizational stress of each officer's current assignments.

Table 12 - ANOVA of Current Assignment and Organizational Stress

Descriptives
Organizational Stress

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Patrol	125	53.0160	24.17309	2.16211	48.7366	57.2954	20.00	130.00
Investigator	11	66.0909	20.92106	6.30794	52.0359	80.1459	30.00	105.00
Administration	18	72.6111	23.83556	5.61810	60.7580	84.4643	23.00	119.00
Community Resource Assignment	22	55.5909	23.92182	5.10015	44.9846	66.1972	24.00	121.00
Total	176	56.1591	24.57752	1.85260	52.5028	59.8154	20.00	130.00

ANOVA
Organizational Stress

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7199.072	3	2399.691	4.190	.007
Within Groups	98510.473	172	572.735		
Total	105709.545	175			

Multiple Comparisons
Dependent Variable: Organizational Stress
Tukey HSD

(I) Current Assignment	(J) Current Assignment	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Patrol	Investigator	-13.07491	7.52653	.308	-32.6012	6.4514
	Administration	-19.59511*	6.03328	.008	-35.2474	-3.9428
	Community Resource Assignment	-2.57491	5.53311	.967	-16.9296	11.7798
Investigator	Patrol	13.07491	7.52653	.308	-6.4514	32.6012
	Administration	-6.52020	9.15890	.892	-30.2814	17.2410
	Community Resource Assignment	10.50000	8.83744	.635	-12.4272	33.4272
Administration	Patrol	19.59511*	6.03328	.008	3.9428	35.2474
	Investigator	6.52020	9.15890	.892	-17.2410	30.2814
	Community Resource Assignment	17.02020	7.60605	.117	-2.7124	36.7528
Community Resource Assignment	Patrol	2.57491	5.53311	.967	-11.7798	16.9296
	Investigator	-10.50000	8.83744	.635	-33.4272	12.4272
	Administration	-17.02020	7.60605	.117	-36.7528	2.7124

*. The mean difference is significant at the 0.05 level.

Due to the nominal nature of the output for the individual's availability of mental health services, hypotheses were formed to interpret the outcome of each ANOVA utilized to identify the relationship between the levels of stress and the predictor of the availability of mental health services.

Hypothesis 3. $H3_0$: There is not a significant difference between the operational stress levels of each officer's availability of mental health services.

$H3_a$: There is a significant difference between the operational stress levels of each officer's availability of mental health services.

A one-way ANOVA was conducted to investigate the possibility of a statistically significant relationship between the individual's availability of mental health services and their level of operational stress. There was not a statistically significant relationship between the current work assignment and organizational stress, $F(3,164) = 2.537$, $p = .059$. The null hypothesis failed to be rejected and it was concluded that there is not a significant difference between the operational stress levels of each officer's availability of mental health services.

Table 13 - ANOVA for Mental Health Availability and Operational Stress

Descriptives
Operational Stress

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
No help at all.	19	77.578	18.8482	4.3240	68.4944	86.6635	39.00	108.00
Help available but unknown how to access.	57	64.157	23.8588	3.1601	57.8273	70.4885	26.00	115.00
Help available and I know how to access it.	73	61.767	23.7232	2.7766	56.2321	67.3022	19.00	118.00
Specific individual I can contact.	19	70.105	27.5215	6.3138	56.8403	83.3702	27.00	119.00
Total	168	65.309	24.0652	1.8566	61.6439	68.9751	19.00	119.00

ANOVA
Operational Stress

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4288.864	3	1429.621	2.537	.059
Within Groups	92427.041	164	563.580		
Total	96715.905	167			

Multiple Comparisons
Dependent Variable: Operational Stress
Tukey HSD

(I) Mental Health Availability	(J) Mental Health Availability	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
No help at all.	Help available but unknown how to access.	13.42105	6.28883	.147	-2.9020	29.7441
	Help available and I know how to access it.	15.81182	6.11411	.051	-.0578	31.6814
	Specific individual I can contact.	7.47368	7.70222	.767	-12.5179	27.4653
Help available but unknown how to access.	No help at all.	-13.42105	6.28883	.147	-29.7441	2.9020
	Help available and I know how to access it.	2.39077	4.19614	.941	-8.5006	13.2821
	Specific individual I can contact.	-5.94737	6.28883	.780	-22.2705	10.3757
Help available and I know how to access it.	No help at all.	-15.81182	6.11411	.051	-31.6814	.0578
	Help available but unknown how to access.	-2.39077	4.19614	.941	-13.2821	8.5006
	Specific individual I can contact.	-8.33814	6.11411	.524	-24.2077	7.5314
Specific individual I can contact.	No help at all.	-7.47368	7.70222	.767	-27.4653	12.5179
	Help available but unknown how to access.	5.94737	6.28883	.780	-10.3757	22.2705
	Help available and I know how to access it.	8.33814	6.11411	.524	-7.5314	24.2077

Hypothesis 4. $H4_0$: There is not a significant difference between organizational stress levels of each officer's availability of mental health services.

$H4_a$: There is a significant difference between organizational stress levels of each officer's availability of mental health services.

A one-way ANOVA was conducted to investigate the possibility of a statistically significant relationship between the individual's availability of mental health services and their level of organizational stress. There was not a statistically significant relationship between the individual's availability of mental health services and organizational stress, $F(3,164) = 1.789$, $p = .151$. The null hypothesis failed to be rejected and it was concluded that there is not a significant difference between the organizational stress levels of each officer's availability of mental health services.

Table 14 - ANOVA for Mental Health Availability and Organizational Stress

Descriptives
Organizational Stress

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
No help at all.	19	66.736	26.5577	6.0927	53.9364	79.5373	23.00	112.00
Help available but unknown how to access.	57	53.614	21.2919	2.8201	47.9645	59.2636	21.00	105.00
Help available and I know how to access it.	74	54.405	23.7093	2.7561	48.9124	59.8984	20.00	123.00
Specific individual I can contact.	18	61.444	33.7607	7.9574	44.6556	78.2333	20.00	130.00
Total	168	56.285	24.6797	1.9040	52.5265	60.0449	20.00	130.00

ANOVA
Organizational Stress

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3222.810	3	1074.270	1.789	.151
Within Groups	98495.475	164	600.582		
Total	101718.286	167			

Multiple Comparisons
Dependent Variable: Organizational Stress
Tukey HSD

(I) Mental Health Availability	(J) Mental Health Availability	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
No help at all.	Help available but unknown how to access.	13.12281	6.49200	.184	-3.7276	29.9732
	Help available and I know how to access it.	12.33144	6.30282	.209	-4.0280	28.6908
	Specific individual I can contact.	5.29240	8.06072	.913	-15.6298	26.2145
Help available but unknown how to access.	No help at all.	-13.12281	6.49200	.184	-29.9732	3.7276
	Help available and I know how to access it.	-.79137	4.31885	.998	-12.0012	10.4185
	Specific individual I can contact.	-7.83041	6.62587	.639	-25.0283	9.3675
Help available and I know how to access it.	No help at all.	-12.33144	6.30282	.209	-28.6908	4.0280
	Help available but unknown how to access.	.79137	4.31885	.998	-10.4185	12.0012
	Specific individual I can contact.	-7.03904	6.44063	.694	-23.7561	9.6780
Specific individual I can contact.	No help at all.	-5.29240	8.06072	.913	-26.2145	15.6298
	Help available but unknown how to access.	7.83041	6.62587	.639	-9.3675	25.0283
	Help available and I know how to access it.	7.03904	6.44063	.694	-9.6780	23.7561

Summary of Findings

This chapter identified the analysis of the provided demographics and stress inventories. The different types of analysis performed in this study returned with different levels of correlation, but the statistics identify that the predictor values do have a strong relationship with differing levels of law enforcement stress. Significant differences were identified between the means of operational and organizational police stress levels within the different current work assignments. Additionally, significant differences were not observed between the means of operational and organizational police stress levels within the different availabilities of mental health services. Chapter 5 contains further discussion on the findings, study limitations, study strengths, possible implications of the study, and recommendations for future research.

Chapter 5 – Discussion and Conclusion

Introduction

The purpose of this study of law enforcement officers is to understand identifiable demographics in a law enforcement officer's career that may correlate to the individual's level of work stress, which may impact the frequency of burnout, suicides, or PTSD. The quantitative nature of the study is designed to investigate the relationship between self-reported stress levels in law enforcement officers and information about the officer's current demographics within the police career. Following informed consent, participants were asked to complete demographic information including their current law enforcement assignment, age, years of service in law enforcement, agency census size, and the availability of mental health services to each law enforcement officer. The participants were also asked to complete the Operational Police Stress Questionnaire (Op-PSQ) and the Organizational Police Stress Questionnaire (Org-PSQ) (McCreary & Thompson, 2006).

Discussion of the Findings

Levels of Stress within Law Enforcement

If every Likert scale was completed on the Operational or Organizational Police Stress Questionnaires a possible summary score for each of the inventories of 20 to 140 were possible. The mean score of the completed Operational Police Stress Questionnaires was 65.06 indicating a moderate level of ongoing operational stress among law enforcement officers. The mean score of the complete Organizational Police Stress Questionnaires was 56.78 indicating a moderate level of ongoing organizational stress among law enforcement officers. The inventories and this study did not test levels

of acute stress during a critical incident, but instead sought to examine levels of stress that were current in the career of the individual law enforcement officer. The moderate levels of stress identified in the mean of both inventories provide evidence of an ongoing level of both types of stress within the law enforcement profession.

Analyses of Relationship Between Variables

In the canonical correlation analysis, when both types of stress in law enforcement were analyzed with the predictor variables of the individual's age, years of service in police work, and agency size, factor loadings returned with a correlation of .53 for operational stress and .95 for organizational stress. These high levels of correlation identify a high level of relationship between the variables when the two stress types are examined together. In the Canonical Correlation Analysis, factor loadings returned with predictor variable correlations of .83 for age, .70 for agency size, and .68 for the officer's years of service. These high levels of correlation identify the high levels of relationship that each predictor variable have with both types of law enforcement stress.

The coefficients of the canonical correlation analysis indicate that for every standard deviation increase in age, years of service, or agency size that the level of operational stress decreases by .46 standard deviations. For every standard deviation increase in age, years of service, and agency size the level of organizational stress increases by 1.31 standard deviations. These standardized beta weights, combined with the standard deviations of the predictor variables, provide evidence of large changes in organizational and operational stress throughout an officer's career. Specifically, for every 11.22 years of an officer's career the level of operational stress decreases by 11.1 points on the aforementioned 120-point stress scale. For every increase of the officer's

age of 12.17 years the operational stress decreases by 11.1 points, and for every 244.68 members increase in the officer's agency size the operational stress decreases by 11.1 points. The decrease in operational stress during the course of an officer's career, in which the officer is eligible for retirement after 25 years of service (Kentucky Association of Counties, 2012), averages 24.74 points on a possible 120-point scale if they remain 25 years.

Likewise, for every 11.22 years of an officer's career the level of organizational stress increases by 33.08 points on the aforementioned 120-point stress scale. For every increase of the officer's age of 12.17 years the organizational stress increases by 33.08 points, and for every 244.68 members increase in the officer's agency size the organizational stress increases by 33.08 points. The increase of organizational stress per year of an officer's career averages 2.95 points on the aforementioned 120-point stress scale. The increase in organizational stress during the course of an officer's career, in which the officer is eligible for retirement after 25 years of service (Kentucky Association of Counties, 2012), averages 67.95 points on a possible 120-point scale if they remain 25 years.

The first multilinear regression analysis identified moderate levels of correlation between all three predictor variables and the dependent variables of operational stress, and all three predictor variables were identified as statistically significant to the operational type of stress. Although the relationship between the predictor variables and operational stress proved moderately strong, none of the predictor variables are statistically significant enough from zero to indicate a unique contribution to the levels of stress without the presence of the other predictors. The information still proves valuable

in understanding the significance of the relationship between years of service (.163), age (.215), agency size (.172), and the amount of operational stress.

The second multilinear regression analysis identified moderate levels of correlation between all three predictor variables and the dependent variables of organizational stress, and all three predictor variables were identified as statistically significant to the organizational type of stress. Although the relationship between the predictor variables and operational stress proved moderately strong, only the respondent's age and agency size are statistically significant enough from zero to indicate unique contributions to the levels of stress without the presence of the final predictor. For every .61 years increase to the age of officer, the level of organizational stress is raised by 1 point. For every .02 increase in agency size, the level of the officer's organizational stress is raised by 1 point. The information still proves valuable in understanding the significance of the relationship between years of service (.297), age (.366), agency size (.302), and the amount of operational stress.

Simple linear regressions were completed to determine the predictability, strength of relationship, and significance of relationship between individual predictor values of years of service, age, agency size, and the two types of police stress. Except for agency size to operational stress, all predictor values are statistically significant and within a small to moderate range of relationship to the two types of stress. The information obtained by the simple linear regressions is valuable in understanding predictions of the two types of stress, however, the multilinear and canonical correlations provide the most value of relationship as all three predictor values are always present within law enforcement. Since all three predictor values are always present in the law enforcement

career, the linear regressions show that any attempt to pick one predictor from the set of three does not accurately represent the actual law enforcement environment, and any attempts to understand stress levels with the removed single predictor is not inherently valuable in understanding police stress.

Comparisons of the simple linear regressions to the multilinear regressions identifies that all the levels of correlation are higher when the three predictor variables are examined together. As all three predictor variables are constant in law enforcement service, the multilinear comparison provides a more scientific finding of significant correlation to the types of stress. Comparisons of all linear regressions to the canonical correlation analysis identifies all the levels of correlation are higher when the three predictor variables are examined together with both types of law enforcement stress. As all three predictor variables and both types of stress are constant in law enforcement service, the canonical correlation analysis provides the most scientific finding of significant correlations to law enforcement stress. Since all three predictor values are always present in the law enforcement career, the linear regressions show that any attempt to pick one predictor from the set of three does not accurately represent the actual law enforcement environment, and any attempts to understand stress levels with the removed single predictor is not inherently valuable in understanding police stress.

Due to the nominal nature of the output for the individual's current assignment, hypotheses were formed to interpret the outcome of each ANOVA utilized to identify the relationship between the levels of stress and the predictor of assignments. In both types of law enforcement stress, significant differences were observed between the levels of stress between the possible work assignments. The law enforcement assignment type of

investigator yielded the highest mean of operational stress levels, followed sequentially by administration, community services, and then patrol. The law enforcement assignment type of administration yielded the highest mean of organizational stress levels, followed sequentially by investigator, community services, and then patrol.

Due to the nominal nature of the output for the individual's availability of mental health services, hypotheses were formed to interpret the outcome of each ANOVA utilized to identify the relationship between the levels of stress and the availability of mental health services. Neither operational nor organizational stress are statistically different within the possibilities of the availability of mental health services. For law enforcement agency administrators, this information is valuable in understanding that simply obtaining mental health service availability for an agency is not enough of a step to significantly change the stress level of the officers. This discovery provides validation for the need of further studies into police stress and how further administrative mental health wellness steps may be required to statistically change the stress levels of police officers.

Strengths and Limitations

A strength of the current study is that all participants are active law enforcement officers of varying age, years of service, agency size, current assignment, and availabilities of mental health services within their agencies. While demographics of agency locations within Kentucky were not requested, the participants represent a wide range of law enforcement officers within the requested demographics. Classes for new law enforcement officers and classes of law enforcement officers participating in ongoing in-service were chosen to ensure a wide range of service dates.

One limitation of the study is the lack of demographic information about sex or ethnicity. The rationality for excluding gender and ethnicity from the demographics is explained in chapter one of this study. While the decision to exclude the information request on the demographic sheet was to reduce the possibility of officers worrying that they may be identified by answering the questions as the minority sex or ethnicities of law enforcement, further evaluations of police stress may benefit from identifying the differences in stress levels between sex and ethnicity within the profession. This study does not report on the differences of stress among differing sexes or ethnicities within law enforcement.

An additional limitation of the study is the use of self-reported Likert scales to identify levels of stress. While self-reported inventories reduce time in gathering data and reduces the possibility of influence by a researcher upon a participant during an individual interview setting, the use of self-reported measures are accepted as less reliable than individual behavioral assessments (Zhang & He, 2011). Use of behavioral assessments may prove to identify specific measurable stressors over the self-reported interval scores, but the assessments may suffer from bias of the interviewer and a limitation of sample size. The bias of the qualitative interviewer is regularly called into question due to difficulty in a lack of explaining analytical procedures in the interview methodologies and the concern that the outcome is collection of the interviewer's personal opinions (Rolfe, 2006; Sandelowski, 1993). Qualitative studies, such as behavioral assessments and interviews, also suffer from a smaller sample size that may not provide a true representation of the study results as they relate to the entire population

(Rahman, 2017). The use of a Likert scale in this study provides a large sample size and better represents removal of the research's bias from the statistics.

Recommendations for Future Research

This study identified the relationships between predictors of law enforcement demographics and the levels of two types of stress found in police work. Recommendations for future studies on law enforcement stress include the need to understand how the use of mental health services affect law enforcement stress, identifying how steps taken by administrators to change the identified predictor values will affect stress levels, and studies of how the levels of stress in law enforcement affect the officer's life outside of the career. Following the identification of the limitations and outcomes of the study, future research on law enforcement levels of stress may benefit from the following recommendations. First, utilizing law enforcement officers from a single large agency may be helpful in determining how age, years of service, sex, ethnicity, and the availability of mental health services effect officers that share the same administration. Second, since this study was not able to identify significant changes in the levels of stress when the availability of mental health services was identified, further research may benefit in identifying officers that utilized mental health services that were provided by the agency and comparing the mean stress scores. Third, the use of interviews in further identifying police stress may provide a new understanding of the struggles that individual officers can identify as difficult parts of the profession that were not addressed in this study.

It is also recommended that future researchers of law enforcement stress repeat the study in similar groups to verify the accuracy of the inferential analysis. If future

researchers are able to repeat the findings of decreased operational stress and increased organizational stress, the below implications from this study are strengthened. Verification of the inferential analysis allows for further evidence for law enforcement administrators to utilize the 20 individual questions within the Police Stress Questionnaire-Organizational to identify specific changes that can be made to effect a change in organizational stress positively.

Implications of the Study

This study was designed to identify potential predictors of higher levels of law enforcement stress. Using the statistical analysis of the surveys an increase in age, years of service, and agency size correlates with an increase in organizational stress, while operational stress decreases at a slower rate. The study identified that for every standard deviation increase in age, years of service, and agency size the level of organizational stress increases by 1.31 standard deviations, or an increase of 33.08 on a 120-point stress scale for every 11.22 years of service the individual remains in law enforcement. The findings from this study can be used by law enforcement administrators to understand that officer's complaints about their perceptions of growing organizational stress are statistically valid, and the findings can be further utilized to discover steps to reduce the organizational stress. Due to the findings of organizational stress increase in this study, it is clear that, combined with the discovery that operational stress reduces with age and years of service, that finding administrative possibilities of reducing organizational stress will lower the overall stress of the law enforcement officer as their career continues.

Relating to the mental health of law enforcement officers, the analysis of this study allows for information that professional mental health therapists can utilize when

working with officers or police agencies. Since this study provides evidence that organizational stress increases with an officer's years of service, mental health therapists are able to provide normalization of the organizational stress that is causing the officer to seek help. While the normalization of a stressor may not mitigate the full impact of the cause, normalization allows the client to identify that their belief about the difficulties of organizational stress is realistic and that processes exists to deal with the specific difficulties (Ochberg, 1991).

Mental health practitioners may also benefit from the evidence in this study in the area of advocacy and stress prevention for law enforcement officers. The identification of the growing levels of organizational stress in a law enforcement officer's career allows therapists working within police agencies to provide education and systems that may allow for early intervention in reducing law enforcing organizational stress. Individual therapists can use the 20 identified organizational stressors to build the educational or prevention steps within the specific agency.

Further related to the use of this study for law enforcement mental health is the specific need identified for officers to seek therapy, without delay, once organizational stress begins to affect their lives. This study identified evidence that organizational stress will continue to increase during the officer's career, so delaying seeking help may add to an officer's growing work-related stress. Simply expecting the stress to reduce naturally is also negated by the evidence identified in this study. Understanding the increase in organizational stress will provide the mental health practitioner the evidence to advocate for the necessity of seeking help early in an officer's career.

The analysis also identified that the officer's current assignment is significant to levels of an increase in stress with the highest level of operational stress observed in the investigation role while the highest level of organizational stress is observed in the administrative roles. The findings from this study can be used by police administrators to understand the importance of monitoring the stress levels in each of the indicated higher stress assignments. Armed with the information from monitoring levels of stress in the high-stress assignments, combined with the significance of stress relationships identified in this study, police administrators may be able to plan rotations of assignments with the hope to reduce growing levels of stress within the officers assigned to these higher stress positions.

Analysis additionally discovered that the presence alone of law enforcement agency administrators offering of mental health assistance does not significantly decrease the levels of stress among the law enforcement ranks. The findings from this study can be utilized by police administrators to create wellness programs that ensure an increase of the usage of mental health programs, such as offering paid time off for meeting with a mental health professional for maintenance of the health of the officer as opposed to waiting for the officer to seek mental health when an identifiable problem arises. The information for mental health availability discovered in this study may also allow law enforcement administrators to utilize the quantitative outcomes to provide proposals to government administrators about the necessity of bettering the agencies mental health programs.

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Appendix A

Demographic Survey

Causes of Police Operational and Organizational Stress

Current Law Enforcement Assignment (Mark appropriate assignment with an "X")

Patrol _____ Dedicated Traffic Unit _____ Investigator _____

Administration _____ Community Resource Assignment _____

Years of Law Enforcement Service (Enter your years of service)

_____

Age (Enter your age)

_____

Approximate Number of Officers in your Law Enforcement Agency (Enter the number below)

_____

Mental Health Services Available to you at your Agency (Circle one)

1 No help at all.

2 I believe there is help but I do not know how to access it.

3 I know how to access mental health services for me at my agency.

4 I have a specific individual that is always available that I can contact for immediate help.

Appendix B

Police Stress Questionnaire – Operational

Operational Police Stress Questionnaire

Below is a list of items that describe different aspects of being a police officer. After each item, please circle how much stress it has caused you over the past 6 months, using a 7-point scale (see below) that ranges from "No Stress At All" to "A Lot Of Stress":

No Stress At All			Moderate Stress			A Lot Of Stress
1	2	3	4	5	6	7

1. Shift work	1	2	3	4	5	6	7
2. Working alone at night	1	2	3	4	5	6	7
3. Over-time demands	1	2	3	4	5	6	7
4. Risk of being injured on the job	1	2	3	4	5	6	7
5. Work related activities on days off (e.g. court, community events)	1	2	3	4	5	6	7
6. Traumatic events (e.g. MVA, domestics, death, injury)	1	2	3	4	5	6	7
7. Managing your social life outside of work	1	2	3	4	5	6	7
8. Not enough time available to spend with friends and family	1	2	3	4	5	6	7
9. Paperwork	1	2	3	4	5	6	7
10. Eating healthy at work	1	2	3	4	5	6	7
11. Finding time to stay in good physical condition	1	2	3	4	5	6	7
12. Fatigue (e.g. shift work, over-time)	1	2	3	4	5	6	7
13. Occupation-related health issues (e.g. back pain)	1	2	3	4	5	6	7
14. Lack of understanding from family and friends about your work	1	2	3	4	5	6	7
15. Making friends outside the job	1	2	3	4	5	6	7
16. Upholding a "higher image" in public	1	2	3	4	5	6	7
17. Negative comments from the public	1	2	3	4	5	6	7
18. Limitations to your social life (e.g. who your friends are, where you socialize)	1	2	3	4	5	6	7
19. Feeling like you are always on the job	1	2	3	4	5	6	7
20. Friends / family feel the effects of the stigma associated with your job	1	2	3	4	5	6	7

Appendix C

Police Stress Questionnaire – Organizational

Organizational Police Stress Questionnaire

Below is a list of items that describe different aspects of being a police officer. After each item, please circle how much stress it has caused you over the past 6 months, using a 7-point scale (see below) that ranges from "No Stress At All" to "A Lot Of Stress":

No Stress At All			Moderate Stress			A Lot Of Stress
1	2	3	4	5	6	7

1. Dealing with co-workers	1	2	3	4	5	6	7
2. The feeling that different rules apply to different people (e.g. favouritism)	1	2	3	4	5	6	7
3. Feeling like you always have to prove yourself to the organization	1	2	3	4	5	6	7
4. Excessive administrative duties	1	2	3	4	5	6	7
5. Constant changes in policy / legislation	1	2	3	4	5	6	7
6. Staff shortages	1	2	3	4	5	6	7
7. Bureaucratic red tape	1	2	3	4	5	6	7
8. Too much computer work	1	2	3	4	5	6	7
9. Lack of training on new equipment	1	2	3	4	5	6	7
10. Perceived pressure to volunteer free time	1	2	3	4	5	6	7
11. Dealing with supervisors	1	2	3	4	5	6	7
12. Inconsistent leadership style	1	2	3	4	5	6	7
13. Lack of resources	1	2	3	4	5	6	7
14. Unequal sharing of work responsibilities	1	2	3	4	5	6	7
15. If you are sick or injured your co-workers seem to look down on you	1	2	3	4	5	6	7
16. Leaders over-emphasise the negatives (e.g. supervisor evaluations, public complaints)	1	2	3	4	5	6	7
17. Internal investigations	1	2	3	4	5	6	7
18. Dealing the court system	1	2	3	4	5	6	7
19. The need to be accountable for doing your job	1	2	3	4	5	6	7
20. Inadequate equipment	1	2	3	4	5	6	7

The Organizational Police Stress Questionnaire is provided free for non-commercial, educational, and research purpos

Appendix D

Informed Consent

CONSENT FORM
Causes of Police Operational and Organizational Stress

You are invited to participate in a research study of factors relating to an increase in police organizational and operational stress. You were selected as a possible participant due to your dedication to your community as a full-time police officer. Please read this form and ask any questions you may have before acting on this invitation to be in the study.

This study is being conducted by Trevor Wilkins, a doctoral candidate at the University of the Cumberlands, School of Counseling. Mr. Wilkins spent 15 years in uniform law enforcement before becoming directly involved in the academic and psychological studies of police stress.

Background Information:
The purpose of this study is to attempt to correlate individual factors of the law enforcement profession with an increase or decrease in types of stress within the career.

Procedures:
If you agree to be in this study, you will be asked to complete two short inventories designed to measure law enforcement stress and one short inventory about demographic factors within your career.

Voluntary Nature of the Study:
Your participation in this study is strictly voluntary. Your decision whether or not to participate will not affect your current or future relations with the Kentucky Department of Criminal Justice Training and has no bearing upon the class which you are currently attending. If you initially decide to participate, you are still free to withdraw at any time later without affecting those relationships.

Risks and Benefits of Being in the Study:
There are no risks associated with participating in this study, and there are no short or long-term benefits to participating in this study. In the event you experience stress or anxiety during your participation in the study you may terminate your participation at any time. You may refuse to answer any questions you consider invasive or stressful.

Compensation:
There will be no compensation provided for your participation in this study.

Confidentiality:
The records of this study will be kept private. In any report of this study that might be published, the researcher will not include any information that will make it possible to identify you. Research records will be kept in a locked file, and only the researcher will have access to the records.

Contacts and Questions:
The researcher conducting this study is Trevor Wilkins. The researcher's faculty advisor is Dr. Gary Patton who can be reached at gary.patton@ucumberlans.edu. You may ask any questions you have now. If you have questions later, you may contact the researcher via email at twilkins2868@ucumberlands.edu.
You will receive a copy of this form from the researcher.

Statement of Consent:

☐ I have read the above information. I have asked questions and received answers. I consent to participate in the study.

Printed Name of Participant _____

Participant Signature _____

Signature of Investigator _____

Appendix E

IRB Approval

IRB Approval Letter

July 17, 2018

Trevor Wilkins

TWilkins2868@ucumberlands.edu

RE: Operational and Organizational Stress of Law Officers

During the week of July 16, 2018, your IRB was approved with full-board review.

Approval Type & Approval Number	Full Board	0198
Principal investigation	Trevor Wilkins	
Expiration Date Study	July 17, 2019	
Faculty Advisor	Dr. Gary Patton	
Consent Form	Included	
Advertising & Recruitment Materials	Included	
Other Study Documents	NA	
Total Number of Subjects Approved	100	
Changes Needed for Approval	None	

Principal investigators are responsible for ensuring that studies are conducted according to the protocol. As a principal investigator, you have multiple responsibilities to the IRB, the research subjects and the faculty advisor. If you have questions about them, please feel free to call or email Christopher.leskiw@ucumberlands.edu

Christopher Leskiw, Ph.D.
Professor of Political Science
Associate Dean of Academic Affairs
University of the Cumberlands
7557 College Station Drive
Williamsburg, KY 40769

There are five conditions attached to all approval letters:

1. No subjects may be involved in any study procedure prior to the IRB approval date or after the expiration date. (PI's are responsible for initiating Continuing Review proceedings. See the IRB website on the MyUC site or call us for more details.)
2. All unanticipated or serious adverse events must be reported to the IRB within 5 days.
3. All protocol modifications must be IRB approved prior to implementation unless they are intended to reduce risk. This includes any change of investigator or site address.
4. All protocol deviations must be reported to the IRB within 5 days.
5. All recruitment material and methods must be approved by the IRB prior to being used.

Appendix F

Kentucky Department of Criminal Justice Training Approval Letter

Matthew G. Bevin / Governor
John C. Tilley / Secretary
Mark Filburn / Commissioner

Funderburk Building
521 Lancaster Avenue • Richmond, KY 40475-3102
(859) 622-1328 • https://docjt.ky.gov
An Equal Opportunity Employer M/F/D

Letter of Support for Off-Campus Research

January 12, 2018

Institutional Review Board:

As an authorized representative of the Department of Criminal Justice Training, I grant approval for Trevor Wilkins to conduct research involving human subjects at our organization. I understand that the purpose of this research is to examine the impact of operations and organizational stressors on law enforcement officers. Additionally, the research will focus on officers working different assignments and consider their years of service.

I grant permission for this project to involve officers who are attending training here at the Department of Criminal Justice Training or any of our off-site training locations. He will conduct his study without interfering with the normal training activities of the officers. He will assure the officers that this study is not part of their training and that it is a voluntary study with no penalty for non-participation. A consent form should be utilized to ensure the students voluntarism for the project.

Sincerely,

Dr. Frank Kubala
Staff Assistant, Office of the Commissioner
Department of Criminal Justice Training
521 Lancaster Avenue
Richmond, KY 40475
(859) 622-5923