A STUDY OF EMOTIONAL INTELLIGENCE AND POLICE STRESS AS IT

RELATES TO POLICE LEADERSHIP

by

Eugenio Gonzalez

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The Dissertation Committee for Eugenio Gonzalez certifies approval of the following dissertation:

A STUDY OF EMOTIONAL INTELLIGENCE AND POLICE STRESS AS IT

RELATES TO POLICE LEADERSHIP

Committee: Yohannes Mariam, PhD, Chair

Sushil Jindal, PhD, Committee Member

Yonas Keleta, PhD, Committee Member

Yohannes K.G. Mariam

Yohannes Mariam

Sushil Jindal

Sushil Jindal

Yonas Keleta

Yonas Keleta

William C. Beck II

William C. Beck II, PhD
Academic Dean
School of Advanced Studies
University of Phoenix

Date Approved: November 23, 2016

ABSTRACT

Stress and emotional intelligence (EQ) in the context of law enforcement were the two constructs under investigation. Stress is defined as the demands and pressures that are experience by police leadership as a result of their leadership responsibilities. EQ is defined as a different type of intelligence that involves emotions for the purpose of making constructive decisions. The purpose of this quantitative correlational study was to ascertain whether a relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities. It was expected that those with elevated levels of EQ are better able to cope stress. EQ and stress are the two variables that were measured. The Bar-On Emotional Quotient (EQ-i) 2.0 (Bar-On, 1997; Stein & Book, 2011) was used to measure EQ and the Police Stress Survey (PSS) (Spielberger, Westberry, Grier, & Greenfield, 1981) was used to measure stress. The population included a single large law enforcement agency located in central Texas that serves a population greater than 100,000. The participants were the agency's leadership that includes Captains, Lieutenants, and Sergeants. A total of 41 officers participated in the study. The results showed that EQ and stress are inversely proportional, indicating that those with elevated levels of EQ are better able to deal with stress. The finding may help law enforcement to design training programs for increasing EQ that may help with lowering stress in law enforcement.

DEDICATION

This dissertation is dedicated to my family and friends, especially my parents, Austreberto and Monica Gonzalez, who instilled in me the importance and value of education. I will forever be grateful to all for their all-around support and encouragement throughout my many years of school. To my loving wife Mariana Sanchez: thank you for allowing me the time to focus by enduring long hours of me sitting in front of my computer and staying home on the weekends and holidays. Without your support and understanding, I could not have completed this doctoral journey. Finally, I dedicate this dissertation to all of my nieces and nephews who I hope to encourage to follow their dreams and never be afraid to challenge themselves because anything is possible when you put your mind to it.

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Chapter 1

Introduction

Research shows that the profession of law enforcement is one of society's most stressful occupations (Waters & Ussery, 2007; Levenson, 2007; Kaur, Chodagiri, & Reddi, 2013; Webb, 2010). The reason has to do with the multitude of challenges that law enforcement faces both from internal and external sources. The consequences of stress include both physical and emotional symptoms which may result in a multitude of health related issues, such as depression, heart disease, sleep problems, alcoholism, and gastroenterological problems just to mention a few (Rosenbluh, 2005; Webb, 2010; Larned, 2010; Woody; 2006). Hess and Orthmann (2012) identified several sources of stress associated with the profession of law enforcement. Hess and Orthmann classified these sources into four categories. These include (a) life demands stressors, (b) innate police job stressors, (c) administrative and organizational stressors, and (d) stressors due to the law enforcement environment that originate from entities such as the public, the criminal justice system, the media, and family.

Mayer and Salovey (1997) put forth one of the first definitions of emotional intelligence (EQ) in that EQ is the skill to use emotions to make constructive decisions. EQ might help law enforcement personnel in dealing with the stress they experience. EQ is an organizational construct that has been linked to reducing stress, improving performance, and reducing employee turnover (Yu-Chi, 2011). Several studies show that an inverse relationship exists between EQ and stress, suggesting that individuals with high levels of EQ suffer less stress or are better able at maintaining stress at manageable levels (Satija & Khan, 2013; Singh & Sharma, 2012; Nikolaou & Tsaousis, 2002).

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The focus of this quantitative correlational research study was to determine if a relationship exists between stress and EQ among police leadership. Specifically, the study conducted examined whether or not a relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities. For the present study, police leadership included Captains, Lieutenants and Sergeants. Research suggests that individuals in leadership positions tend to have higher levels of EQ (Morehouse, 2007; Goleman, 1995). The present study focused on law enforcement leadership to investigate if police leadership personnel who are assumed to have higher levels of EQ are better suited at handling stress. The results of the present doctoral study may add to the understanding of EQ's role for leadership and handling stress.

Chapter 1 presents the background to the problem, followed by the problem statement, and then the purpose of the study. Following these sections, the significance of the problem and nature of the study will be presented. Subsequently, the research methodology, the theoretical framework of stress and EQ theories, assumptions, limitations, and delimitations associated with the study will be discussed.

Background of the Problem

Selye (1956) is credited with formulating the theoretical concept of stress. According to Selye, stress is any event whether physical, mental, or emotional that places a demand or causes a tension on the body. Lazarus and Folkman (1984) characterized stress as a type of association between an individual and his or her environment, whereby the individual gauges his or her strengths and weaknesses and decides the best approach in coping or responding to a demanding situation. That is, an individual perceives a task and weights it against his or her available resources in dealing with the task. Stress is a

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complex construct and up to this point researchers have not put forth a definition in which they all agree; as a result stress has a multitude of definitions (Satija & Khan, 2013). One aspect of stress researchers agree on is that stress impairs a person's ability to function normally (Lazarus & Folkman, 1984; Satija & Khan, 2013).

In law enforcement, stress is a necessary construct that is needed for survival. Physiologically, stress triggers defense mechanisms in the body that assists police officers when confronting danger (Larned, 2010). However, too much stress can take a physical and mental toll on the body, which may lead to conditions such as psychological problems, substance abuse, physical health problems, depression, and even suicide (Larned, 2010). Police stress has been defined as the daily frustrations that police officers encounter due to the demands of police work (Woody, 2006). Law enforcement faces a multitude of stressors both on the job and outside the job (Hess & Orthmann, 2012).

Police stress can be attributed to many factors such as organizational stress and operational stress (Louw & Viviers, 2010). Abdollahi (2002) put forward three categories or sources of police stress. These categories are (a) intra-personal, (b) occupational, and (c) organizational. Intra-personal stress refers to stress as due to personality factors. Personality factors include constructs such as self-confidence and self-esteem. Research shows that individuals who lack self-confidence and self-esteem experience more stress (Abdollahi, 2002). Studies show that the reverse is also true, that is, individuals who are high on self-confidence and high on self-esteem are more able in dealing with stress or experience less stress (Abdollahi, 2002; Babatunde, 2013). Occupational stress refers to job-related stress such as constantly experiencing horrifying

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scenes of death, public scrutiny as a result of the media, and officer involved shootings (Abdollahi, 2002). Organizational stress refers to stress that is a result of such factors as inadequate supervision, lack of recognition for a job well done, and insufficient pay (Abdollahi, 2002). Woody (2006) identified four other sources of police stress: discretionary decisions made in the field, the dangers of dealing with career criminals, public distrust, and minimal support by the community and organization.

EQ can be viewed as another dimension of intelligence in addition to intelligence quotient (IQ). EQ was first presented in this fashion in the 1990's by Mayer and Salovey. Mayer and Salovey (1997) characterized EQ as the "…ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth…" (p. 31). Essentially, EQ can be defined as using emotions to make constructive decisions (Mayer & Salovey, 1997). Goleman (1995) further developed the EQ construct with five concepts that are personal and social in nature. These concepts are "…self-awareness, self-regulation, motivation, empathy, and social skills" (Goleman, 2004, p. 82). Bar-On (1997) described EQ as an assortment of abilities, non-cognitive in nature, crucial to the success of an individual when dealing with any type of outside demands and pressures. Mayer and Salovey (1997), Bar-On (1997), and Goleman (1995) suggested that EQ is a skill that can be improved by being more aware of one's own emotions especially during stressful situations.

EQ and stress have been a topic of discussion for several decades. Several studies show that a negative correlation exists between EQ and stress (Oginska-Bulik, 2005; Nikolaou & Tsaousis, 2002; Ramesar, Koortzen, & Oosthuizen, 2009; Satija & Khan,

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2013; Singh & Sharma, 2012). That is, individuals with higher EQ experience less stress as compared to those individuals with low EQ. Stated differently, individuals with higher EQ are better at handling stressful situations. EQ research suggests that the EQ construct is crucial to leadership success (Goleman, 1995; Walter, Cole, & Humphrey, 2011). Stated differently, research suggests that EQ promotes leadership effectiveness or that those in leadership positions have higher EQ levels (Morehouse, 2007; Goleman, 1995). The purpose of the present doctoral research was to investigate if a correlation exists between the EQ of police leadership and the stress they experience as a result of their leadership responsivities. For this study, police leadership included Captains, Lieutenants, and Sergeants. Morehouse (2007) and Goleman (1995) posited that certain organizational cultures are inadvertently designed to enhance and promote personnel based in part on employee EQ. In addition, propositions were made that people with a higher EQ may be inherently more drawn to leadership positions and that certain occupations or professions may knowingly or unknowingly hire and promote personnel with EQ in mind (Morehouse, 2007; Goleman, 1995). The assumption here is that police leadership has higher levels of EQ, can better cope with stress, and should lead by example. Today's police leadership is expected to be leaders, managers, trainers, and friends to their subordinate police officers. As a result, police leadership has the ability to impact subordinate police officers in how the officers handle stressful circumstances. In this study, the investigation examined if a correlation exists between the EQ of police leadership and the stress police leadership experience because of their leadership responsibilities. The intent of the study was to show whether or not the EQ of those in leadership positions results in them better dealing with the stress they experience because

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of their leadership responsibilities. The results showed that the present study has the potential to augment the existing knowledge with regards to the type of role that EQ plays in the domain of leadership.

Problem Statement

In law enforcement stress has been shown to have a multitude of negative effects (Hess & Orthmann, 2012; Webb, 2010; Larned, 2010). EQ is a construct that has been shown to aid in coping with stress and contributing to effective leadership (George, 2000; Webb, 2010). The intent of the present research was to show whether EQ plays a role in the realm of police leadership taking into account stress. Police leadership experience stress from various sources (Woody, 2006). As a result, police leadership can experience numerous problems such as higher incidence of sickness, absenteeism, burnout, and alcoholism (Waters & Ussery, 2007). The specific problem in this study is the adverse results of stress that police leadership experience because of their leadership responsibilities and EQ might be a construct that can aid in dealing with these adverse conditions. A search revealed no studies that examined if a relationship exists between the EQ of police leadership and the stress they experience because of their police leadership responsibilities. This study used quantitative research methods to explore whether or not police leadership experiences less stress due to their assumed higher levels of EQ, thus providing the opportunity to further the understanding on whether or not EQ is a valuable construct in the field of police leadership. The population of this study is law enforcement personnel, specifically police leadership, to include Captains, Lieutenants, and Sergeants, from a Texas law enforcement organization. This geographic location was chosen because of the accessibility to participants and for cost effective data

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collection. The sample population included participants who represent differences in gender, age, years of employment, and educational achievement.

Purpose of Study

The purpose of the proposed study was to ascertain if a relationship exists between the EQ of police leadership and the stress they experience because of their police leadership responsibilities. Research suggests that effective leaders possess higher levels of EQ (Malos, 2011; Morehouse, 2007; Goleman, 1995). This means that effective leaders are capable of perceiving and controlling their own emotions and that of others such that it allows them to have more positive social interactions, more self-control, better decision making skills, and possess higher interpersonal skills. With regards to police leadership, interpersonal skills can be used to guide and coach subordinates under their command; perhaps then lessening the effects of stress that subordinates encounter. For example, an officer, who is known for his quality of work and promptness, suddenly starts coming to work late and turns in low-quality reports. A supervisor with high EQ can use his skills to help the officer get back on track without minimal incident. A supervisor with low EQ, however, may not notice or discover the reasons why the officer does not perform to the standards and may seek to discipline the officer.

Significance of the Study

There are many studies that explored EQ and stress in law enforcement (Vuzzo, 2009; Burnette, 2006; Millet, 2007). However, there are no studies that examined the relationship of the EQ of police leadership and the stress they experience because of their leadership responsibilities. The present study seeks to fill this missing knowledge gap. The study will focus on two constructs, that is, EQ and stress in conjunction with police

leadership. The significance of the study is to show that EQ may be a beneficial

construct in law enforcement, specifically contributing to scholarship, public policy, and

training.

Significance to Scholarship. The significance of the study is to show that EQ

may be a beneficial construct in law enforcement, specifically law enforcement

leadership. Kiel, Bezboruah, and Oyun (2009) stated that both effective leadership and

professional success can mainly be attributed to EQ. This is in line with Goldman (1995)

in that he stated that EQ becomes more important the higher an individual moves up the

ranks in an organization. The reason has to do with the state of current organizations in

that they can be described as being made up of dynamic environments with complex

inter-organizational networks where the trend is to do more with less (Hess & Orthmann,

2012). Law enforcement organizations fit this description, especially the trend of doing

more with less (Hawkins & Dulewicz, 2007; Hess & Orthmann, 2012). Such

organizations call for emotionally intelligent leaders who are capable of fostering sturdy

work environments that are not only productive, but are capable of functioning under the

high stress produced by such organizations (Kiel et al., 2009; Goldman, 1995). For

example, Hawkins and Dulewicz (2007) found that in policing, the EQ of a leader is

positively related to his or her performance. This study will augment the knowledge of

the current leadership scholarship in law enforcement, in terms of EQ and the stress law

enforcement leadership encounter because of their leadership responsibilities.

Significance to Public Policy and Training. The present study augments the

understanding of EQ and stress as it applies to law enforcement and may contribute to

making EQ training part of law enforcement training. In a study by Sabzevar, Sarpoosh,

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Esmaeili, and Khojeh (2016), 135 nurses underwent EQ training in an effort to cope with anxiety-related problems. The results for this study showed that EQ training improved the nurses' EQ scores and significantly decreased their anxiety scores. In another study by Vishavdeep, Sharma, Das, PrahbhjotMalhi, and Ghai (2016), 224 undergraduate nursing students underwent EQ training and at the end of the EQ training all students showed a significant rise in their EQ scores.

The findings of the present study may also help law enforcement to develop training or educational programs that will help in dealing with stress more effectively. Vigoda-Gadot and Meisler (2010) showed that EQ is directly related to job satisfaction in public agencies, which translates into higher quality public services. That is, EQ contributes to improvements in services to citizens and efficiency in the public sector (Vigoda-Gadot & Meisler, 2010). This doctoral study is founded on the contention that the EQ of police leadership can help their subordinates in dealing with the stressors they encounter both on the job and outside the job, which could reflect in better police service. The outcome of the present study may be useful in designing training programs for increasing self-awareness on the stressors that law enforcement encounters. The findings may also serve as starting points for future research that seeks to answer additional questions regarding police stress and EQ.

Nature of Study

The present study used a quantitative approach with a correlational research design. A correlational design is suitable for determining and examining the relationship between variables (Leedy & Ormrod, 2010). In this study, the intent was to show that a relationship exists between two variables, that is, EQ and stress. An examination of the

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two variables in their current state was conducted and the research design did not involve changing or modifying the state of these variables. A cause and effect relationship was not the focus of the present study, but rather to investigate whether a relationship exists and determine the strength and direction of this relationship.

A qualitative method is not appropriate because typically qualitative research questions change or evolve as more is known of the phenomena under investigation (Christensen, Johnson, &Turner, 2011). In addition, qualitative research explores broad questions without determining what might be discovered (Neuman, 2006). In quantitative research, the focus is usually on hypothesis testing and typically the research questions are not allowed to evolve or change (Christensen et al., 2011). This study tested several hypotheses, listed in the next section. Qualitative research methods allow data collection using interviews via open-ended questions for the purpose of obtaining an in-depth understating of the phenomena under investigation and to gain an understanding of the participants' experiences (Christensen et al., 2011; Neuman, 2006). In most instances, qualitative research results in creating new concepts or theories to explain the phenomena under investigation. In the present doctoral study, EQ and stress were the two specific variables under investigation and each has been adequately defined and theorized.

The present study included statistical analysis and involved exploring a possible relationship between EQ and stress. In the present study, EQ and stress were the variables that were investigated. The data for these variables were collected using two validated survey instruments, that is, Bar-On's (1997) EQ-i 2.0 instrument for measuring social intelligence and EQ, and Spielberger's Police Stress Survey (PSS), which

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measures on the job stress among law enforcement officers (Spielberger et al., 1981). The instruments are formulated with Likert-type scales to measure EQ and stress (Bar-On, 1997; Spielberger et al., 1981).

In studies where the level of association between two variables is desired, a correlational study is useful to investigate their relationship (Christensen et al., 2011). According to Leedy and Ormrod (2010), one of the functions of a correlational study is to determine the depth of association between variables. In the present study, two variables were tested to determine their level of association. The two variables in question are the EQ level of police leadership and the stress they experience because of their leadership responsibilities. For this study, police leadership includes Captains, Lieutenants, and Sergeants. The researcher was interested in determining whether and in what ways these two variables might be related. The goal of the study influenced the choice of correlational analysis as the appropriate statistical method. The Statistical Package of Social Sciences (SPSS v 24) software program was used to analyze the data collected from the two surveys used.

Research Questions and Hypotheses

The present research explored answers for one leading question and two sub-questions.

Lead Research Question. The lead research question of the present study is:

Q1.   What is the relationship between the EQ of police leadership and the stress they experience because of their leadership responsibilities?

Sub-questions. The lead question is supported by the following two sub-questions:

Q2.   What is the relationship between the total EQ score as measured by the

EQ-i 2.0 and the stress levels of police leadership?

Q3.   What are the relationships between the stress level of police leadership

and each of the components of the EQ-i 2.0 model, (i) self-perception, (ii)

self-expression, (iii) interpersonal, (iv) decision making, and (v) stress

management?

Correlation analysis was used to find answers to all questions.

Research Hypotheses. The present doctoral research employs quantitative

correlational research design. Responses to the study questions were obtained by testing

the following hypotheses:

Hypothesis 1.

H_{10}:   No relationship exists between the EQ of police leadership and the stress

they experience because of their leadership responsibilities.

H_{1A}:   A statistically significant relationship exists between the EQ of police

leadership and the stress they experience because of their leadership

responsibilities.

Hypothesis 2.

H_{20}:   No relationship exists between the total EQ score as measured by the EQ-i

2.0 and the stress levels of police leadership.

H_{2A}:   A statistically significant relationship exists between the total EQ score as

measured by the EQ-i 2.0 and the stress levels of police leadership.

Unlike the first two questions, the third question examines relationships between the five components of EQ-i 2.0 and the stress level of police leadership. Therefore, it contains five hypotheses as presented below.

Hypothesis 3.

H_{30}:   No relationship exists between the EQ-i 2.0 model self-perception component score and the stress level of police leadership.

H_{3A}:   A statistically significant relationship exists between the EQ-i 2.0 model self-perception component score and the stress level of police leadership.

Hypothesis 4.

H_{40}:   No relationship exists between the EQ-i 2.0 model self-expression component score and the stress level of police leadership.

H_{4A}:   A statistically significant relationship exists between the EQ-i 2.0 model self-expression component score and the stress level of police leadership.

Hypothesis 5.

H_{50}:   No relationship exists between the EQ-i 2.0 model interpersonal component score and the stress level of police leadership.

H_{5A}:   A statistically significant relationship exists between the EQ-i 2.0 model interpersonal component score and the stress level of police leadership.

Hypothesis 6.

H_{60}:   No relationship exists between the EQ-i 2.0 model decision making component score and the stress level of police leadership.

H_{6A}:   A statistically significant relationship exists between the EQ-i 2.0 model decision making component score and the stress level of police leadership.

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Hypothesis 7.

H_{70}:   No relationship exists between the EQ-i 2.0 model stress management

component score and the stress level of police leadership.

H_{7A}:   A statistically significant relationship exists between the EQ-i 2.0 model

stress management component score and the stress level of police

leadership.

Conceptual or Theoretical Framework

The present study explored if police leadership who report higher EQ experience

less stress. This study investigated the extent of association between the reported EQ and

the reported stress levels in a law enforcement setting. In formulating a theoretical

perspective various theories and models are applicable with regards to the constructs of

stress and EQ.

Stress. The stress construct has been examined by various models. One model is

Hans Selye's (1950) General Adaption Syndrome (GAS) stress model. The basis of the

GAS model deals with the human body in that it is preprogramed to maintain a biological

balance also known as homeostasis (Gachter, Savage, & Torgler, 2011; Hess &

Orthmann, 2012). Selye's (1950) stated that his GAS stress model holds that an event

that threatens an organism's well-being leads to a three-stage biological bodily response

in an attempt to return the organism to homeostasis (Gachter et al., 2011). Selye (1950)

labeled this 3-stage response the alarm stage, resistance stage, and exhaustion stage. In

the alarm stage, the body responds by releasing hormones such as cortisol and adrenalin

in the bloodstream to prepare the body for the stressor (Rosenbluh, 2005). In this stage,

the body's resources are fully mobilized to resist the stressor. Stage two, the resistance

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stage, starts if the stressor continues and death has not yet occurred. The resistant stage is recognized as the "fight or flight response" or is how the body responds to the stressor (Rosenbluh, 2005). Also, in this stage, the body attempts to adopt to the stressor in order to re-establish and maintain homeostasis (Gachter, et al., 2011). In this stage, the high physiological arousal initiated in the alarm stage dwindles but remains higher than normal (Rosenbluh, 2005). The body refills the hormones released and continues to resist the stressor. If the stressor is not controlled or eliminated, the body ultimately enters the third stage, the exhaustion stage. In the exhaustion stage, the body's energy is totally exhausted and the body is left defenseless. That is, the body's resistance to environmental stressors break down and the body becomes susceptible to disease and dysfunction of bodily organs and death may occur (Gachter et al., 2011).

Another stress model is the person-environment (P-E) fit theory approach. The P-E fit theory approach to stress is one of the many theories of P-E fit. All P-E fit theories are focused on explaining the fit between individuals and their work environments (Ehrhart & Makransky, 2007). The P-E fit theory is grounded in Kurt Lewin's systematic formula that states that a person's behavior is a function of the environment he or she lives in (Caplan & Van Harrison, 1993). The idea behind the P-E fit theory is that everyone has a work environment with which he or she is most compatible. In other words, a person's individual characteristics make him or her a fit for a particular work environment. The P-E fit theory allows predictions of such constructs as job performance, career path longevity, and job satisfaction (Ehrhart, & Makransky, 2007). With regard to the P-E fit theory approach to stress, stress is the outcome of a mismatch between a person's abilities and that person's environment (Caplan, 1987). This lack of

fit is theorized to result in damaging physiological and psychological effects (Caplan, 1987; Caplan & Van Harrison, 1993). The present doctoral research used the Police Stress Survey (PSS) put forth by Spielberger et al. (1981). The Police Stress Survey consists of 60-item questions that attempt to identify sources of stress in law enforcement and is based on the P-E fit framework.

Both stress models make strong arguments on the dangers of stress. For this reason, it is crucial that different techniques for handling stress are introduced into law enforcement. This study seeks to determine the relationship, if any, of EQ with stress levels. To follow is a more thorough description of the EQ construct.

Emotional Intelligence. The EQ construct is believed to have origins directly related to the study of emotional expression, which was first formulated by Charles Darwin for explaining human survival and adaptation (Cherniss, 2004). In this study, the focus was to determine if a relationship between EQ and stress exists. Research suggests that a relationship indeed exists and EQ and stress are inversely proportional, that is, individuals with higher EQ, experience less stress and vice versa (Morehouse, 2007; Millet, 2007; Oginska-Bulik, 2005). Mayer and Salovey (1997) were the first to formally defined EQ. Goleman and Bar-On are among two of the theorists who put forth a definition of EQ. Mayer and Salovey (1997) made the argument that EQ is a new and different form of intelligence and that it meets the same standards as cognitive intelligence or IQ. Mayer and Salovey (1997) defined EQ as the "…ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (p.

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35). From this definition, Mayer and Salovey (1997) put forth the Four Branch Model of EQ. Each branch represents a different concept that defines EQ. The four branches of EQ are "perceiving emotion accurately, using emotion to facilitate cognitive activities, understanding emotion, and managing emotion" (Caruso, Mayer, Salovey, & Sitarenios, 2003, p. 180). The first two branches, perception and facilitation relate to feelings. The third and fourth branches, emotional understanding and emotional management pertain to calculating and planning with information about emotions.

Daniel Goleman (1995) put forth a similar definition of EQ. According to Goleman (2004), five concepts make up the EQ construct, that is, "self-awareness, self-regulation, motivation, empathy, and social skill" (p. 82). Goleman's (1995) model views EQ as a type of competency or competencies that involves emotions and leads to improving managerial performance and leadership. Bar-On (1997) approached EQ from a similar perspective and attributed EQ to an assortment of social and emotional abilities that can guide how an individual exists within his or her environment. Based on this definition, Bar-On (1997) proposed an EQ model (Bar-On EQ-i) comprised of five scales with 15 subscales. The five scales include "...intrapersonal capacity, interpersonal skills, adaptability, stress management, and motivational and general mood factors" (Bar-On, Brown, Kirkcaldy, & Thome, 2000, p. 1108). From these five scales, 15 subscales of closely related competencies, skills, and behaviors comprise or define EQ. These 15 subscales are "self-regard, emotional self-awareness, assertiveness, independence, and self-actualization (intrapersonal EQ); empathy, social responsibility, and interpersonal relationship (interpersonal EQ); stress tolerance, and impulse control (stress-management); reality testing, flexibility, and problem solving (adaptability); and

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optimism and happiness (general mood)" (Bar-On, 2013 "Description of the Bar-On EQ-i," para. 4). The Bar-On EQ-i model was designed as a way to quantify social intelligence and EQ. This study will use the latest version of the Bar-On EQ-i instrument, the EQ-i 2.0, to measure the EQ of police leadership. The EQ-i 2.0 model is a realignment of the composite scales and subscales of the EQ-i. For the EQ-i 2.0, the five primary subscales include "self-perception, self-expression, interpersonal, decision making, and stress management" (Multi-Health Systems, 2011 "The EQ-i 2.0 Framework," para. 7). The definition or subscales for self-perception include "self-regard, self-actualization, and emotional self-awareness" (Multi-Health Systems, 2011 "The EQ-i 2.0 Framework," para. 7). The subscales for self-expression include "emotional expression, assertiveness, and independence" (Multi-Health Systems, 2011 "The EQ-i 2.0 Framework," para. 7). The subscales for interpersonal include "interpersonal relationships, empathy, and social responsibility" (Multi-Health Systems, 2011 "The EQ-i 2.0 Framework," para. 7). The subscales for decision making include "problem solving, reality testing, and impulse control" (Multi-Health Systems, 2011 "The EQ-i 2.0 Framework," para. 7). The subscales for stress management include "optimism, stress tolerance, and flexibility" (Multi-Health Systems, 2011 "The EQ-i 2.0 Framework," para. 7). For this study, these five scales were used to score the EQ of police leadership.

Representation of Theoretical Framework. Figure 1 provides a visual representation of both stress models and EQ models presented in a manner to facilitate the understanding of how the two different constructs interact. The figure shows that both the GAS stress model and the P-E fit model suggest that stress results in damaging

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results. The figure also shows all EQ models suggesting that individuals with higher EQ experience less stress. In this study, the researcher proposes to show that police leadership who are assumed to have higher reported EQ better handle the stress they encounter because of their leadership responsibilities.
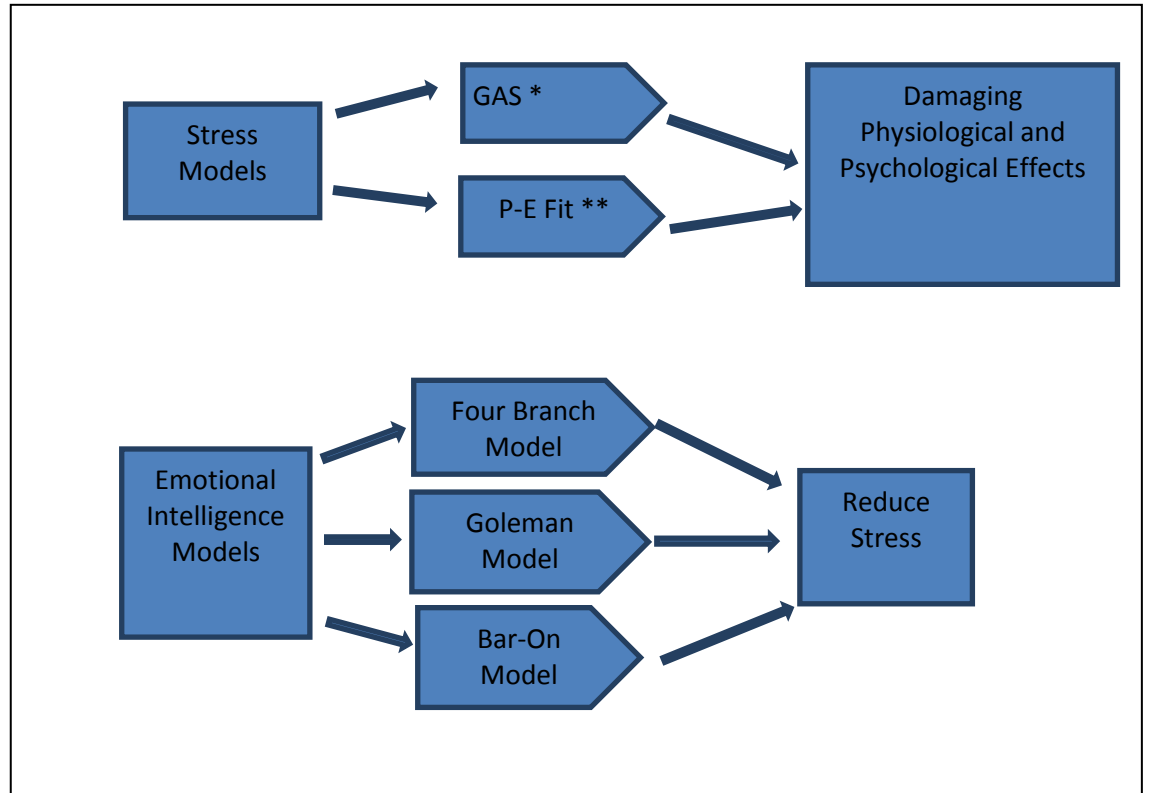
Figure 1: The theoretical framework depicts how stress is related to damaging physiological and psychological effects, and how emotional stress models are linked to reduction in stress.

* GAS (General Adaption Syndrome)

**P-E (Person-Environment Fit Theory of Stress)

Definitions of Terms

The present study is situated by the following definitions.

Bar-On Emotional Quotient Inventory 2.0 (EQ-i 2.0) instrument: The EQ-i instrument was originally created by Reuven Bar-On (1997) for the purpose of estimating EQ and updated by Stein and Book (2011).

Emotional Intelligence (EQ): Literature shows several definitions of EQ but the foundation of all definitions is similar in nature. For this study, EQ is defined as a set of emotional and social abilities that guide an individual's actions, establish and nurture social connections, manage demands, and use emotions to make constructive decisions (Bar-On, 1997; Stein & Book, 2011; Multi-Health Systems, 2011).

Occupational stress: Refers to the effect of job environment demands that can impact and impair an individual's well-being (Chen, 2009). For the purpose of this research, occupational stress is defined as the stress police leadership encounters because of their leadership responsibilities.

Police Leadership: It includes law enforcement officials of the rank of Captain, Lieutenant, and Sergeant who have direct reports under their command.

Stress: Refers to the body's response or how the body copes with environmental demands and pressures (Selye, 1956). In the present study, stress is defined as demands and pressures that are experience by law enforcement personnel that have a negative impact on their well-being.

Assumptions

Assumptions are an integral part of scientific research in that they address the issue of taking certain factual information for granted. Assumptions provide a base, facilitate the understanding of the study, and guide the development of the research (Leedy & Ormrod, 2010). A list of assumptions provides others with what is assumed within this study to be

true. One assumption was that police leadership will support the time constraints needed to complete this study. Another assumption was that both instruments, that is the EQ-i 2.0 and the PSS survey accurately measured what they were intended to measure. A third assumption is that all participants responded honestly to both surveys. Related to this assumption is the fourth assumption in that participants understood both surveys and responded to all questions as best they could. Research suggests that effective leaders possess higher levels of EQ (Malos, 2011; Morehouse, 2007; Goleman, 1995). As a result, the fifth assumption is that police leadership has higher levels of EQ. The last assumption is that the results of the study are unbiased and unaltered.

Scope of Study

This quantitative correlational study was used to examine the relationship between EQ and stress in a law enforcement setting. The focus was on examining the relationship between EQ and stress rather than a cause and effect study where the assumption that higher levels of EQ are capable of lessening the stress experience by police leadership while executing their law enforcement duties. The scope of the present study was limited two variables, that is, the EQ of police leadership and the stress they experience because of their leadership responsibilities. The study population was limited to rank officers of a single large law enforcement agency located in central Texas. All participants were of the rank of Captain, Lieutenant, and Sergeant. The sample frame consisted of 150; a total of 79 participants responded to the surveys, and 38 participants failed to complete one or both of the assessments, while 41 participants fully completed both assessments. As a result, only the data collected from these 41 participants were used in the study.

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Limitations

Limitations include any potential weakness within the study (Leedy & Ormrod, 2010). One limitation has to do with the validity of self-reporting instruments. The Bar-On EQ-i 2.0 and Police Stress Survey are self-reporting instruments. This means the study is relying on what respondents believe to be true or, perhaps, what they believe the researcher is seeking (Leedy & Ormrod, 2010). In other words, self-reporting instruments carry the potential for validity problems. A second limitation is that participants are of different age groups and different levels of law enforcement experience as supervisors. A third limitation is with regards to cost, time and data gathering efforts. A larger investment in cost, time and gathering efforts would have led to a larger sample. According to Vogt (2007), it is good practice to obtain the largest sample possible because the largest sample possible will be more representative of the population than a smaller sample. In addition, selecting a large sample means a smaller sampling error and greater statistical power (Vogt, 2007). A fourth limitation is with regards to the collected data in that it is relational and no cause and effect relationships were assumed. The final limitation has to do with a lack of generalizability in the results. This study was conducted using one police department; therefore, the ability to generalize the results may be limited to the degree that the sample represents the population.

Delimitations

What the researcher does not intend to do is stated in the statement of delimitations (Leedy & Ormrod, 2010). Delimitations are parameters or boundaries within the study specified by the researcher on what to include, what not to include, and the reasons for both (Leedy & Ormrod, 2010). The first delimitation has to do with self-

reporting instruments, that is, the EQ-i 2.0 survey and Police Stress Survey. Using these types of instruments brings forth the possibility that participants may not put forth honest answers to the survey questions, which can affect the integrity of the study and lead to inaccurate study results. Such results can be attributed to the participants' perceptions and opinions. The second delimitation had to do with the variables under investigation in that the study focused exclusively on the variables of EQ and stress. The third delimitation was with regard to the sample population in that the study was confined to only ranked police officers to include Captains, Lieutenants, and Sergeants. Lastly, the study was confined to one law enforcement agency located in the southern part of Texas.

Summary

The purpose of the present study was to determine the extent of association between the EQ of police leadership and the stress they experience because of their leadership responsibilities. Research shows that law enforcement is inherently a stressful occupation (Levenson, 2007; Murtagh, 2010). While there are studies focused on EQ and stress in law enforcement, there are no studies that specifically examined if a relationship exists and the type of relationship between the EQ of police leadership and the stress they experience because of their leadership responsibilities. This study seeks to fill this missing knowledge gap. This study seeks to determine if police leadership, due to their assumed higher levels of EQ, are better able to handle stress as they perform their law enforcement duties. The study employed quantitative correlational research design because the intent was to explore and determine if a relationship between two variables exists, that is, EQ and stress. Furthermore, the present research intended to quantify the impact of EQ on the stress experience by police leadership. Bar-On's EQ-i scale was

used to measure EQ and Spielberger's Police Stress Survey was used to measure stress.

The study is significant because the findings may help motivate law enforcement

leadership to make changes in their departments towards improving or increasing the EQ

of their leadership personnel.

Chapter 2

Review of the Literature

The present quantitative correlational research involved determining if a relationship exists between the EQ of police leadership and the stress they experience because of their police leadership responsibilities. Police leadership includes Captains, Lieutenants, and Sergeants. One of the goals of this research was to further the understanding of stress and EQ in law enforcement. There is ample evidence that suggests that individuals with elevated levels of EQ do a better job at dealing with stress (Bar-On, 1997; Goldman, 1995; Singh & Sharma, 2012; Satija & Khan, 2013; Nikolaou & Tsaousis, 2002; Oginska-Bulik, 2005). Stated differently, research shows that a negative correlation exists between EQ and stress (Singh & Sharma, 2012; Satija & Khan, 2013). That is, working professionals with higher EQ experience less stress as compared to working professionals with lower EQ. The specific questions guiding this research were: a) is there a correlation between the EQ of police leadership and the stress they experience because of their leadership responsibilities; b) what is the relationship of the total EQ as measured by the EQ-i 2.0 and the stress levels of police leadership; and c) what is the relationship between each of the components of the EQ-i 2.0 model that include: (i) self-perception, (ii) self-expression, (iii) interpersonal, (iv) decision making, and (v) stress management with the stress level of police leadership.

Chapter 1 includes the background of the problem concerning the need to manage stress in law enforcement. Chapter 2 presents an in-depth analysis of the theoretical, historical, germinal, and current research findings that served as the basis for the present research. This literature review includes (a) a historical overview of stress, (b) an

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exploration of police stress, (c) a historical overview of EQ, (d) an overview of leadership as it pertains to EQ and stress, (e) an exploration of EQ measurements, and (f) a review of research designs and methods of analyses that are commonly used for this kind of study. The objective of this literature review was to situate the present study within the relevant body of research, delineate the purpose of the present study, and analyze past studies. The literature review offers the foundation for the development and validation of the theoretical framework of the present doctoral research. The literature review begins with an explanation of the sources reviewed.

Documentation

The review of literature includes articles, scholarly books, peer-reviewed articles, doctoral dissertations, and referenced journal articles. These sources were located using the following words or a combination of words in a title search: stress, police stress, occupational stress, EQ, police, and law enforcement. The research literature was accessible through the University of Phoenix Online Library, University of Houston MD Anderson Library Central Campus, Google, and various websites. Historical germinal works were located and reviewed based on the theoretical constructs of the study, that is, stress and EQ to provide background data (see Table 1).

Table 1: Literature Review Summary of Sources

Reference Type	Total	> 5 Years	< 5 Years
Peer-reviewed journals	51	25	26
Books	18	11	7
Websites	12	11	1
Total	81	57	34

The literature is vast regarding the variables of stress and EQ with regards to law enforcement. However, only literature that was relevant to the research questions was utilized. Literature was considered relevant for many reasons but mainly if it highlighted the research variables in a way that supported the historical or philosophical foundations of the present variables. The literature reviewed approached in this manner provided the basis for an in-depth analysis of the problems associated with police stress and the role of EQ. The literature reviewed also yielded relevant literature on potential correlations between stress and EQ. Finally, the literature review highlighted the gap and lack of literature associated with the EQ of police leadership and the stress they experience because of their police leadership responsibilities.

Historical Overview of Stress

Stress is a concept that has been around since the 19th century and possibly earlier (Abbott, 1990). Most individuals have some sort of working knowledge of the concept of stress, but yet there is no consensus in the academic community with respect to its use (Johnson & Johnson, 2010). Researchers agree that individuals differ in how they experience or react to a certain event; while some may consider an event stressful other

may not (Johnson & Johnson, 2010; Abbott, 1990). However, what researchers do not agree on is the link between antecedent events and the generation of a stressful mental state (Johnson & Johnson, 2010; Abbott, 1990).

Researchers have also agreed that the presence of stress can be identified and as a result, stress research deals predominantly with the physiological and psychological effects or reactions on the human body. According to Babatunde (2013), a general definition of stress involves adverse physiological and psychological effects as a result of exceeding an individual's resources to cope with certain demands. Abbot (1990) defined stress as the general idea that living places difficult demands on individuals, who then respond or succumb under the strain of unmanaged stress to psychological or biological disease. Approaching stress from this perspective has resulted in numerous researchers defining stress in accordance to its effects or reactions.

Hans Selye popularized the stress concept in the 1950s from the perspective of stress as a response or reaction (Abbott, 1990). Selye's original definition of stress identified stress as a physiological reaction to certain threats in a person's environment (Gachter et al., 2011; Hess & Orthmann, 2012). Selye's (1949) definition of stress was the result of numerous experiments on laboratory animals, whereby these animals were exposed to stimuli that were both physically and emotionally harmful. Such stimuli included intense lighting, extreme temperature changes, and different types of loud sounds. Through these experiments, Selye also demonstrated that if the stress these animals incurred did not stop, these animals developed diseases similar to what humans develop, such as stomach ulcers, heart attacks, and stroke (Sapolsky, 1988). Selye's

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stress research contributed to stress being looked at as a negative construct (Johnson & Johnson, 2010).

Selye later determine that the effects of stress were simply caused by the result of the wear and tear of living (Abbot, 1990). Selye emphasized that stress did not always result in negative outcomes for the organism involved, and in fact he viewed stress as a necessary part of life (Salami, Ojokuku, & Ilesanmi, 2010). Selye's account of stress as a necessary part of life is in line with current research that shows stress can actually improve individual performance (Salami et al., 2010; Larned, 2010). Selye is also credited with the terms *distress* and *eustress*, where distress is defined as negative stress and eustress is positive stress (Hickman, Fricas, Strom, & Pope, 2011; Szabo, Tache, & Somogyi, 2012). According to Selye, eustress is the stress needed to achieve one's goals (Salami et al., 2010). Distress is the stress that can be harmful to an individual's overall health (Salami et al., 2010).

Selye's General Adaption Syndrone (GAS) stress model is one of the many models that attempts to define stress (Hickman et al., 2011). In accordance to the GAS stress model, the human body is preprogramed to maintain a physiological balance or equilibrium known as homeostasis (Gachter et al., 2011; Hess & Orthmann, 2012). Stress alters the homeostasis in the human body, and according to the GAS stress model, the body responds with a three stage response, where the purpose of the response is to return the body to its homeostasis state. The three stages include the alarm, the resistance, and the exhaustion stage (Selye, 1950).

Stress has also been defined as a stimulus (Babatunde, 2013). Stress from a stimulus perspective focuses on those features of the environment considered disturbing,

which can lead to harmful strain reactions to those individuals who are expose to such environmental factors (Babatunde, 2013). In viewing stress from a stimulus perspective, the focus is on how stress affects the person and not how the person responds. The consolidation of both definitions of stress, that is, as a response and as a stimulus, brings forth the notion that stress is a combination between the individual and environmental factors that result in physiological and psychological reactions that can lead to harmful mental or physical health conditions. According to Cooper and Cartwright (1997), viewing stress from a stimulus-response relationship points to a lack of fit between an individual's faculties and that individual's environment. Viewing stress from a stimulus-response relationship has led to numerous stress models. The person-environment (PE) fit theory of stress is one such theory.

The person-environment (PE) fit theory of stress is based on Kurt Lewin's formula, that states that a person's behavior is a function of his or her environment, $B = f(P, E)$. Kurt Lewin's formula has the assumption that humans are rational and social creatures and our actions or behaviors are the result of the person and the environment (Caplan & Van Harrision, 1993). In Kurt Lewin's formula the B stands for an individual's overt public behavior, P indicates the causal factors innate to an individual, and E designates the causal factors found in the world outside the individual. Stated differently, Kurt Lewin's formula states that the combination of personal and environmental factors causes individuals to behave in a certain way. The PE fit theory looks at stress as a product resulting from a lack of fit between an individual's attributes and that individual's environment, which has an effect on that individual's physical or psychological well-being (Edwards & Cooper, 1990). This study collected stress data

using Spielberger's Police Stress Survey (PSS), which was based on Kurt Lewin's PE fit framework.

Stressors, stress, and strain are closely related terms but different constructs and a definition of each is in order. Stressors are external events such as a heavy workload, unreasonable work timelines, or a lack of job security all of which lead to the conception of stress (Beheshtifar & Nazarian, 2013). Stress refers to how an individual response to stressors and the response can be negative or positive (Beheshtifar & Nazarian, 2013). Strain is the effects of stress long-term and can include harmful psychological effects such as depression, anxiety, and insomnia (Beheshtifar & Nazarian, 2013). In simple terms, stressors are the sources of stress and strain is the long-term effects of stress.

Job stress. Today's organizations demand more from their workforce than organizations did 30 years ago (Beheshtifar & Nazarian, 2013). Long work hours, multitasking responsibilities, changes in shifts, and changes in culture are among the adjustments and demands that today's organizations require of their workforce (Beheshtifar & Nazarain, 2013). Law enforcement organizations are no different. These adjustments and demands among other events lead to a greater presence and level of job stress (Beheshtifar & Nazarain, 2013).

Occupational stress, similar to the concept of stress, is a complex construct and as a result several definitions exists (Salami et al., 2010). Beheshtifar and Nazarian (2013) defined occupational stress as the assessment of an inconsistency between a work environment's demands and an individual's capacities to meet these demands. Distress or negative stress in terms of occupational stress, takes place when the demands or pressures of an individual's job responsibilities outweigh that individual's knowledge,

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skills, abilities, and attitudes (Ismail et al., 2009). That is, the employee's skill set is not at a sufficient level to handle the demands of his job responsibilities. Eustress or positive stress in terms of occupational stress is just the opposite. That is, the employee's skill set is capable of meeting the demands of his job responsibilities.

Occupational stress can be further divided into physiological stress and psychological stress (Ismail et al., 2009; Satija & Khan, 2013). Headaches, migraines, stomach pain, backaches, stiffness in shoulders, fatigue and muscle aches are some of the known physiological reactions to physiological stress (Ismail et al., 2009). Based on Selye's (1956) definition of stress, in that it is a physiological reaction to threats in a person's environment, any threat in a work environment from Selye's perspective is job related stress. That is, job stress can be defined as any threat perceived in a work environment (Salami et al., 2010). Researchers often classify or label psychological stress as emotional reactions (Ismail et al., 2009). Some of these emotional reactions include "…anxiety and depression burnout, job alienation, hostility, depression, tension, anger, nervousness, irritability, and frustration…" (Ismail et al., 2009, p. 4). According to Beheshtifar and Nazarian (2013), recently job stress has received the attention of researchers such that it has been labeled as a serious health issue.

Sources of job stress. Scholars have identified numerous sources of job stress. There are similarities in the sources with scholars making arguments as to which source is the most detrimental. Beheshtifar and Nazarian (2013) identified and classified, into five groups, prevalent organizational and individual stressors. These five groups are "…organizational practices, job/task features, organizational culture/climate, interpersonal relationships, and employee personal characteristics…" (Beheshtifar &

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Nazarian, 2013, p. 651). Salami et al. (2010) identified organizational stress or situational stress and dispositional stress as the two main sources of job stress. Organizational stress or situational stress includes any stress that is a consequence of the work environment, such as work related factors, organizational structural factors, interpersonal stress, and organizational change. Work related factors can include work overload, underutilization, job or role ambiguity, and role conflict. Organizational structural factors can include "…staff rules and regulations, poor reward systems, and lack of freedom or even lack of a career path" (Salami et al., 2010, p. 251). Interpersonal stress is normally the result of individuals not having the necessary skills to develop and maintain relationships with other co-workers, supervisors, and subordinates. Organizational change includes changes in culture, policies, and work protocols (Beheshtifar & Nazarian, 2013).

Dispositional stressors refer to stressors arising from workers' individual characteristics (Salami et al., 2010). For example, workers with a Type A personality are said to experience more stress than individuals with a Type B personality (Salami et al., 2010). Individuals with Type A personalities can be defined as individuals who approach life with a sense of urgency (Agarwal, 2013). These individuals can be characterized as highly competitive, aggressive, impatience, and excessive with respect to their drive and hostility (Agarwal, 2013). Individuals with Type B personalities can be defined as being the opposite of individuals with Type A personalities (Agarwal, 2013). Individuals with Type B personalities may be easy going and not obsessed with success, achievement, or competition (Agarwal, 2013).

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Effects of job stress. Research shows that job stress negatively affects workers, their families, and the organizations they serve (Beheshtifar & Nazarian, 2013; Salami et al., 2010). The consequences of stress to workers are numerous such as subjective, cognitive, physiological, behavioral, and health consequences (Beheshtifar & Nazarian, 2013; Salami et al., 2010). Some of the subjective or intrapersonal effects of stress are boredom, anger, feelings of anxiety, lack of interest, fatigue, depression, anxiety, and irritability (Salami et al., 2010). Other intrapersonal effects of stress include eliminating employee enthusiasm and job satisfaction (Adebayo & Ogunsina, 2011). Cognitive effects of stress can include short attention span, mental blocks, poor concentration, and a lack of mental focus to make decisions (Salami et al., 2010). Physiological effects of stress can include "…increased heart and pulse rate, dryness of throat, high blood pressure, and excessive sweating…" (Salami et al., 2010, p. 252). Behavioral effects of stress can include being accident prone, unhealthy eating, excessive eating, excessive drinking, impulsive behaviors, and depressions (Salami et al., 2010). Health effects as a result of stress can include stomach disorders, asthma, eczema, and other psychosomatic disorders (Salami et al., 2010). Job stress, if not properly handled gets worse and can lead to death (Beheshtifar & Nazarian, 2013).

Consequences for the family are the result of how workers respond or cope with stress. Dysfunctional coping, such as with alcohol abuse or having withdrawal behaviors, may lead to adverse effects on family life (Salami et al., 2010). Such adverse effects can include spousal abuse, child abuse, alienation from family members, and divorce (Salami et al., 2010). Consequences for the organizations they serve are also a result of how workers respond or cope with stress. Beheshtifar and Nazarian (2013) identified two

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major groups of organizational consequences, that is, organizational symptoms and organization costs. Some organizational symptoms can include workers under performing or low productivity, excessive absenteeism and turnover, poor customer service, increased worker job alienation, and even destructive behaviors resulting in sabotage and worker strikes (Beheshtifar & Nazarian, 2013; Salami et al., 2010). For organizations, these consequences can translate into a loss in present and future business, poor reputation, assets, and profits. These consequences can also be detrimental to the constituent's organizations served. For example, the stresses experience by an airline pilot can result in several hundred lost lives.

Job stress and performance. To begin this discussion a clear definition of job performance is desired. Ismail et al. (2009) defined job performance as the ability of employees to complete their work responsibilities for the purpose of attaining organizational goals. Chen (2009) defined job performance as the behaviors needed to accomplish a given task to include the level of efficacy and the end result of each behavior. Most research on stress focuses on how stress negatively affects performance (Salami et al., 2010; Levenson, 2007; Satija & Khan, 2013). However, there are studies that indicate that stress, depending on the level of the stress, can lead to a boost in individual performance (Salami et al., 2010). This is labeled as the Inverted-U relationship between stress and performance, first constructed by Yerkes and Dodson (1908, as cited in Onyemah, 2008). According to Yerkes and Dodson (1908, as cited in Onyemah, 2008), the Inverted-U relationship shows that as stress increases, performance increases, but at a certain optimum level, an increase in stress results in a decrease in performance.

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There are critics who make the argument that stress and performance do not have a U-shape relationship (Nygaard & Dahlstrom, 2002). Instead, stress is seen to affect performance at any level, in which stress and performance take on a negative linear relationship (Singh, 1998). The argument is that stress reduces performance by depleting an individual's energy, focus, and time (Salami et al., 2010). Another argument is that stress and performance are linearly related (Salami et al., 2010). The argument is that in this relationship at low levels of stress, performance is poor and optimal performance is reached at the highest levels of stress (Salami et al., 2010). Regardless of which argument is raised, there is no question that a type of connection exists between stress and performance. Salami et al. (2010) and the majority of studies lean towards stress negatively affecting performance.

Police Stress

Research shows that law enforcement is a highly stressful career (Kaur et al., 2013; Levenson, 2007; Louw & Viviers, 2010; Murtagh, 2010; Satija & Khan, 2013). Police stress is similar to its parent construct "stress" in that it is a complicated concept to define. The main reason police stress is a difficult concept to define is because police stress is attributed to multiple factors. Most police studies utilize a stimulus and response-based definition of stress, in that stress is the result of the excessive demands placed on police officers due to police work (Griffin, 2012; Murtagh, 2010). McCreary and Thompson (2006) defined police stress as how police officers respond to the often habitual and dangerous demands of law enforcement. According to Murtagh (2010), police stress is police officers' physiological response to job demands incurred as a result of enforcing the law and as a result of the challenges of being a police officer. Selokar,

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Nimbarte, Ahana, Gaidhane, and Wagh (2011) defined police stress as a physiological response to job demands in a law enforcement setting or a response to work forces that appear threating and illicit a response to match the threat.

Research shows that stress results in both short-term and long-term negative outcomes for police officers (Chen, 2009; Webb, 2010). Short term and long term effects include undermining the physical and mental health of police officers with devastating outcomes. These devastating outcomes include suicide, domestic violence, marital discord, PTSD, depression, alcohol abuse, drug abuse, digestive disorders, and cardiovascular disease just to mention a few (Chen, 2009; Griffin, 2012; Neely & Cleveland, 2013; Woody, 2006). Organizational effects of police stress include high rates of absenteeism, high turnover, and loss of productivity or loss in work performance (Chen, 2009; Vuzzo, 2009). Stress is a serious problem for police officers and law enforcement organizations. As a result, more research is being focused on minimizing stress.

Sources of police stress. Human-service professions, such as police officers, correction officers, nurses and physicians, teachers, and the clergy, are particularly vulnerable to stress (Shane, 2010; Suresh, Anantharaman, Angusamy, & Ganesan, 2013). One of the reasons for this vulnerability has to do with the nature of these professions in that the agents of these professions are responsible for the safety, health, or well-being of other people (Shane, 2010). In these professions, customer behavior, which can be demanding and aggressive even to include complaints when the customer is not happy with the results, also adds to an already stressful experience (Oginska-Bulik, 2005). Other reasons these professions experience stress include the layout of the organization in

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that employees do not get to pick on who they deal with and the service they provide and their work is constantly scrutinized by the public they serve (Hess & Orthmann, 2012). For police officers this is especially true in that they are subjected to the uglier side of life, where they are forced to deal with lawbreakers, traumatic events, and boredom along with instances when they must act or respond to time sensitive events (Neely & Cleveland, 2013). Critical or traumatic incidents include events such as 9/11 and Hurricane Katrina. Other reasons for stress in service professions are outdated working conditions, lack of acknowledgement on a job well done, and work overload. Work overload is a two-part process in that too many administrative tasks may be given or tasks may become too routine to the workers (Oginska-Bulik, 2005).

Emotional dissonance is a type of stress that is common in human service occupations (Oginska-Bulik, 2005). Emotional dissonance refers to the need to display emotions that are not genuine (Oginska-Bulik, 2005). For human service occupations, emotional dissonance is sometimes a job requirement in that customers must always be treated and showed positive emotions (Oginska-Bulik, 2005. Regardless of customers' attitudes, human service workers are to display or express positive emotions towards customers (Oginska-Bulik, 2005).

For police officers, two prevalent sources of stress include: operational stressors and organizational stressors (Moreno, 2011; Murtagh, 2010; Shane, 2010; Spielberger et al., 1981). Operational stressors include police duties inherent to police work, such as testifying in court, extra employment, and dealing with both lawbreakers and victims (Abdollahi, 2002). Organizational stressors are the result of innate organizational characteristics. One such organizational characteristic is the bureaucratic nature of police

organizations. Characteristics of this nature have the potential to inhibit autonomy, flexibility, openness, and decision making that affects a police officer's career success and daily life (Oginska-Bulik, 2005; Shane, 2010). Most, if not all police departments, tend to take on a bureaucratic design, which calls for police departments to be designed along tall formal organizational hierarchies (Hess & Orthmann, 2012). In a formal hierarchical structure, control is in a pyramid form where by the top level controls the levels below (Hess & Orthmann, 2012). The intent or purpose of a formal hierarchy is centralized planning and decision making, which may result in excessive formality and standardized procedures before any official decision making can take place (Hess & Orthmann, 2012). According to Murtagh (2010), excessive formality and routine can result in a stressful working environment.

The social distance between ranks can also be a source of stress (Hess & Orthmann, 2012). Social distance is a result of tall organizational structures (Hess & Orthmann, 2012). A social distance between ranks may create detached type of atmospheres, where high rank police officers rarely interact with those officers at lower levels of the hierarchy (Hess & Orthmann, 2012). This type of impersonal atmosphere can have negative effects on organizational communication, which is crucial for back and forth feedback needed for official decision making (Hess & Orthmann, 2012). In addition, an impersonal atmosphere has the potential to develop leadership styles that can neglect the contributions by employees at the lowest levels of the hierarchy (Hess & Orthmann, 2012). A tall hierarchy can also lead to other concerns by lower level police officers such as being "second-guessed" in field work, mainly because of the disconnect in communication between lower level police officers and higher level police officers

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(Murtagh, 2010). Other concerns include a lack of a rewards system for outstanding performance and punishment in lieu of training for minor infractions that can be handled via training. Both concerns may be attributed to an impersonal atmosphere, which is a result of a bureaucratic structure (Hess & Orthmann, 2012).

Another source of police stress is what is known as intra-interpersonal stressors or personality related stressors (Abdollahi, 2002). Personality related stressors can be traced back to an individual's personal characteristics or qualities and how he or she interacts with others (Abdollahi, 2002). Research shows there are certain personality characteristics or traits that are preferable in policing (Abdollahi, 2002). Some of these traits include high levels of self-confidence and self-esteem, optimistic versus pessimistic, extraverted versus introverted, hardiness, and Type B personalities. According to Abdollahi (2002), in law enforcement, higher levels of self-confidence and self-esteem lead to higher levels in job satisfaction. Police officers who are secure in their skills and talents to do police work are generally more content and satisfied with their careers in law enforcement and in turn feel less stressed (Abdollahi, 2002). A similar logic can be applied to the other mentioned personality traits.

Historical Overview of EQ.

EQ is a branch of cognition and affect, which is a general branch of research that centers on the mutual interaction of feelings and thought (Forgas, 2008). Whereas this general area of research seeks to explain the relationship between affect and cognition, EQ is a more concentrated construct that is concerned with the ability to recognize emotions, to understand and trigger emotions for the purpose of promoting emotional growth, and improving cognitive abilities (Mayer & Salovey, 1997). Stated differently,

EQ represents skills and abilities that combine intellectual intelligence with feelings and emotions used to enhance thought (Vigoda-Gadot & Meisler, 2010). The whole idea behind EQ has to do with finding ways to make people aware of the consequences of their actions and decisions while taking their feelings and emotions into account (Mayer & Salovey, 1997).

The EQ construct has roots as early as Darwin's work that dealt with emotional expression in that emotional expression is a crucial skill for the purpose of human survival and adaptation (Vigoda-Gadot & Meisler, 2010). Many scholars have put forth models of EQ and while there are differences in models, they also have many similarities. These similarities involve the basic dimensions of EQ, which are the abilities to perceive and understand emotions accurately, to facilitate through using emotions, and to regulate and guide one's own emotional reactions for the purpose of gaining an advantage (Cherniss, 2004). Mayer and Salovey (1993) were the first to put forth a formal model, which they called an ability model, derived from two components, that is, intelligence and emotions (as cited in Morehouse, 2007). According to Mayer and Salovey (1997), EQ can be defined as the "…ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (p. 35). Mayer and Salovey (1997) used a deductive approach to identify the four branches that make up their ability model. These branches can be seen in their definition of EQ (Cherniss, 2004). The first branch depicts the ability or abilities for perceiving emotions accurately (Cherniss, 2004). The second branch illustrates the ability or abilities of using emotions to facilitate thought

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(Cherniss, 2004). The third branch illustrates the ability or abilities to perceive emotions (Cherniss, 2004). Finally, the fourth branch illustrates the ability or abilities for managing emotions (Cherniss, 2004).

Goldman is another scholar who put forth an EQ model. Goldman's (1998) EQ model is a "performance based" model developed inductively. Goldman's (1998) model is based on identified competencies that research has shown to be most predictive of superior performance. Goldman (1998) then arranged these competencies into four clusters that resembled the basic components of EQ. These four components include "…self-awareness, social awareness, self-management, and social skills…" (Watkin, 2000, p. 89). Goldman (1998) also added another level to his model that constitutes a total of 20 competencies all linked to the four clusters just mentioned. For example, social skills are linked to eight specific competencies that include influencing others, leading by example, developing the skills of others, open communication, change agents, conflict management, and building bonds (Goldman, 1998).

Another popular EQ model was developed by Reuven Bar-On. Bar-On's (2013) model is also a competency-based model composed of five major dimensions and 15 competencies. The five major dimensions are

(i) the ability to understand emotions as well as to express our feelings and ourselves; (ii) the ability to understand others' feelings and relate with people; (iii) the ability to manage and control our emotions so they work for us and not against us; (iv) the ability to manage change and solve problems of an intrapersonal and interpersonal nature; (v) the ability to generate positive mood

and be self-motivated. (Bar-On, 2013, "The 15 factors of the Bar-On Model,"

para. 1).

The 15 competencies are "…self-regard, emotional self-awareness, assertiveness, independence, and self-actualization (intrapersonal EQ); empathy, social responsibility, and interpersonal relationship (interpersonal EQ); stress tolerance, and impulse control (stress-management); reality testing, flexibility, and problem solving (adaptability); and optimism and happiness (general mood)" (Bar-On, 2013, "The 15 factors of the Bar-On Model," para. 2-16). Based on this model, Bar-On (2013) put forth a definition of EQ in that it is as an assortment of emotional, personal, and social skills that have the potential to impact how we respond or cope with environmental pressures and demands.

In most of the literature that deals with EQ, the authors use Mayer and Salovey's definition, Goldman's definition, Bar-On's definition, or a combination of them. For example, Oginska-Bulik (2005) defined EQ as the ability to understand emotions and to use this understanding to facilitate interactions. Ismail et al. (2009) defined EQ as having two major dimensions: interpersonal competency and intrapersonal competency. According to Ismail et al. (2009), the idea behind EQ is that it is a construct that allows employees the ability to properly identify and handle their emotions and use them to guide their thinking for the purpose of promoting emotional and intellectual growth. Ismail's et al. (2009) definition is the one most often attributed to Bar-On and Goldman's EQ definition. There are many other authors who have put forth EQ models and definitions but Mayer and Salovey, Bar-On, and Goldman are in the forefront with regards to defining this construct.

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EQ and police stress. Research shows that police personnel experience a great deal of stress that is, for the most part, due to police work and stress that is a result of the organization's make up (Murtagh, 2010; Suresh et al., 2013; Selokar et al., 2011; Page & Jacobs, 2011). Support of research is growing that states that EQ might be the answer or the correct strategy to implement for dealing with job stress (Goleman, 1995; Bar-On, 2013; Nikolaou & Tsaousis, 2002; Karriem, 2010). The argument behind this claim is that certain environmental threats or factors lead to certain emotional reactions that have the potential to lead to stress (Gachter et al., 2011), and learning to recognize and control these emotions could lead to dealing with stress more effectively. This is in accordance to EQ theory, which posits that those individuals who have control of their emotions and that of others are more capable of coping with the challenges that arise in their environment (Bar-On, 1997; Goleman, 1998; Ismail et al., 2009).

Different studies approached EQ and stress from different perspectives and all have found that EQ helps alleviate or offset job stress. In other words, several studies have found EQ to be inversely proportional to stress. That is, individuals with a higher EQ experience less stress than those individuals with lower levels of EQ. For example, Satija and Khan (2013) showed that individuals who scored higher in EQ suffered less stress in the workplace. Ismail et al. (2009) found that EQ significantly contributed to lessening occupational stress by helping individuals identify feelings of frustration. Singh and Sharma (2012) claimed that individuals with strong, well-developed interpersonal and intrapersonal abilities are more prepared to control their emotions and that of others, which helps to cope with stress. Interpersonal abilities or competency has to do with how well people are in control of themselves and intrapersonal competency

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has to do with how well people manage others (Ismail et al., 2009). Interpersonal competency includes motivation, self-awareness, and self-regulation; while intrapersonal competency includes the ability to empathize and well-developed social skills. According to Ismail et al. (2009), these competencies, when properly managed, account for properly handling external demands and pressures that lead to coping with job stress effectively. The idea is that those with higher levels of EQ are better at identifying feelings of frustration that lead to stress. The constructs under investigation in these mentioned studies were EQ and stress and the results in all of them are similar in that EQ helps alleviate or better cope with stress.

EQ and police stress studies. EQ and stress are two constructs that have received considerable attention in law enforcement. However, most studies have treated these constructs separately. For example, Burnette (2006) examined the relationship between the EQ of front-line police supervisors and the EQ of front-line police officers. Burnette (2006) intended in making the argument that the EQ of a supervisor could potentially influence the EQ of a subordinate officer thereby helping him or her to better cope with stress. Burnette based his approach on researchers who came to the conclusion that front-line police supervisors can positively influence the attitudes and behaviors of their subordinates (Engel & Worden, 2003; Mastrofski, Parks, Reiss & Worden, 1999, as cited in Burnette, 2006). However, the findings in Burnette's study did not show that a relationship existed between the EQ of front-line police supervisors and the EQ of their subordinate police officers.

Griffin (2012) investigated the relationship between police stress to gender, resiliency, work environment, work-family conflict, burnout, and demographics. For

Griffin's study, three subscales defined burnout, (emotional exhaustion, depersonalization and personal accomplishment). Griffin's study results showed a significant positive relationship exists between stress and work-family conflict, emotional exhaustion, and depersonalization. Griffin's study results also showed that stress was significantly negatively correlated with hardiness, personal accomplishments, and the demographic variables of rank and education. No correlations were found between stress and gender and ethnicity. Griffin stated that the lack of correlations between stress and gender and ethnicity could be contributed to the sample size since the sample did not contain a high degree of gender and ethnic diversity.

Studies involving the direct examination of EQ and police stress are limited. Vuzzo (2009) and Oginska-Bulik (2005) are two researchers who examined the relationship between EQ and police stress. Vuzzo (2009) examined the relationship of EQ and stress on law enforcement front-line police supervisors. Vuzzo's (2009) research showed that front-line police supervisors with higher levels of EQ experience less stress. Ogińska-Bulik (2005) investigated EQ in the workplace, with regards to the type of role it plays on occupational stress taking into account health-related issues. The findings indicated that individuals with a higher EQ experience less stress and are in better health.

Overview of Leadership as it Pertains to EQ and Stress

There is a growing trend that the key to organizational success requires leaders high on EQ (Walter, Cole, & Humphrey, 2011; Batool, 2013; Goleman, 1995). Several reasons have been put forth as to why EQ is related to effective leadership. The major reason has to do with the type of role that emotions play in the leadership process (George, 2000; Goleman, 2005; Rosete, & Ciarrochi, 2005). This is in line with one of

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the many definitions of EQ in that EQ translates to having the ability to recognize and control one's own emotions and that of others (Mayer & Salovey, 1997). The proposition is that leaders high on EQ are skillful on managing their emotions and that of their subordinates (George, 2000). Leaders high on EQ can result on a multitude of advantages for their subordinates. For example, leaders high on EQ may be capable of sympathizing and empathizing toward followers in crises and in turn gain follower confidence, cooperation, and trust (Goleman, 2005).

In today's dynamic work environments that are characterized as fast pace and where the rule is to do more with less, employees can experience stress from multiple sources (Hess & Orthmann, 2012). Today, fast paced organizations can lead to situations of ambiguity, confusion, and conflict, which all have the potential to be sources of stress for employees (Hess & Orthmann, 2012). Research shows that leaders high on EQ have the ability to guide subordinates through these stressful situations (Goleman, 2005; George, 2000). This is in line with the findings of several studies in that the relationship between leadership effectiveness and EQ has been determined to be positive and significant (Batool, 2013; Dulewicz, Young, & Dulewicz, 2005; Rosete & Ciarrochi, 2005).

Measurement of EQ

Several tests exist that are used to measure EQ. Three of these measures are the Emotional Competence Inventory (ECI), Emotional Quotient Inventory (EQ-i) 2.0, and Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). To follow is a concise description of these measures.

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MSCEIT is an ability test that measures EQ through a series of objective and impersonal questions (Cherniss, 2004). The questions are derived from Mayer and Salovey's four branch EQ ability model. MSCEIT's focus is on an individual's ability to use emotions to solve problems, rather than on scales that concentrate on the individual's assessment of perceived emotional skills (Caruso et al., 2003).

ECI is a 360-degree feedback instrument developed by Goleman and Boyatziz (1998, as cited in Cherness, 2004). ECI is a 110-item instrument that measures emotional skills or abilities and positive social behaviors. These abilities and behaviors are based on Goldman's (2008) four clusters of competencies, which are "…self-awareness, self-management, social awareness, and social skills…" (p. 38). Each cluster is composed of an additional three to eight specific competencies that are considered to make up the more general competency. A total of 20 EQ competencies are assessed using ECI.

The EQ-i 2.0 instrument is based on Bar-On's EQ model. The EQ-i 2.0 is a self-report measure put forth to assess several related EQ constructs (Cherniss, 2004). The EQ-i 2.0 consists of 133 items and can be completed in approximately 30 minutes (Stein & Book, 2011). The EQ-i 2.0 instrument delivers an overall score along with determining scores for Bar-On's five composite scales (Stein & Book, 2011).

Review of Research Design and Method of Analysis

The present doctoral project utilized a quantitative correlational research design. Data was collected using two survey instruments. These two instruments include the Emotional Quotient Inventory (EQ-i) 2.0 developed by Bar-On (1997) and updated by Stein and Book (2011) and the Police Stress Survey (PSS) developed by Spielberger et al. (1981). The purpose of a correlational study is to examine the relationship between two

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or more variables and make predictions (Christensen et al., 2011). For this study, the variables in question are the EQ of police leadership and the stress they experience because of their leadership responsibilities. The objective of this study was to investigate if a relationship exists, and to what degree this relationship exists, between the EQ of police leadership and the stress they experience because of their leadership responsibilities. Pearson's correlation coefficient was calculated to ascertain if a relationship exists and to what degree. Pearson's correlation coefficient is a numerical index that ranges from -1.00 to +1.00, where zero indicates no relationship (Christensen et al., 2011). A -1.00 and +1.00 score indicates a perfect correlation and the negative and positive indicates direction of relationship. A negative correlation suggests that the values are inversely proportional, that is, they tend move in opposite direction. Whereas a positive correlation means that the values of the two variables tend to move in the same direction. Correlation coefficients were tested for statistical significance using the t test at 5% (alpha level of 0.05) level of significance.

The research design and method of analysis implemented in this study has been commonly used when investigating the relationship between variables. Vuzzo (2009) conducted a study that entailed a correlational strategy and used instruments similar to those used in this study. Vuzzo used Reuven Bar-On's (2002) Emotional Quotient Inventory: Short (EQ-i: S) (2002) and the Police Stress Survey (PSS). The EQ-i: S is a 51-item self-report instrument used to measure EQ, but this instrument has been replaced by the EQ-i 2.0. Vuzzo's study involved examining the relationship of EQ and stress on law enforcement sergeants or front-line supervisors. The focus of Vuzzo's study was to determine which EQ factors and stressors have the greatest effect on front-line

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supervisor's ability to lead effectively. Vuzzo's research approach is based on the importance of the understanding of not only the EQ and police stress constructs, but also how they might be related. According to Vuzzo, it is prudent that law enforcement in general has an understanding of their front-line supervisor's EQ and stress since the sergeant's role is to oversee the main functions of their subordinates, that is, the jobs of front-line police officers. According to Vuzzo, an understanding of which EQ factors and stressors have the greatest effect on front-line supervisor's ability to lead effectively may direct law enforcement into avenues to improve their front-line supervisors' performance. To determine which EQ factors and stressors have the greatest effect on front-line supervisors, Vuzzo's research examined four research questions.

The first question sought to determine which correlations were the most prevalent between the EQ-i: S scales and the stress experience by front-line supervisors. To analyze this question, Vuzzo used Pearson's correlation coefficient. The findings revealed that only two correlations were significant, that is, the correlations between stress and total EQ and the general mood component of the EQ-i: S scale.

The second question sought to determine which EQ-i: S scales were significantly related to the top 5 PSS stressors. For Vuzzo's study, the top 5 stressors included killing someone in the line of duty, fellow officer killed in the line of duty, exposure to battered or dead children, inadequate support by supervisor, and physical attack on one's person. Pearson's correlation coefficient was also used to analyze this question and the findings showed no significant positive or negative correlations between the EQ-i: S scales and the top 5 stressors as measured by the PSS scale.

The third question sought to determine which EQ-i: S scales were significantly related to the lowest 5 PSS stressors. For Vuzzo' study, the lowest 5 PSS stressors included working a second job, personal insult from a citizen, periods of inactivity and boredom, performing non-police tasks, and ineffectiveness of the correlational system. Pearson's correlation coefficient was also used to analyze this question and the findings showed only one significant correlation. The correlation was between the general mood component of the EQ-i: S and two PSS stressors that included working a second job and personal insult from a citizen.

The fourth question sought to determine to what extent the EQ-i: S scale predicted or impacted stress. To analyze this question, Vuzzo applied regression analysis. The findings were not significant, which suggest that there is no predictive relationship between the EQ-i: S scale and the PSS scale.

Of interest in Vuzzo's study is the negative significant correlation between the total EQ and PSS scores. That is, as the total EQ score increases or decreases, the PSS score moves in the opposite direction. The total EQ score shows that those individuals who have an understanding of their emotions and how to use them effectively experience less stress (Bar-On, 1997, Goleman, 1995). In addition, Vuzzo's study also showed that the correlation of stress and the general mood component of the EQ-i: S should be of interest to law enforcement since it was also significant and negative. In summary, Vuzzo found a strong negative relationship between stress and the general mood components of EQ-i: S scale and the overall level of EQ, which indicates that EQ might play a role in stress management.

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Hall (2010) conducted a study that was also similar in research design and method as compared to the present study, that is, a quantitative correlational design. Hall's study examined the relationship between managers' EQ and employees'/followers' turnover intentions at an aerospace company. The managers' EQ was measured using Reuven Bar-On (1997) Emotional Quotient Inventory (EQ-i) and turnover intentions was measured with the Michigan Organizational Assessment Questionnaire (MOAQ). The purpose of the study was to determine whether there is any relationship between managers' EQ and employee turnover intentions. To determine if there is any relationship between managers' EQ and employee turnover intentions, Hall examined two research questions. Also, to obtain a more in-depth analysis of the research questions, the sample population was divided into seven different groups (Group A – G).

The first question sought to determine to what extent is the sample population in the study homogenous. Hall's reasoning behind this question was that it was important to verify that all of the sample population could be defined under the same characteristics or all participants met the same parameters to be a part of the study. To analyze this question, Hall used analysis of variance (ANOVA) statistical analyses to ascertain if the sample population was homogenous and the results showed that the sample population was homogenous. The second question sought to determine the relationship between managers' EQ and employees' turnover intentions. To analyze this question, Hall used Pearson's correlation coefficient and the findings were mixed among the groups (Group A – G), such that Hall came to the conclusion that the EQ of managers is a minor determining factor in an employee's decision to either stay or leave the organization.

In comparing Vuzzo and Hall's study to the present study, the research design and method are similar but all three investigated or looked to fill different knowledge gaps. Vuzzo's investigated which EQ factors and stressors have the greatest effect on front-line supervisor's ability to lead effectively. Hall investigated the relationship between managers' EQ and employees'/followers' turnover intentions at an aerospace company. For the present study, the researcher investigated if a relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities. In addition, all three studies arrived at their results by collecting and analyzing the data that pertained to what they sought.

Conclusions

Stress has been linked to multiple illnesses such as acid reflux, respiratory disorders, cirrhosis of the liver, eating disorders, depression, anxiety, and even suicide (Sultan-Taieb, Chastang, Mansouri, & Niedhammer, 2013). In addition, stress has been linked to employee burn-out, excessive absenteeism, poor performance and productivity, costly errors at work, and alcohol and drug abuse (Mark, & Smith, 2012). In law enforcement, stress has led to equal or more severe consequences. For example, in law enforcement stress has been linked to depression, posttraumatic stress disorder (PSTD), apathy, and cynicism (Sekar, Subburaj, & Sundaram, 2013). As a result, managing stress is crucial for organizations to operate effectively.

Research indicates that EQ plays a crucial role in dealing with stress (Singh & Sharma, 2012; Goleman, 1995). In this study, the EQ construct was examined in respect to police stress. There are many studies that support the correlation between stress and EQ. However, up-to-date no studies were found that examined the relationship between

the EQ of police leadership and the stress they experience because of their leadership responsibilities. Other studies that covered EQ and stress in a law enforcement setting covered each construct separately. For example, Brunetto, Teo, Shacklock, and Farr-Wharton (2012) investigated the effect of EQ on job satisfaction and well-being, but stress played no role in the study. As a result, a knowledge gap exists between EQ and stress when both constructs are measured for each participant in a law enforcement setting. As a result, in this study, the EQ of police leadership, to include Captains, Lieutenants, and Sergeants, and the stress they experience as a result of their leadership responsibilities was measured.

Summary

The present study investigated if the EQ of police leadership alleviates or lessens the magnitude of stress they experience because of their leadership responsibilities. This study is different from other similar studies in that in this study the EQ of police leadership was measured and compared to the measured stress they experience because of their leadership responsibilities. The findings show that a correlation exists between the EQ of police leadership, that include Captains, Lieutenants, and Sergeants, and the stress they experience because of their leadership responsibilities. Prior to this study, a gap of knowledge existed in this area of law enforcement research.

As has been shown above, stress has become an epidemic in law enforcement and EQ might be a construct that can aid in coping with stress. Two models of stress were reviewed, that is, Hans Selye's General Adaption Syndrome (GAS) stress model and the Person-Environment (PE) fit theory of stress, which is based on Kurt Lewin's PE-fit model. To measure stress, Speilberger's Police Stress Survey (PSS) was used and this

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survey is based on the PE-fit model. Speilberger's PSS was chosen because the instrument measures stressors specific to the law enforcement field. According to Speilberger et al. (1981), organizational and operational stress are the two major stressor components specific to law enforcement and the PSS is factored into these two major stressor components. Murtagh (2010), Shane (2010), and Moreno (2011) also claimed that organizational and operational stress are the most common or most accepted stressors in law enforcement.

Three models of EQ were reviewed, that is, Salovey and Mayer's "ability" model, Goldman's "performance-based" model, and Bar-On's competency-based model. This study used the Emotional Quotient Inventory (EQ-i) 2.0 instrument, developed by Bar-On and updated by Stein and Book (2011) to quantify EQ. The EQ-i instrument has been widely used mainly due to its reliability and validity (Vuzzo, 2009; Van Rooy, Viswesvaran, & Pluta, 2005). Karriem (2010) used the measure because of its widespread history and effectiveness in measuring EQ. In addition, one of the five major scales of the instrument covers stress management.

In the next chapter, a detail discussion is put forth of the research methodology used in the current research. The discussion covers: the research method, research design and appropriateness, population, data collection procedures and rationale, validity and reliability of the research tools, and the statistical analysis that were used. The discussion also covers confidentiality, the research questions, and hypotheses.

Chapter 3

Methodology

The purpose of the present quantitative correlational research study was to determine if a relationship exists between the emotional intelligence (EQ) of police leadership, that includes Captains, Lieutenants, and Sergeants, and the stress they experience because of their leadership responsibilities. The EQ and stress constructs presented in Chapter 2 served as the theoretical foundations for this study. EQ was measured using the Bar-On Emotional Quotient Inventory (EQ-i) 2.0 and stress was measured using the Police Stress Survey (PSS). A correlational approach was determined to be appropriate because the degree to which two variables are related is what needed to be determined (Leedy & Ormrod, 2010). That is, in this study two variables were measured, EQ and stress, and the focus was to describe how these two variables are related or vary together.

Chapter 1 presented an introduction of the present research, the framework, rationale, and purpose for the research study, among other things. Chapter 2 presented a literature review relevant to the present study and set the tone for the research methods used in Chapter 3. Chapter 3 presents a discussion of the research method and design appropriateness, restatement of the research questions, the target population, the data collection methods, and the methods necessary to analyze the research data. Also, Chapter 3 also presents a discussion of the reliability and validity of the two instruments used, that is, the EQ-i 2.0 and the PSS.

Research Method and Design Appropriateness

The present study determined if there is a relationship between the EQ of police leadership and the stress they experience because of their leadership responsibilities. Two variables were measured for the purpose of answering one central or leading question and two sub-questions. EQ and stress are the two variables that were measured using two separate survey instruments. Statistical analysis was performed to determine the degree of relationship between the selected variables. In addition, the goal was to quantify the magnitude and direction of association among the two variables. For these and other reasons a quantitative research method, specifically a correlational design, was appropriate for the current study. According to Christensen et al. (2011), a quantitative research method is appropriate when the researcher is tasked with finding a relationship between two or more variables. In addition, the basic building blocks of this study are the EQ and stress variables (Christensen et al., 2011).

Qualitative research aims at gaining a thorough understanding through extensive and prolonged probing of the phenomenon under investigation (Leedy & Ormrod, 2010). In qualitative research, the probing or exploring is accomplished through such techniques as interviews, observations, recordings, videotapes, and case studies. According to Neuman (2006), qualitative research draws on an inductive process in which patterns and relationships of meanings emerged through analysis of non-statistical data. The data collected in qualitative research is not numerical in nature, but instead is in the form of words, pictures, and objects (Christensen et al., 2011). Typically, in qualitative research, the researcher or researchers are the data gathering instruments (Leedy & Ormrod, 2010). In other words, the researcher does not use tools, such as questionnaires or equipment to

collect data. In this study, the two surveys that were used to collect numerical data were the EQ-i 2.0 and the PSS surveys. The numerical data was necessary in order to perform correlation analysis that allowed the research to find answers to the research questions. For these and other reasons, a qualitative research method was not appropriate for this study.

There are various research designs to conduct psychological research. Examples of these research designs include mixed methods, case study, longitudinal study, cross-sectional study, phenomenological, and grounded theory. All of these research designs are suitable for qualitative research, in which the focus is on a phenomenon that occurred or occurs in a natural setting with the intention of understanding the phenomena in all its complexity (Leedy & Ormrod, 2010). As the name implies, mixed methods collects, analyzes, and reports both qualitative and quantitative data in a study (Christensen et al., 2011). Research designs that are suitable for quantitative research include pre-experimental, true experimental, quasi-experimental, and ex post facto. For these designs, the researcher is interested in determining cause and effect relationships (Leedy & Ormrod, 2010). For the present study, determining cause and effect relationships is not the intent. For the present doctoral study, the intent was to examine the extent of relationship between two variables, that is, EQ and stress. As a result, a quantitative correlational design was the most appropriate for the present study.

Research Questions and Hypotheses

Scholarly research starts with an accurately and clearly defined research question (Leedy & Ormrod, 2010). An accurately and clearly defined research question sets forth the kind of data to be collected along with how the researcher should analyze and

interpret the data (Leedy & Ormrod, 2010). The following research questions guided

how this study evolved and proceeded.

The present research explored answers for one leading question and two sub-

questions.

Lead Research Question. The lead research question of the present study is:

Q1.   What is the relationship between the EQ of police leadership and the stress

they experience because of their leadership responsibilities?

Sub-questions. The lead question is supported by the following two sub-questions:

Q2.   What is the relationship between the total EQ score as measured by the

EQ-i 2.0 and the stress levels of police leadership?

Q3.   What are the relationships between the stress level of police leadership

and each of the components of the EQ-i 2.0 model, (i) self-perception, (ii)

self-expression, (iii) interpersonal, (iv) decision making, and (v) stress

management?

Correlation analysis was used to find answers to all questions.

The research hypotheses are formulated parallel to each research question and

sub-questions. Accordingly, the following hypotheses were implemented to find answers

to the research questions. Each hypothesis has a null (identified with subscript "0") and

an alternate (identified with subscript "1") hypotheses.

Hypothesis 1.

H_{10}:   No relationship exists between the EQ of police leadership and the stress

they experience because of their leadership responsibilities.

H1A: A statistically significant relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities.

Hypothesis 2.

H20: No relationship exists between the total EQ score as measured by the EQ-i 2.0 and the stress levels of police leadership.

H2A: A statistically significant relationship exists between the total EQ score as measured by the EQ-i 2.0 and the stress levels of police leadership.

Unlike the first two questions, the third question examines relationships between the five components of EQ-i 2.0 and the stress level of police leadership. Therefore, it contains five hypotheses as presented below.

Hypothesis 3.

H30: No relationship exists between the EQ-i 2.0 model self-perception component score and the stress level of police leadership.

H3A: A statistically significant relationship exists between the EQ-i 2.0 model self-perception component score and the stress level of police leadership.

Hypothesis 4.

H40: No relationship exists between the EQ-i 2.0 model self-expression component score and the stress level of police leadership.

H4A: A statistically significant relationship exists between the EQ-i 2.0 model self-expression component score and the stress level of police leadership.

Hypothesis 5.

H_{50}:   No relationship exists between the EQ-i 2.0 model interpersonal

component score and the stress level of police leadership.

H_{5A}:   A statistically significant relationship exists between the EQ-i 2.0 model

interpersonal component score and the stress level of police leadership.

Hypothesis 6.

H_{60}:   No relationship exists between the EQ-i 2.0 model decision making

component score and the stress level of police leadership.

H_{6A}:   A statistically significant relationship exists between the EQ-i 2.0 model

decision making component score and the stress level of police leadership.

Hypothesis 7.

H_{70}:   No relationship exists between the EQ-i 2.0 model stress management

component score and the stress level of police leadership.

H_{7A}:   A statistically significant relationship exists between the EQ-i 2.0 model

stress management component score and the stress level of police

leadership.

Population and Sampling

The study's sample was drawn from a population of a single large law

enforcement agency located in central Texas. Participants were the selected agency's

leadership that includes Captains, Lieutenants, and Sergeants. Participation was only

limited to those who were at the rank of Captain, Lieutenant, and Sergeant. Participation

was open to a total of 150 participants. Ideally, 50 Captains, 50 Lieutenants, and 50

Sergeants would have been asked to participate, but the agency only had a total of 42

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Captains. As a result, the sample population consisted of 42 Captains, 50 Lieutenants, and 58 Sergeants. Three separate lists of possible participants were obtained from the selected agency; one list of all Captains in the agency, one list of all Lieutenants, and one list of all Sergeants. The Captain's list had a total of 42 captains, as a result all were asked to participate. The Lieutenant's list and the Sergeant's lists had more officers than the needed officers for the study, that is, 50 Lieutenants and 58 Sergeants. As a result, both lists where entered into Microsoft Excel (2013) and 50 names from the Lieutenant's list and 58 names from the Sergeants' list were randomly extracted. This resulted in having the 150 participants needed for the study. In order to obtain as many participants as possible from the selected 150 participants, participation was not limited to work experience or the number of years on the job, gender, or age.

Sampling involves selecting participants from a population (Christensen et al., 2011). According to Christensen et al. (2011), a sample is a fraction of the target population that the researcher will use to make a generalization about the group as a whole. The population in this case was police leadership from a single law enforcement agency. The research design utilized a convenience sampling approach. The intent of a convenience sampling approach is to select participants who are most available, who agree to participate, and who fit the description of the sample (Christensen et al., 2011). In the present study, only police leadership that included Captains, Lieutenants, and Sergeants from a single law enforcement agency were asked to take part in the study.

According to Christensen et al. (2011) and Cohen (1992) the sample size can be estimated if the alpha level and effect size have been determined for a given level of power. By convention, for this study, a power level of 0.80 and an alpha level of 0.05

were used (Christensen et al., 2011). A power of 0.80 and an alpha of 0.05 yields a large

effect size recommending 28 participants (Christensen et al., 2011; Cohen, 1992). The

chosen sample size in this study were a total of 150 participants. Ideally, the sample

should consist of 42 Captains, 50 Lieutenants, and 58 Sergeants. The chosen sample size

of 150 participants far exceeds the mentioned recommended sample size (28

participants), which should not affect the integrity of the study. According to Vogt

(2007), it is good practice to obtain the largest sample possible because the largest sample

possible will be more representative of the population than a smaller sample. In addition,

selecting a large sample means a smaller sampling error and greater statistical power

(Vogt, 2007).

Informed Consent

In this study, all who volunteered to participate were provided for their signature a

copy of the informed consent form, which assures their human rights as participants in a

study (see Appendix A). One of the purposes of the informed consent form is to provide

details of the study so that each participant has the information he or she needs in order to

participate (Christensen et al., 2011). Stated differently, informed consent is a statement

about the kinds of procedures or questions involved regarding the study and how the date

collected will be used. For the present study, the informed consent consisted of an

introduction of the researcher to the participants along with the type of degree the

researcher sought out. After the introduction of the researcher, the title of the study was

presented along with the purpose of the study. Then both survey instruments, that is, the

EQ-i 2.0 and the PSS scale were introduced along with instructions on how to complete

these surveys. Most importantly, the informed consent provided detailed information

regarding anonymity and confidentiality. Participants were also advised that if they signed the consent form and later changed their mind that they could then withdraw from the study at any time.

Confidentiality

The informed consent agreement clearly indicated that participation was voluntary and anonymous. All necessary steps were taken to ensure each participant's anonymity and confidentiality. For example, to guarantee confidentiality and anonymity, no information that identifies the identity of the participant was requested. This was accomplished by coding each participant's response using a unique identifier. The data collected was handled in a manner that prevented connecting the responses of the participants to individual participants. The data was collected via online surveys, specifically, Survey Monkey and the Multi-Health Systems Inc. (MHS) Online Assessment Center. Once the data was collected it was extracted from the survey database and entered into Microsoft Excel (2013) spreadsheets and the Statistical Package for the Social Sciences (SPSS) software for analysis. The data collected is currently kept in a secure location and will be destroyed in three years from the completion of this research project. If the findings are published, the data will be presented in a manner that maintains the anonymity and confidentiality of the participants. The data will be published in its entirety so others who wish to verify the results have the necessary information to do so.

Geographic Location

The geographic location was a law enforcement agency located in central Texas that serves a population greater than 100,000. This law enforcement agency was selected

because it ensured that the study had sufficient participants for the purpose of obtaining a relatively large sample. Permission was obtained from this law enforcement agency's command staff to approach all eligible participants (see Appendix B). In addition, permission was obtained from the command staff to use the data collected for answering the study's questions (see Appendix B).

Data Collection

With help from the human resources department of the chosen law enforcement agency, participants were identified and contacted via the organization's electronic mail system. An introduction of the study, which provided a synopsis of the study, was presented and those interested in participating were asked to respond with information of when was the best time to be contacted and the preferred method of contact. Those who chose to participate were provided with the informed consent form for their review and signature. After the informed consent form was signed and all of their questions answered, the participants were provided with information on how to access the EQ-i 2.0 and the PSS Survey, both of which were located online via Survey Monkey, an online survey company, and the Multi-Health Systems, Inc. Online Assessment Center. Participants were also informed that their participation was voluntary and that at no time were they obligated to complete the survey if they were not comfortable. As a result, participants had the option of leaving or withdrawing from the study at any time during the completion of the survey.

Instrumentation

The objective of the current research was to ascertain if a relationship exists between the EQ of police leadership and the stress they encounter because of their

leadership responsibilities. As a result, two self-report instruments were used: one that measures EQ and one that measures stress. Several instruments exist in the market place that can be used to measure EQ and stress. For example, with regards to EQ some of the most popular instruments to measure this construct include the Emotional Intelligence Quotient (EQ-i) 2.0, the Emotional Competence Inventory (ECI), the Emotional Social Competence Inventory (ESCI), and the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT) (Cherniss, 2004). For this study, the two instruments that were used are Bar-On's Emotional Quotient Inventory (EQ-i) 2.0 and the Police Stress Survey (PSS) developed in 1981 by Spielberger and his colleagues (Speilberger et al., 1981). Permission to use the EQ-i 2.0 instrument was granted by Multi-Health Systems Inc. (see Appendix C). Permission to use the Police Stress Survey (PSS) was granted by Nick Spieldberger (see Appendix D). The EQ-i 2.0 is a self-report type measure, and advantages of this type of measure include ease of administering and scoring. In addition, the EQ-i 2.0 has been found to be adequate in reliability and internal consistency and a multitude of research studies have used it with successful results (Abdulrarim, 2013). The PSS is also a self-report type measure that has been used extensively in assessing police stress. Both instruments, the EQ-i 2.0 and the PSS, are described in more detail in the following paragraphs.

For this study the Emotional Intelligence Quotient (EQ-i) 2.0 was used to measure the EQ of police leadership. The EQ-i 2.0 is a self-report instrument that measures both social intelligence and EQ characteristics (Stein & Book, 2011). The EQ-i 2.0 is the result of approximately 17 years of research along with the help of approximately 4,000 participants and is the first EQ instrument in the market (Engstrom, 2005; Bar-On, 2013;

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Stein & Book, 2011). The EQ-i 2.0 can be completed in 30 minutes and candidates 17 years and older are allowed to take it (Bar-On, 2013; Stein & Book, 2011). The reading level in English of the EQ-i 2.0 is equivalent to the North American sixth grade level (Bar-On, 2013; Stein & Book, 2011). The EQ-i 2.0 renders a total EQ score and five composite scales scores made up of 15 subscale scores (Bar-On, 2013, Stein & Book, 2011).

For the present study, the Police Stress Survey was used to measure the impact of police leadership stress. The PSS is a 60-item questionnaire that identifies the most common stress sources in law enforcement. The PSS can be defined by two factors, that is, the "…Administrative and Organizational Pressures factor and the Physical and Psychological factor…" (Wellbrock, 2000, p. 99). The first event is "assignment of disagreeable duties" which is used as a standard with a "stress rating" of 50. Respondents rated all 60 events within the scale using a 0-100 comparison to the "assignment of disagreeable duties" standard. Events that were more stressful than "assignment of disagreeable duties", respondents rated that event proportionately larger than 50. If an event was viewed as less stressful than "assignment of disagreeable duties", then respondents rated that event proportionately less than 50. Also, for each question the respondent was required to indicate the number of times the event occurred within the past month and the past year. The survey also included a frequency of occurrence for 6 months and one year.

Reliability and Validity

Reliability and validity are constructs for the purpose of ensuring proper measurements. The main purpose of these constructs in research is to establish the

truthfulness, credibility, or believability of a study's findings (Neuman, 2006). For the present study, which took on a quantitative research approach, reliability referred to dependability or consistency of the numerical results produced by the two instruments that were employed in the current study, that is, the EQ-i 2.0 survey and the PSS survey. In other words, each instrument is said to be reliable if the data produced is stable and consistent and is not dependent on characteristics present because of the measurement process. Validity has to do with how accurate a measuring device is measuring what it is intended to measure (Neuman, 2006). A more technical definition is that validity refers to the accuracy of the interpretations made as a result of the measurements obtained (Christensen, 2011). In this case, the measurements obtained or numerical results were from the EQ-i 2.0 and the PSS.

      Bar-On Emotional Quotient (EQ-i) 2.0 Reliability and Validity. One of the main reasons for using the EQ-i 2.0 in this study has to do with this instrument's history of well-established validity and reliability (Abdulkarim, 2013; Sparkman, 2008; Hall, 2010; Burnette, 2006; Bar-On, 2006). While the EQ-i 2.0 is an improved or updated version of the EQ-i originally developed by Dr. Bar-On (1997), the EQ-i 2.0's reliability and validity remains sound (Multi-Health Systems, 2011; Stein & Book, 2011). According to Stein and Book (2011), a number of researchers examined the reliability of the EQ-i 2.0 and all concluded that the instrument is consistent, stable, and reliable. In a North American normative sample of about 4,000 participants, the overall internal consistency coefficient of the EQ-i 2.0 was calculated to be 0.97 (Multi-Health Systems, 2011). In another study of 51,623 adults, similar findings were obtained (Bar-On, 2006). Other researchers such as Brackett and Mayer (2003), Newsome, Day, and Cantano

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(2000), and Petrides and Furnham (2000) also found similar findings in that the reliability of the EQ-i is consistent and stable over time.

With regards to validity, Bar-On (2006) mainly focused on construct validity and predictive validity. A definition of construct validity with respect to how Bar-On approached this type of validity has to do with how well the EQ-i correlates with other measures of EQ than with other measures of cognitive intelligence, such as IQ (Multi-Health Systems, 2011). According to Bar-On (2006) and Stein and Book (2011), the findings indeed showed that the EQ-i correlates highly with other measures of EQ than with measures of cognitive intelligence, which indicates that the EQ-i possesses good construct validity. Therefore, the EQ-i is measuring what it is intended to measure.

Predictive validity, with respect to the EQ-i, refers to having the capacity to predict various aspects of human behavior (Bar-On, 2006). The findings of 20 predictive validity studies have shown that the EQ-i was able to predict various aspects or characteristics of human performance, suggesting that the EQ-i also possesses good predictive validity (Bar-On, 2006). Other researchers focused on other types of validity such as content, convergent, factor, criterion-group, and discriminant validity. The results also indicated that the EQ-i is describing or measuring emotional and social intelligence (Engstrom, 2005; Sparkman, 2008; Hall, 2010).

Police Stress Survey (PSS) Reliability and Validity. The purpose of the PSS is to identify the most common stressors in law enforcement (Amin, 2011). Speilberger et al. (1981), Martelli, Waters, and Martelli (1989), Spielberger and Reheiser (1995), Violanti and Aron (1995), and Webb (2010) are five groups of researchers who found the PSS to be reliable. Researchers from all the mentioned groups found the reliability of the

PSS to be in the range of 0.80 to 0.90. In this study, the reliability factor was calculated

to ensure that the reliability lies within reasonable expectations for a research instrument.

Cronbach's alpha was the measure that was used to calculate the reliability factor.

Cronbach's alpha is a statistic or coefficient of internal consistency that is normally used

as an estimate of the reliability of an instrument (Vogt, 2007).

Spielberger et al. (1981) conducted a pilot study and found the PSS to have

adequate validity. The pilot study involved field testing of the PSS with the aid of 50

Florida law enforcement officers. The results of this pilot study showed the PSS to be

accurate, valid, and reliable (Spielberger et al., 1981). The validity of the PSS has been

confirmed by other studies. Martelli et al. (1989) tested the PSS to assess its internal

validity and the results showed the PSS to be valid with respect to its scoring, accuracy,

and validity. Violanti and Aron (1995) and Roberts and Levenson (2001) also found the

PSS to be a valid instrument for the purpose of collecting data related to law enforcement

stress.

Data Analysis

For this study, two instruments were used to collect data, that is, the EQ-i 2.0 and

the PSS. The EQ-i 2.0 was used to measure the EQ of police leadership and the PSS was

used to measure the stress they experience because of their leadership responsibilities.

Descriptive statistics, such as the mean, range of scores, and standard deviation, was

calculated for the data collected. One of the main reasons for calculating descriptive

statistics is to show or summarize data in a meaningful way. For example, the range of

scores can be used to summarize how spread out the scores are. Pearson's correlation

coefficient was used to determine if a correlation exists between the EQ of police

leadership and the stress they experience because of their leadership responsibilities. The measures of EQ includes a total EQ score and scores for each of the components of EQ-i, that is, self-perception, self-expression, interpersonal, decision making, and stress management. Data analysis was performed using the Statistical Package for Social Science Software (SPSS) version 24.

Inferential statistics was used to test the null hypotheses and answer the research questions. The level of significance or the alpha level was set at 5% or 0.05. According to Christensen et al. (2011), by convention the alpha is usually set at .05 in social science research. As stated above, Pearson's correlation coefficient was determined for the relationship between the EQ of police leadership and the stress they experience because of their leadership responsibilities. These calculated correlation coefficients showed that a relationship exists between EQ and stress to include the strength and direction of the relationship. To test whether an observed correlation coefficient was statistically significant, the *t* test for correlation coefficients was implemented.

Summary

Chapter 3 reviewed the methodology of the study. This study seeks to uncover whether or not a relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities. When determining the degree of relationships among variables, one of the most effective designs is a quantitative correlational design (Leedy & Ormrod, 2010; Neuman, 2006; Christensen et al., 2011). As a result, this design was found to be appropriate for this study. Qualitative research design was also introduced and assessed, and it was determined that this design would not aid the researcher in accomplishing the intent of the study.

The research question, population, sample, consent form, confidentiality, and geographic location were discussed. The research question defined and narrowed the objectives of the study (Neuman, 2006; Christensen et al., 2011). In this chapter, the research question, along with two sub-questions, were restated. The sample population was extracted from a large law enforcement agency located in central Texas. The sample consisted of only police leadership that included Captains, Lieutenants, and Sergeants. The sample of participants was provided with consent forms, which provided a full understanding of the study including how confidentiality was addressed.

The reliability and validity of the instruments and the methods of the data collection were presented. The data collection was implemented through online surveys. As stated, the surveys or instruments used in the study were the EQ-i 2.0 and the PSS.

The Statistical Package for Social Science Software (SPSS) version 24.0 was used to analyze the data collected. Using SPSS, Pearson's correlation coefficient was calculated to determine the extent of relationship between the EQ of police leadership and the stress they experience as a result of their leadership responsibilities.

Chapter 4

Results

The present study was designed to determine if a relationship exists between the emotional intelligence (EQ) of police leadership and the stress they experience because of their police leadership responsibilities. EQ and stress were the two variables that were measured. EQ was measured using the Bar-On Emotional Quotient (EQ-I) 2.0 (Bar-On, 1997) and stress was measured using the Police Stress Survey (PSS) (Spielberger et al., 1981). The participants in this study were from a single large law enforcement agency located in central Texas that serves a population greater than 100,000. The central research question that guided this doctoral research is "What is the relationship between the EQ of police leadership and the stress they experience because of their leadership responsibilities?" The overarching research question is supported by the following sub-questions:

1. What is the relationship between the total EQ score (independent variable) as measured by the EQ-i 2.0 and the stress (dependent variable) levels of police leadership as measured by the PSS?

2. What is the relationship between each of the components of the EQ-i model, (i) self-perception, (ii) self-expression, (iii) interpersonal, (iv) decision making, and (v) stress management with the stress levels of police leadership as measured by the PSS?

Chapter 4 includes the findings and results of the two research surveys and the analysis of the results. Findings and results include (a) population and demographic findings, (b) inferential analysis, and (c) test of hypotheses. SPSS version 24 was used

for all descriptive and inferential analyses. Chapter 4 closes with a summary of the findings.

Population and Sample Participation

The population for this study included the police leadership from a single large law enforcement agency located in central Texas. For this study, police leadership was defined as Sergeants, Lieutenants, and Captains. A total of 150 participants, which included 58 Sergeants, 50 Lieutenants, and 42 Captains, were asked to be a part of the study. All participants were 18 years of age or older.

Study participants were anonymously surveyed using Survey Monkey, an online survey platform, and the Multi-Health Systems Inc. (MHS) Online Assessment Center. A total of 79 (N = 79) participants from the sampling frame of 150 responded to the surveys. 38 participants partially completed the surveys, and 41 participants fully completed the surveys. Only fully completed data, comprised from 41 participants, were analyzed in this research study. 41 participants exceed the recommended sample size for this study. In accordance to Christensen et al. (2011) and Cohen (1992), the sample size can be estimated if the alpha level and effect size have been determined for a given level of power. For this study, the recommended size was 28 participants and is based on a power level of 0.80 and an alpha level of 0.05.

Descriptive Demographic Findings

The composition of the 41 study participants is listed in Table 2. Most of the study participants were male (n = 32 or 78%), and the remaining nine (22%) were female. Almost half of the participants were between the ages of 45 and 54 years (n = 19 or 46.3%). Only one participant was less than 34 years of age. Fourteen (34.1%)

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participants were between the ages of 35 and 44 years of age and seven (17.1%) participants were 55 years or more. With regard to the level of education, two participants (4.9%) have Doctorates, about half of the participants have Master's degree (n = 20 or 48.8%), 12 (29.3%) participants have Bachelors' degrees, and seven (17.1%) of the participants have some college. Most participants were married (n = 32 or 78%), six (14.6%) participants were single and three (7.3%) were divorced. Eighteen participants (43.9%) were Caucasian, 16 (39%) were Hispanic, four (9.8%) were African American, and three (7.3%) were Asian. Table 3 summarizes the mean and standard deviation of years as police officers and of years as supervisors or managers.

Table 2: Frequency Statistic for Demographic Study Variables (N=41)

Variable		N	%
age			
	< 34 years	1	2.4
	35 - 44 years	14	34.1
	45 - 54 years	19	46.3
	55 years or more	7	17.1
Gender			
	Male	32	78.0
	Female	9	22.0
Level of Education			
	Some college	7	17.1
	Bachelors	12	29.3
	Masters	20	48.8
	Doctorate	2	4.9
Marital Status			
	Married	32	78.0
	Single	6	14.6
	Divorced	3	7.3
Ethnicity	Caucasian	18	43.9
	Hispanic	16	39.0
	African American	4	9.8
	Asian	3	7.3

Table 3: Years as Police Officers and Years as Supervisors or Managers

	N	Years as Police Officers	Years as Supervisors or Managers
Mean	41	21.61	10.56
SD	41	7.5	8.44

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Inferential Analysis

Cronbach's alpha tests for reliability and internal consistency were conducted on the PSS Survey and EQ-i 2.0 survey (see Table 4). Cronbach's alpha is a statistic that measures the internal consistency to which a set of variables are homogeneous and reflect the same underlying construct (Vogt, 2007). According to Vogt (2007), a Cronbach's alpha value of 0.70 or above is often considered satisfactory for most purposes. Cronbach's alpha for the PSS scores was calculated at .975 and .866 for the EQ-i 2.0 scores. Both measures were well above the .70 general cut-off value of acceptance and as a result, all constructs were reliable for the data set used in the study.

Table 4: Cronbach's Alpha on the PSS Survey and the EQ-i 2.0 Survey

Survey	Cronbach's Alpha	N of Items
PSS	.975	60
EQ-i 2.0	.866	133

The mean scores and standard deviations of the PSS Survey and the EQ-i 2.0 Survey were collected (see Table 5). The average PSS score as indicated by the mean was 43.57. The minimum PSS score was 3.64 and the maximum was 74.66. The mean of the total EQ-i score was 102.02, where the minimum and maximum total EQ-i scores were 74 and 133, respectively. The scores for the five EQ-i components, that is, self-perception, self-expression, interpersonal, decision making, and stress management are also reported in Table 5.

Table 5: The PSS Survey and the EQ-i 2.0 Survey: Mean and Standard Deviation Values

Survey	N	Min	Max	Mean	SD
PSS	41	3.64	74.66	43.57	21.11
Total EQ Score	41	74	133	102.02	13.16
EQ-i Survey Components Scores					
Self-Perception	41	74	126	99.44	12.52
Self-Expression	41	70	131	103.05	13.85
Interpersonal	41	68	128	98.15	12.89
Decision Making	41	79	130	106.59	11.10
Stress Management	41	68	128	101.90	13.19

A correlation analysis was centered on the relationship between the EQ of police leadership and the stress they experience as a result of their police leadership responsibilities. Six Pearson *r* correlations were conducted between the PSS Stress scores and the EQ-i scores, to include the total EQ-i score along with the scores of the five EQ-i components (self-perception, self-expression, interpersonal, decision making, and stress management), see Table 6. The findings revealed significant negative correlations among all the EQ-i components with the exception of the interpersonal component. That is, the stress levels of police leadership had a statistically significant negative relationship with the EQ scores of police leadership. The correlations are as follows: the total EQ-i ($r = -.438$, $p < .01$), self-perception ($r = -.315$, $p < .05$), self-expression ($r = -.425$, $p < .01$), decision making ($r = -.538$, $p < .01$), and stress management ($r = -.472$, $p < .01$). The correlation between PSS stress and the EQ-i interpersonal component was negative ($r = -.187$) but not statistically significant. A

negative correlation suggests an inverse relationship exists or that as the scores increase or decrease for PSS Stress, EQ-i scores move in the opposite direction.

The findings show that the correlations between the PSS scores and the total EQ-i and four out of the five EQ-i components (self-perception, self-expression, decision making, and stress management), were negative and statistically significant. This is in line with other studies whereby EQ is inversely proportional to stress or that as the scores increase or decrease for PSS Stress, EQ-i scores move in the opposite direction (Nikolaou & Tsaousis, 2002; Karriem, 2010; Vuzzo, 2009). With regard to this study, the findings indicate that police leaders with a high EQ score will most likely have a low job stress score. Goldman (1998) and Bar-On (1997) posited that EQ theory evolved under the rationale that those individuals who have control of their emotions and that of others are more capable of coping with the challenges that arise in their environment thus experiencing less stress. This may explain why statistically significant negative correlations were found between the PSS stress scores and the total EQ-i and four out of the five EQ-i components (self-perception, self-expression, decision making, and stress management). The definition or subscales of the four EQ-i components that were statistically significant, that is, self-perception (self-regard, self-actualization, and emotional self-awareness), self-expression (emotional expression, assertiveness, and independence), decision making (problem solving, reality testing, and impulse control), and stress management (optimism, stress tolerance, and flexibility), (Multi-Health Systems, 2011), can all be used to argue in support for the rationale behind the EQ theory. The EQ theory, which is under the rationale that individuals have control of their emotions and that of others, may be explained by most, if not all, of the different

subscales that define self-perception, self-expression, decision making, and stress management. For example, emotional self-awareness, a subcomponent of self-perception, emotional expression, a subcomponent of self-expression, impulse control, a subcomponent of decision making, and flexibility, a subcomponent of stress management, can all be argued to contribute to an individual's ability to have control of their emotions and that of others for the purpose of coping with the challenges that arise in their environment, thus experience less stress.

The correlation between the PSS stress scores and the interpersonal component of the EQ-i model was not statistically significant. The definition or subscales for the interpersonal component of the EQ-i model include interpersonal relationships, empathy, and social responsibility (Multi-Health Systems, 2011). An argument can be made that based on the definition or subscales of the interpersonal component of the EQ-i model, the interpersonal component does not support the rationale behind the EQ theory. For example, social responsibility, a subcomponent of interpersonal, has to do with being a contributing member to society (Multi-Health Systems, 2011). An argument can be made that that this subcomponent of the interpersonal component of the EQ-i model does not contribute or affect the rationale of the EQ theory, in that being a contributing member to society does not impact an individual's ability to have control of their emotions and that of others for the purpose of coping with the challenges that arise in their environment. This may help explain why the correlation between the PSS stress scores and the interpersonal component of the EQ-i model was not statistically significant.

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Table 6: Pearson's *r* Correlations for the PSS Survey and the EQ-i Survey

	Components of the EQ-i Survey					
	Total EQ	Self-Perception	Self-Expression	Interpersonal	Decision Making	Stress Management
PSS Score	-.438**	-.315*	-.425**	-0.187	-.583**	-.472**

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
c. Listwise N=41

Hypothesis Testing

Seven hypotheses were tested employing quantitative techniques involving 41 records. The main purpose behind the testing of these seven hypotheses was to find answers to the research questions. Hypothesis testing was conducted using the Pearson product-moment correlation. The significance level established for null hypothesis rejection was $p < .05$.

Hypothesis 1 and Results.

H_{10}: No relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities.

H_{1A}: A statistically significant relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities.

The Pearson product-moment correlation was performed on the seven variable constructs used during inferential analysis (see Table 6). According to Vogt (2007), the Pearson product-moment correlation is appropriate when the goal of the research is to

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assess the strength of a relationship between two or more continues variables of interest.

Results from the Pearson correlational analyses indicated a statistically significant

association between the EQ of police leadership and the stress they experience because of

their leadership responsibilities. All correlations between the EQ of police leadership and

the stress levels of police leadership were significant and negative with the exception of

the correlation between the interpersonal component of the EQ-i model and the stress

levels of police leadership ($r = -.187$). The correlation between the decision making

component of the EQ-i model and the stress levels of police leadership was the strongest

($r = -.538$, $p < .01$). The rest of the correlations between the EQ of police leadership and

the stress levels of police leadership are as follows in order from the highest correlation

to the lowest correlation: stress management ($r = -.472$, $p < .01$), total EQ-i ($r = -.438$, $p <$

$.01$), self-expression ($r = -.425$, $p < .01$), and self-perception ($r = -.315$, $p < .05$). With

the exception of the correlation that was not statistically significant between the

interpersonal component of the EQ-i model and the stress levels of police leadership, the

evidence from this study indicates that a statistically significant relationship exists

between the EQ of police leadership and the stress they experience because of their

leadership responsibilities. Therefore, the first null hypothesis was rejected.

Hypothesis 2 and Results.

H_{10}: No relationship exists between the total EQ score as measured by the EQ-i
and the stress levels of police leadership.

H_{1A}: A statistically significant relationship exists between the total EQ score as
measured by the EQ-i and the stress levels of police leadership.

To examine the second hypothesis, the application of Pearson correlation helped to analyze the overall level of EQ and the stress levels of police leadership. Results from the Pearson correlational analysis indicated a statistically significant association between the overall level of EQ, or total EQ, and the stress levels of police leadership ($r = -.438$, $p < .01$). Based on the strength of this correlation, the findings from this study indicates that a statistically significant relationship exists between the overall level or total EQ score of police leadership and the stress levels of police leadership. Therefore, the second null hypothesis was rejected.

Hypothesis 3 and Results.

H_{10}:   No relationship exists between the EQ-i 2.0 model self-perception component score and the stress levels of police leadership.

H_{1A}:   A statistically significant relationship exists between the EQ-i 2.0 model self-perception component score and the stress levels of police leadership.

To examine the third hypothesis, the application of Pearson correlation helped to analyze the self-perception component of the EQ-i model and the stress levels of police leadership. Results from the Pearson correlational analysis indicated a statistically significant association between the self-perception component of the EQ-i model and the stress levels of police leadership ($r = -.315$, $p < .05$). Based on the strength of this correlation, it is justifiable to conclude that a statistically significant relationship exists between the self-perception component of the EQ-i model and the stress levels of police leadership. Therefore, the third null hypothesis was rejected.

Hypothesis 4 and Results.

H$_{10}$:   No relationship exists between the EQ-i 2.0 model self-expression

        component score and the stress levels of police leadership.

H$_{1A}$:   A statistically significant relationship exists between the EQ-i 2.0 model

        self-expression component score and the stress levels of police leadership.

To examine the fourth hypothesis, the application of Pearson correlation helped to analyze the self-expression component of the EQ-i model and the stress levels of police leadership. Results from the Pearson correlational analysis indicated a statistically significant association between the self-expression component of the EQ-i model and the stress levels of police leadership ($r = -.425$, $p < .01$). Based on the strength of this correlation, it is justifiable to infer that a statistically significant relationship exists between the self-expression component of the EQ-i model and the stress levels of police leadership. Therefore, the fourth null hypothesis was rejected.

Hypothesis 5 and Results.

H$_{10}$:   No relationship exists between the EQ-i 2.0 model interpersonal

        component score and the stress levels of police leadership.

H$_{1A}$:   A statistically significant relationship exists between the EQ-i 2.0 model

        interpersonal component score and the stress levels of police leadership.

To examine the fifth hypothesis, the application of Pearson correlation helped to analyze the interpersonal component of the EQ-i model and the stress levels of police leadership. Results from the Pearson correlational analysis did not indicate a statistically significant association between the interpersonal component of the EQ-i model and the stress levels of police leadership ($r = -.187$). Based on the lack of strength of this

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correlation, there is not sufficient evidence to conclude that a statistically significant relationship exists between the interpersonal component of the EQ-i model and the stress levels of police leadership. Therefore, the fifth null hypothesis was not rejected.

Hypothesis 6 and Results.

H_{10}: No relationship exists between the EQ-i 2.0 model decision making component score and the stress levels of police leadership.

H_{1A}: A statistically significant relationship exists between the EQ-i 2.0 model decision making component score and the stress levels of police leadership.

To examine the sixth hypothesis, the application of Pearson correlation helped to analyze the decision making component of the EQ-i model and the stress levels of police leadership. Results from the Pearson correlational analysis indicated a statistically significant association between the decision making component of EQ-i model and the stress levels of police leadership ($r = -.538, p < .01$). Based on the strength of this correlation, the evidence suggest that a statistically significant relationship exists between the decision making component of the EQ-i model and the stress levels of police leadership. Therefore, the sixth null hypothesis was rejected.

Hypothesis 7 and Results.

H_{10}: No relationship exists between the EQ-i 2.0 model stress management component score and the stress levels of police leadership.

H_{1A}: A statistically significant relationship exists between the EQ-i 2.0 model stress management component score and the stress levels of police leadership.

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To examine the seventh hypothesis, the application of Pearson correlation helped to analyze the stress management component of the EQ-i model and the stress levels of police leadership. Results from the Pearson correlational analysis indicated a statistically significant association between the stress management component of the EQ-i model and the stress levels of police leadership ($r = -.472$, $p < .01$). Based on the strength of this correlation, sufficient evidence exists to infer that a statistically significant relationship exists between the stress management component of the EQ-i model and the stress levels of police leadership. Therefore, the seventh null hypothesis was rejected.

Summary

Chapter 4 included the findings and results of the two research surveys, that is, the EQ-i 2.0 survey and the PSS survey and the analysis of the results. Chapter 4 began with an introduction that restated the objective of the study, along with restating the research questions. Following the introduction, a description was presented of the population along with demographic information of all participants that were included in this study.

The chapter also included the presentation and discussion of information pertaining to the required assumptions for the inferential analyses to include reliability information for all the constructs examined in this study. The mean scores and standard deviations of the EQ-i 2.0 survey and PSS survey were also presented and discussed. Following this, correlational analysis was performed on the study constructs, that is, the PSS stress, the total EQ, and the five components of the EQ-i survey.

Correlational analysis produced statistically significant correlations for most bivariate correlations; one bivariate correlation was statistically significant. Hypothesis testing followed with an assessment of the correlation analysis to address hypothesis one

through seven. The findings from the analysis showed that a negative statistically significant relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities. This was based on the strength of the bivariate correlations for all hypotheses with the exception of hypothesis 5, which could not be rejected. That is, the findings revealed negative statistically significant correlations among the total EQ-i score and all the EQ-i components, with the exception of the interpersonal component. A negative correlation suggests an inverse relationship exists, or that as the scores increase or decrease for the PSS stress, EQ-i scores move in the opposite direction. The findings suggest that the findings are in line with similar research in that those individuals with higher EQ experience less stress than those individuals with lower levels of EQ (Satija & Khan, 2013; Ismail et al., 2009).

A more detailed discussion of the results of the study will be presented in Chapter 5. Chapter 5 includes a discussion of the results juxtapose with other current similar research. Chapter 5 also includes a discussion with regard to the significance of this study to leadership. Chapter 5 ends with a presentation of the study's strengths and limitations and future research recommendations.

Chapter 5

Conclusions and Recommendations

The purpose of this quantitative correlational research study was to determine the extent of the relationship between the emotional intelligence (EQ) of police leadership and the stress they experience because of their police leadership responsibilities. EQ and stress were the two variables that were measured. EQ was measured using the Bar-On Emotional Quotient (EQ-i) 2.0 survey (Bar-On, 1997) and stress was measured using the Police Stress Survey (PSS) (Spielberger et al., 1981). The research methods employed for the study consisted of the Pearson product-moment correlation to identify possible relationships between the independent variables of EQ and the dependent variable of stress.

Chapter 5 starts with a summary of the findings to include the problem statement and purpose of the study. Following this section is a summary of the findings and an interpretation of the findings. Next is a review of the research questions and hypotheses to follow by a summary of the results of hypothesis testing. The chapter continues with a section on how this study relates to other similar research, a section on the significance of the study to leadership, and a section on the study's strengths and limitations. The last section of the chapter contains future research recommendations and a conclusion.

Summary of the Findings

Research shows that law enforcement is one of society's most stressful occupations (Waters & Ussery, 2007; Levenson, 2007; Kaur et al., 2013; Webb, 2010). The study examined the relationship between the EQ of police leadership and the stress they experience because of their police leadership responsibilities. Research also shows

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that a relationship exists between EQ and stress and those individuals with a high EQ experience less stress (Satija & Khan, 2013; Singh & Sharma, 2012; Webb, 2010; Nikolaou & Tsaousis, 2002).

The purpose of the current quantitative correlational research study was to determine if a relationship exists between the EQ of police leadership and the stress they experience because of their police leadership responsibilities. The research was conducted using a convenience sample of 41 participants from a single large law enforcement organization located in central Texas that serves a population greater than 100,000. A total of 150 law enforcement officials were invited to be a part of the study and 79 (52.6%) voluntarily participated, but only 41 (27.3%) participants fully completed the surveys. For this research, only fully completed data were analyzed. Prior to completing the two surveys, the participants were provided with a letter of introduction and instructions, along with a consent form for their review and signature.

Findings and Interpretations

Data analysis was performed using both descriptive and inferential statistics. The Pearson product-moment correlation was used to identify possible relationships between the EQ (independent variables) of police leadership and the stress (dependent variable) they experience because of their police leadership responsibilities. The Pearson product-moment correlation is a common measure of the correlation between two variables and is widely used as a measure of the strength of linear dependence between two variables (Christensen et al., 2011).

The Pearson product-moment correlation was used to examine seven hypotheses. A total of seven variables were examined that include stress, total EQ, and the five EQ-i

survey components (self-perception, self-expression, interpersonal, decision making, and stress management). The first null hypothesis was rejected due to sufficient evidence indicating that a statistically significant negative relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities. This was determined based on the strong negative correlations ascertained between stress and the EQ variables that include the total EQ and the five EQ-i survey components with the exception of the interpersonal component ($r = -.187$), which also produced a negative correlation, but was not statistically significant (see Table 6 located in Chapter 4, p. 81). The negative correlation between the EQ variables and stress entails that the values of the variables tend to move in opposite directions. Put differently, an individual with a high EQ score will most likely have a low job stress score. With regard to this study, the findings indicate that police leaders with a high EQ score will most likely experience less stress.

The second, third, fourth, sixth and seventh null hypotheses were rejected due to sufficient evidence indicating that a statistically significant relationship exists between the EQ of Police leadership and the stress they experience because of their leadership responsibilities. The examination of hypothesis five did not produce a statistically significant correlation between the interpersonal component of the EQ-i model and the stress level of police leadership. Interpersonal relationships, empathy, and social responsibility are the subcomponents that make up or define the interpersonal component of the EQ-i model (Multi-Health Systems, 2011). Interpersonal relationship is the ability of developing and maintaining relationships with other individuals based on trust and compassion (Multi-Health Systems, 2011). Empathy is having the ability to perceive and

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understand the feelings of others (Multi-Health Systems, 2011). Social responsibility has to do with being a contributing member to society (Multi-Health Systems, 2011). While the interpersonal component of the EQ-i model can contribute to an individual's emotional intelligence, an argument can be made that this component can contribute to increasing an individual's stress level. For example, the empathy subcomponent has to do with the ability to perceive and understand the feeling of others. Stated differently, empathy is having the ability to emotionally stand in the place of another person. If this person is going through a situation she or he finds stressful then this person's emotions can affect the other person thus possibly increasing the other person's stress level. A similar argument can be made for the other two subcomponents that define the interpersonal component of the EQ-i model. This line of reasoning may help explain why the correlation between the interpersonal component of the EQ-i model and stress was not statistically significant.

Relationship to Other Research

The current study contributes to the growing body of knowledge in the areas of stress and EQ in law enforcement. This is important because various studies show that stress can lead to a multitude of health issues both physiological and psychological (Lazarus & Folkman, 1984; Babatunde, 2013; Beheshtifar & Nazarian, 2013). In law enforcement, various studies exist on how EQ may be a skill that can lower stress (Amin, 2011; Burnette, 2006; Griffin, 2012). However, no study exists on determining the type of relationship that exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities. Stated differently, a knowledge gap exists related to the relationship of the EQ of police leadership and the stress they

experience because of their leadership responsibilities. The findings of this study fill that knowledge gap.

The findings of the present study are in line with other studies in that EQ could possibly be used as a stress management tool to assist organizations in reducing stress among employees. All correlations in this study between stress and the EQ variables that include the total EQ and the five EQ-i survey components with the exception of the interpersonal component were determined to be negative and statistically significant. Stated differently, this study showed that those police leaders with a high EQ score will most likely have a low job stress score. Karriem's (2010) study that focused on the relationship between stress and EQ among direct-care workers showed that a negative correlation exists between stress and EQ. Karriem (2010) found that direct-care workers with low stress levels have higher levels of EQ and those direct-care workers with high stress levels have lower levels of EQ. Walia and Tulsi (2014) conducted a study on the correlation between EQ and occupational stress of college teachers. Walia and Tulsi's findings also showed that EQ was negatively correlated with occupational stress indicating that teachers with a higher EQ experience less stress and vice versa.

In comparing this study to other similar studies, the major difference of this study from other similar studies or what makes this study unique is this study examined stress and EQ in conjunction with police leadership, which was defined as rank officers to include Captains, Lieutenants, and Sergeants. Currently, there are no studies that examined EQ and Stress in conjunction with police leadership. Research shows that EQ promotes leadership effectiveness or that those in leadership positions have higher EQ levels (Morehouse, 2007; Goleman, 1995). In addition, according to Morehouse (2007)

and Goleman (1995) there are certain organizational cultures that are inadvertently designed to select and promote personnel based in part on employee EQ. This study added to the understanding of EQ's role for leadership and handling stress.

Significance of the Study to Leadership

The results of the current quantitative correlational study might be important to leadership because the findings may broaden the limited knowledge that exists on the EQ of police leadership and the stress they experience because of their police leadership responsibilities. More specifically, the findings of the study could assist police leaders by discovering variables to assist police leaders in finding ways to lessen the stress police leadership experience because of their police leadership responsibilities. For example, the decision making component of the EQ-i model and stress produced the strongest correlation ($r = -.538, p < .01$). Those in leadership positions can use this knowledge to put forth training programs that may improve their subordinates' decision making skills thus improving the EQ of those individuals who go through this training and at the same time resulting in them experiencing less stress in the workplace.

Another benefit of the findings of the current study for leadership could be to use EQ as a tool to both hire and reduce employee turnover. The results of the current study show that as EI increases, job stress decreases. Using EQ scores as a way to select employees could reduce the hiring of employees who are prone to stress. In law enforcement, those in leadership positions can benefit greatly by hiring employees with high EQ scores because this might reduce turnover rates, which means that loss of knowledge, experience, and years of training are kept at a minimum. Having the tools such as EQ to hire employees and reducing turnover rates in today's law enforcement

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organizations is critical since the time has arrived when the public expects their law enforcement organizations to do more with less. According to Cox and Ostertag (2014), the "do more with less" slogan is now a fiscal demand.

Study Strengths and Limitations

One of the strengths of the current study is that no other study exist that involve an exploration into the extent of the relationship between the EQ of police leadership and the stress they experience because of their leadership responsibilities. Another strength of this doctoral research is the results found for all hypotheses with the exception of the fifth hypothesis that could not be rejected. With the exception of the fifth hypothesis, a statistically significant negative correlation was found between the stress and the EQ variables that include the total EQ and four out of the five EQ-i survey components (self-perception, self-expression, decision making, and stress management). This is in line with other similar research in that those individuals with a high EQ might experience less stress at work or are better able to cope with stress.

One of the limitations of this study has to do with generalizability or the ability of the results to be generalizable to the population of this study. A study's validity can be affected by an inadequate number of participants and in turn this can affect generalizability. Validity refers to the accuracy of the interpretations made as a result of the measurements obtained (Christensen et al., 2011). For this study, out of the 150 participants that were requested to be a part of the study only 41 (27%) willingly participated. A higher percentage of participants would have been desirable. However, a sample of 41 is relatively large compared with what is recommended when the sample size is estimated using a power level of 0.80 and an alpha level of 0.05. By convention, a

power of 0.80 and an alpha of 0.05 yields a large sample size effect resulting in 28 participants while 41 police leaders participated in the current study.

Another limitation has to do with the limits of the correlational design. A correlational design is appropriate for establishing a relationship between two or more variables (Leedy & Ormrod, 2010). That is, correlations measure degrees of variable association not cause and effect relationships. For this study, only an examination of two variables, that is, EQ and stress, in their current state was conducted and the research design did not involve changing or modifying the state of these variables.

Recommendations for Future Research

Police stress can be attributed to many factors such as organizational stress and operational stress (Louw & Viviers, 2010). Some of the consequences of stress can include both physical and emotional symptoms, which can lead to a multitude of health related issues such as depression, heart disease, sleep problems, and alcoholism (Rosenbluh, 2005; Larned, 2010). The purpose of the current study was to determine if a relationship exists between the EQ of police leadership and the stress they experience because of their police leadership responsibilities. The study yielded important results about stress and EQ, in that those police leaders with a high EQ, experience less stress.

With regard to future research, one recommendation is to repeat the current study using a larger population and a multitude of different law enforcement organizations. For this study, due to resource limitations with regards to cost, time, and data gathering efforts, the study was confined to one law enforcement agency. By using a larger randomized sample of police leaders from different law enforcement organizations would provide results that could be generalizable to a more diverse population.

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Another recommendation for future research is to add a qualitative component or expand the current study's quantitative design into a mixed-methods study. A qualitative component may lead to an in in-depth analyses and understanding of relationships between EQ and stress. One way to do this is to use the qualitative component as a way to qualify or disqualify the quantitative findings, and in the process clarify and gain a deeper understanding of the variables under investigation. Future studies can explore other qualitative approaches to study the relationship between EQ and stress.

Conclusion

Researchers agree that stress in law enforcement is a major challenge for those who have sworn to serve and protect (Abdollahi, 2002; Waters & Ussery, 2007; Levenson, 2007; Chen, 2009). Researchers also agree that out of the multitude of negative effects of stress, one aspect of stress is that it impairs an individual's ability to function normally (Singh & Sharma, 2012; Lazarus & Folkman, 1984; Satija & Khan, 2013). Some of the consequences of stress can be physical and mental, which can lead to conditions such as psychological problems, substance abuse, physical health problems, and even suicide (Larned, 2010).

EQ is a different type of intelligence in addition to intelligence quotient (IQ). Mayer and Salovey (1997) defined EQ as using emotions to make constructive decisions. Several studies show that a negative correlation exists between EQ and stress (Oginska-Bulik, 2005; Nikolaou & Tsaousis, 2002; Ramesar et al., 2009; Satija & Khan, 2013; Singh & Sharma, 2012; Karriem, 2010). EQ might help law enforcement personnel in dealing with the stress they experience. The focus of the current quantitative correlational research study was to examine the extent of the relationship between the EQ

of police leadership and the stress they experience because of their leadership responsibilities.

The current study further expands the EQ and stress body of knowledge that surrounds the law enforcement profession and might lead to significant benefits for those who have sworn to serve and protect. The results of the current research showed a negative correlation between stress and the EQ variables with the exception of the interpersonal component of the EQ-i survey, which also produced a negative correlation but was not statistically significant. These findings indicate that law enforcement leaders with elevated levels of EQ might experience less stress and might be more productive. Based on the findings of the current research, one could conclude that individuals who score high on EQ will most likely be less stressed (i.e., better health) thus taking fewer sick days off. The current study might add to the body of knowledge by introducing EQ as a coping method or possible stress management intervention technique among all workers in various environments.

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INFORMED CONSENT: PARTICIPANTS 18 YEARS OF AGE AND OLDER

Dear _____,

My name is _____ and I am a student at the University of Phoenix working on a Doctor of Management degree. I am doing a research study entitled A Study of Emotional Intelligence and Police Stress as it Relates to Police Leadership. The purpose of the research study is to determine if a relationship exists between stress and emotional intelligence (EQ) among police leadership. Specifically, the study will examine whether or not there is a relationship between the EQ of police leadership and the stress they experience because of their leadership responsibilities.

Your participation will involve completing two surveys. The two surveys include Bar-On's Emotional Intelligence instrument (EQ-I 2.0) for measuring social intelligence and EQ and Spielberger's Police Stress Survey (PSS), which measures on the job stress among police officers. Each survey will take approximately 45 minutes to complete. The surveys will be located online and completed online via Survey Monkey. A username and password will be provided for you to log on to Survey Monkey. While online only your name, title, and payroll will be recorded when logging on to Survey Monkey. Upon logging on to Survey Monkey, you will be asked to electronically sign the consent form. If you do not sign the consent form you will not be allowed to access the surveys. You can decide to be a part of this study or not. Once you start, you can withdraw from the study at any time without any penalty or loss of benefits. The results of the research study may be published but your identity will remain confidential and your name will not be made known to any outside party.

In this research, there are no foreseeable risks to you except data collection and storage. To counter this risk, the researcher asks all participations to not share the username and password provided to them.

Although there may be no direct benefit to you, a possible benefit from you being part of this study is the knowledge gained with regard to EQ and stress and how they are related.

If you have any questions about the research study, please call me at xxx-xxx-xxxx or email me at --------@email.phoenix.edu. For questions about your rights as a study participant, or any concerns or complaints, please contact the University of Phoenix Institutional Review Board via email at IRB@phoenix.edu.

As a participant in this study, you should understand the following:

1. You may decide not to be part of this study or you may want to withdraw from the study at any time. If you want to withdraw, you can do so without any problems. To withdraw do not log on to Survey Monkey or sign the consent form. If you have already logged on and signed the consent form, to withdraw either log off Survey Monkey or simply close the browser. If you have already started either of the surveys, to withdraw stop and log off or simply close the browser. The researcher will appreciate an email or phone call advising him that you do not want to participate but it is not necessary.

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2. Your identity will be kept confidential using via password protected digital files. All data obtained from participants will be via Survey Monkey. These data will be transferred to an external hard drive, which will also be password protected and store in a locked cabinet, located inside the researcher's home office.

3. The researcher, has fully explained the nature of the research study and has answered all of your questions and concerns.

4. No Interviews will be conducted in this study.

5. Data will be kept secure. All data obtained from participants will be via Survey Monkey. These data will be transferred to an external hard drive, which will also be password protected and store in a locked cabinet, located inside the researcher's home office. The data will be kept for three years, and then destroyed.

6. The results of this study may be published.

"By signing this form, you agree that you understand the nature of the study, the possible risks to you as a participant, and how your identity will be kept confidential. When you sign this form, this means that you are 18 years old or older and that you give your permission to volunteer as a participant in the study that is described here."

(☐) I accept the above terms.   (☐) I do not accept the above terms.   (CHECK ONE)

Signature of the research participant _____ Date _____

Signature of the researcher_____ Date _____

Appendix B: Organization Permission

University of Phoenix

PREMISES, RECRUITMENT AND NAME (PRN) USE PERMISSION

Please complete the following by check marking any permissions listed here that you approve, and please provide your signature, title, date, and organizational information below. If you have any questions or concerns about this research study, please contact the University of Phoenix Institutional Review Board via email at IRB@phoenix.edu.

[✓] I hereby authorize ▇▇▇▇▇▇▇▇▇ a researcher from University of Phoenix, to use the premises (facility identified above and address below) to conduct a study entitled **"A Study of Emotional Intelligence and Police Stress as it Relates to Police Leadership."** This study focuses on stress and emotional intelligence (EQ) in the context of law enforcement. The purpose of this study is to ascertain whether or not a relationship exists between the EQ of police leadership and the stress they experience because of their leadership responsibilities. The request is approved with the below listed stipulations.

[✓] I hereby authorize ▇▇▇▇▇▇▇▇▇ a researcher from University of Phoenix, to recruit subjects for participation in a study entitled **"A Study of Emotional Intelligence and Police Stress as it Relates to Police Leadership"** at the facility identified above. The request is approved with the below listed stipulations.

▇▇▇▇▇▇ Department stipulations:

- Participants in the study must receive anonymity.
- The ▇▇▇▇▇▇ Department must receive anonymity as a participant.
- A copy of your completed work will be provided to the ▇▇▇▇▇▇ Department Office of Planning.
- You seek permission from ▇▇▇ to publish your research results in any other publication.

_____ Signature

5/14/11 Date

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PERMISSION TO USE AN EXISTING SURVEY

Date 01/14/2016

From: MULTI-HEALTH SYSTMES INC.
      P.O. Box 950
      North Tonawanda, NY 14120-0950

To: Researcher Name: ███████████

Thank you for your request for permission to use the Bar-On Emotional Quotient (EQ-i) in your research study. We are willing to allow you to access and use the above named instrument per the MHS Student Research Discount terms and conditions and in accordance with the following terms and conditions:

- You will use this survey only for your research study and will not sell or use it with any compensated management or curriculum development activities.

- You will include the copyright statement on all copies of the instrument.

- You will send your research study and one copy of reports, articles, and related publications that make use of this survey data promptly to our attention.

If these are acceptable terms and conditions, please indicate so by signing one copy of this letter and returning it to us.

Sincerely,

Multi-Health Systems Inc. (MHS)

Author Name (please print)

███████████ - ████████████ - *Permissions Specialist*

Author Signature   Date Feb. 18, 2016

I understand these conditions and agree to abide by these terms and conditions.

                                       Date 02/12/2016

███████████

Researcher Name (Please print)

███████████

Researcher Signature

Expected date of completion 03/04/2016

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University of Phoenix®

PERMISSION TO USE AN EXISTING SURVEY

Date **January 20, 2016**

From: Author Name: ▮▮▮▮▮▮▮▮▮▮▮
      Author Address:

To: Researcher Name: ▮▮▮▮▮▮▮▮▮▮▮

Thank you for your request for permission to use the Police Stress Survey (PSS) in your research study. We are willing to allow you to access, use and reproduce the above named instrument at no charge with the following understanding and in accordance with the following terms and conditions:

- You will use this survey only for your research study and will not sell or use it with any compensated management or curriculum development activities.
- You will include the copyright statement on all copies of the instrument.
- You will send your research study and one copy of reports, articles, and related publications that make use of this survey data promptly to our attention.

If these are acceptable terms and conditions, please indicate so by signing one copy of this letter and returning it to us.

Sincerely,

▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

Author Name (please print)

▮▮▮▮▮▮▮▮▮▮▮▮▮   Date 1-25-2016

Author Signature

I understand these conditions and agree to abide by these terms and conditions.

▮▮▮▮▮▮▮▮▮   Date **01/20/16**

Researcher Name (Please print)

▮▮▮▮▮▮▮▮

Researcher Signature

Expected date of completion **March 4, 2016**

v.1014

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